

| Command NAME                                                                                                                                                                | ASCII command type | ASCII command structure                                                                    | NEW REAL VALUE | NEW VALUE | DATA TYPE | DO WRITE |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------|----------------|-----------|-----------|----------|
| <b>ASCII COMMANDS</b>                                                                                                                                                       |                    |                                                                                            |                |           |           |          |
| HEART BEAT                                                                                                                                                                  | ASCII READ COMMAND | #HB<CR><br>Result:<br>#HB<CR>                                                              |                |           | ASCII     |          |
|                                                                                                                                                                             | TX                 | #1,HB<CR>                                                                                  |                |           |           |          |
|                                                                                                                                                                             | RX                 | #1,HB<CR>                                                                                  |                |           |           |          |
| Sends an Heartbeat to test the communcation                                                                                                                                 |                    |                                                                                            |                |           |           |          |
| GET VERSION                                                                                                                                                                 | ASCII READ COMMAND | #VERSION<CR><br>Result:<br>#VERSION:<VersionHi>,<VersionMed>,<VersionLo><CR>               |                |           | ASCII     |          |
|                                                                                                                                                                             | TX                 | #1,VERSION<CR>                                                                             |                |           |           |          |
|                                                                                                                                                                             | RX                 | #1,VERSION:1.2.00<CR>                                                                      |                |           |           |          |
|                                                                                                                                                                             |                    | Current SW version:1.2.00                                                                  |                |           |           |          |
| Returns the version number of the module<br>VersionHi: Version number high (1..255)<br>VersionMed: Version number medium (1..255)<br>VersionLo: Version number low (1..255) |                    |                                                                                            |                |           |           |          |
| GET TYPE                                                                                                                                                                    | ASCII READ COMMAND | #TYPE<CR><br>Result:<br>#TYPE:<Type><CR>                                                   |                |           | ASCII     |          |
|                                                                                                                                                                             | TX                 | #1,TYPE<CR>                                                                                |                |           |           |          |
|                                                                                                                                                                             | RX                 | #1,TYPE:RESI-32DI24RO-SIO<CR>                                                              |                |           |           |          |
|                                                                                                                                                                             |                    | Current module type:RESI-32DI24RO-SIO                                                      |                |           |           |          |
| Returns the current module type                                                                                                                                             |                    |                                                                                            |                |           |           |          |
| GET FEATURES                                                                                                                                                                | ASCII READ COMMAND | #FTRS<CR><br>Result:<br>#FTRS:<Type><CR>                                                   |                |           | ASCII     |          |
|                                                                                                                                                                             | TX                 | #1,FTRS<CR>                                                                                |                |           |           |          |
|                                                                                                                                                                             | RX                 | #1,FTRS:RESI-32DI24RO-SIO,RS485,DI:32,RO:24,RELAY:30VDC,250VAC,6A,AGSNO2<CR>               |                |           |           |          |
|                                                                                                                                                                             |                    | Current module type:#1,FTRS:RESI-32DI24RO-SIO,RS485,DI:32,RO:24,RELAY:30VDC,250VAC,6A,AGSN |                |           |           |          |
| Returns the current module features                                                                                                                                         |                    |                                                                                            |                |           |           |          |
| GET OWNER                                                                                                                                                                   | ASCII READ COMMAND | #OWNER<CR><br>Result:<br>#OWNER:<Owner><CR>                                                |                |           | ASCII     |          |
|                                                                                                                                                                             | TX                 | #1,OWNER<CR>                                                                               |                |           |           |          |
|                                                                                                                                                                             | RX                 | #1,OWNER:RESI<CR>                                                                          |                |           |           |          |
|                                                                                                                                                                             |                    | Current owner:RESI                                                                         |                |           |           |          |
| Returns the current owner of the module                                                                                                                                     |                    |                                                                                            |                |           |           |          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                          |                                                                  |       |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------------------------|-------|--|
| GET CREATOR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ASCII<br>READ<br>COMMAND | #CREATOR<CR><br>Result:<br>#CREATOR:<Creator><CR>                | ASCII |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | TX                       | #1,CREATOR<CR>                                                   |       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | RX                       | #1,CREATOR:DI HC SIGL,MSC<CR>                                    |       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                          | Current creator:DI HC SIGL,MSC                                   |       |  |
| Returns the current creator of the module                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                                                                  |       |  |
| GET COPYRIGHT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ASCII<br>READ<br>COMMAND | #COPYRIGHT<CR><br>Result:<br>#COPYRIGHT:<Copyright><CR>          | ASCII |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | TX                       | #1,COPYRIGHT<CR>                                                 |       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | RX                       | #1,COPYRIGHT:2015-24 BY RESI AND DI HC SIGL,MSC WWW.RESI.CC<CR>  |       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                          | Current copyright:2015-24 BY RESI AND DI HC SIGL,MSC WWW.RESI.CC |       |  |
| Returns the current copyright of the module                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |                                                                  |       |  |
| GET SERIAL NUMBER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ASCII<br>READ<br>COMMAND | #SN<CR><br>Result:<br>#SN:<Serial><CR>                           | ASCII |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | TX                       | #1,SN<CR>                                                        |       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | RX                       | #1,SN:280029001457435535343920<CR>                               |       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                          | Current serial number:280029001457435535343920                   |       |  |
| Returns the current serial number of the module                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                          |                                                                  |       |  |
| GET INTERNAL STATUS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ASCII<br>READ<br>COMMAND | #INTSTAT<CR><br>Result:<br>#INTSTAT:<Status><CR>                 | ASCII |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | TX                       | #1,INTSTAT<CR>                                                   |       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | RX                       | #1,INTSTAT:I2C1:0,I2C2:0,FRAM:24<CR>                             |       |  |
| Returns the device specific internal status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |                                                                  |       |  |
| GET DIP SWITCH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ASCII<br>READ<br>COMMAND | #GDIP<CR><br>Result:<br>#GDIP:<DIPSwitchDec>,<DIPSwitchHex><CR>  | ASCII |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | TX                       | #1,GDIP<CR>                                                      |       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | RX                       | #1,GDIP:65,0x41<CR>                                              |       |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                          | Current DIP SWITCH settings:0100.0001                            |       |  |
| Returns the current setting of the Dip switches as decimal number and as hexadecimal number.<br>DIPSwitchDec<br>DIPSwitchHex<br>The current value of the DIP switches:<br>Bit 0: DIP Switch 1 (=0:OFF, =1:ON)<br>Bit 1: DIP Switch 2 (=0:OFF, =1:ON)<br>Bit 2: DIP Switch 3 (=0:OFF, =1:ON)<br>Bit 3: DIP Switch 4 (=0:OFF, =1:ON)<br>Bit 4: DIP Switch 5, if available (=0:OFF, =1:ON)<br>Bit 5: DIP Switch 6, if available (=0:OFF, =1:ON)<br>Bit 6: DIP Switch 7, if available (=0:OFF, =1:ON)<br>Bit 7: DIP Switch 8, if available (=0:OFF, =1:ON) |                          |                                                                  |       |  |
| ASCII COMMANDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |                                                                  |       |  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                           |                                               |       |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------------------------------------|-------|----|
| SET MODBUS ADDRESS                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ASCII<br>WRITE<br>COMMAND | #SMBADR:<UNITID> <CR><br>Result:<br>#OK<CR>   | ASCII | NO |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | UNITID                    | 123                                           |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TX                        | #1,SMBADR:123<CR>                             |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | RX                        | N/A                                           |       |    |
| Redefines the unit ID of the module. This change will affect the MODBUS/RTU communication immediately. As a Unit IO you can use the values 0dec to 255dec.                                                                                                                                                                                                                                                                                                           |                           |                                               |       |    |
| HINT: The new settings are activated after a system reboot or power off on cycle!                                                                                                                                                                                                                                                                                                                                                                                    |                           |                                               |       |    |
| SET MODBUS BAUDRATE                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ASCII<br>WRITE<br>COMMAND | #SMBBAUD:<BAUD> <CR><br>Result:<br>#OK<CR>    | ASCII | NO |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | BAUD                      | 128000:128000BD                               |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TX                        | #1,SMBBAUD:128000<CR>                         |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | RX                        | N/A                                           |       |    |
| Sets a new baud rate in the FLASH<br>For ULTRA SLIM IOs RESI-xxx-SIO: This baudrate is only used, if DIP switch mode DIP1=ON+DIP2=ON (BR) (default is 57600bd)<br>For BIG IOs RESI-xxx-SIO: This baudrate is only used, if DIP switch mode DIP7=ON (PARAMETER) (default is 57600bd)<br>The following baudrates are allowed:<br>300bd, 600bd, 900bd, 1200bd, 2400bd, 4800bd,<br>9600bd, 19200bd, 38400bd, 57600bd, 115200bd, 128000bd<br>230400bd, 250000bd, 256000bd |                           |                                               |       |    |
| HINT: The new setup parameters will be active after a restart of the module.                                                                                                                                                                                                                                                                                                                                                                                         |                           |                                               |       |    |
| SET MODBUS PARITY                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ASCII<br>WRITE<br>COMMAND | #SMBPAR:<PARITY> <CR><br>Result:<br>#OK<CR>   | ASCII | NO |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | PARITY                    | ODD:ODD PARITY                                |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TX                        | #1,SMBPAR:ODD<CR>                             |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | RX                        | N/A                                           |       |    |
| Sets a new parity for the serial interface.<br>MBParity:<br>NONE: no parity<br>EVEN: even parity<br>ODD: odd parity                                                                                                                                                                                                                                                                                                                                                  |                           |                                               |       |    |
| HINT: The new setup parameters will be active after a restart of the module.                                                                                                                                                                                                                                                                                                                                                                                         |                           |                                               |       |    |
| SET MODBUS STOPS                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ASCII<br>WRITE<br>COMMAND | #SMBSTOP:<STOPBIT> <CR><br>Result:<br>#OK<CR> | ASCII | NO |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | STOPBIT                   | TWO:TWO STOPBITS                              |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | TX                        | #1,SMBSTOP:TWO<CR>                            |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | RX                        | N/A                                           |       |    |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                           |                                                                                         |       |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------------------------------------------------------------------------------|-------|----|
| <div>Sets a new amount of stop bits for the serial interface.<br/>MBStops<br/>ONE: one stop bit<br/>TWO: two stop bits<br/><br/>HINT: The new setup parameters will be active after a restart of the module.</div>                                                                                                                                                                                                                                                                                        |                           |                                                                                         |       |    |
| SET MODBUS PARAMS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ASCII<br>WRITE<br>COMMAND | #SMBPARAMS:<UNITID>,<BAUD>,<PARITY>,<STOPBIT><CR><br>Result:<br>#OK<CR>                 | ASCII | NO |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | UNITID                    | 3                                                                                       |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | BAUD                      | 115200:115200BD                                                                         |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | PARITY                    | EVEN:EVEN PARITY                                                                        |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | STOPBIT                   | TWO:TWO STOPBITS                                                                        |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TX                        | #1,SMBPARAMS:3,115200,EVEN,TWO<CR>                                                      |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | RX                        | N/A                                                                                     |       |    |
| <div>Sets all parameters for serial interface</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                           |                                                                                         |       |    |
| GET MODBUS ADDRESS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ASCII<br>READ<br>COMMAND  | #GMBADR<CR><br>Result:<br>#GMBADR:<MBUnitDec>,<MBFLASHDec>,<MBUnitHex>,<MBFLASHHex><CR> | ASCII |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TX                        | #1,GMBADR<CR>                                                                           |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | RX                        | #1,GMBADR:1,15,0x1,0xF<CR>                                                              |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                           | Current MODBUS unit ID:1,15,0x1,0xF                                                     |       |    |
| <div>Shows the current used MODBUS/RTU or ASCII unit address and shows also the stored unit address in the FLASH memory, which is only used if the DIP switch for the bus address is set to 0.<br/><br/>MBUnitDec,MBUnitHex<br/>The current used MODBUS/RTU unit or ASCII address for communication<br/><br/>MBFLASHDec,MBFLASHHex<br/>The internal stored MODBUS/RTU unit address or ASCII address from the FLASH memory, if the DIP switch DIP3 is OFF.</div>                                           |                           |                                                                                         |       |    |
| GET MODBUS BAUDRATE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ASCII<br>READ<br>COMMAND  | #GMBBAUD<CR><br>Result:<br>#GMBBAUD:<BaudRate><CR>                                      | ASCII |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TX                        | #1,GMBBAUD<CR>                                                                          |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | RX                        | #1,GMBBAUD:115200,0x1C200<CR>                                                           |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                           | Current baudrate:115200,0x1C200                                                         |       |    |
| <div>This is the current configured baud rate in the FLASH<br/>For ULTRA SLIM IOs RESI-xxx-SIO: This baudrate is only used, if DIP switch mode DIP1=ON+DIP2=ON (BR) (default is 57600bd)<br/>For BIG IOs RESI-xxx-SIO: This baudrate is only used, if DIP switch mode DIP7=ON (PARAMETER) (default is 57600bd)<br/>The following baudrates are allowed:<br/>300bd, 600bd, 900bd, 1200bd, 2400bd, 4800bd,<br/>9600bd, 19200bd, 38400bd, 57600bd, 115200bd, 128000bd<br/>230400bd, 250000bd, 256000bd</div> |                           |                                                                                         |       |    |
| GET MODBUS PARITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ASCII<br>READ<br>COMMAND  | #GMBPAR<CR><br>Result:<br>#GMBPAR:<MBParity><CR>                                        | ASCII |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TX                        | #1,GMBPAR<CR>                                                                           |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | RX                        | #1,GMBPAR:NONE<CR>                                                                      |       |    |

|                                                                                                                                     |                           |                                                                                                                                                     |       |     |
|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|
|                                                                                                                                     |                           | Current parity:NONE                                                                                                                                 |       |     |
| Shows the current configured parity of the serial interface.<br>MBParity<br>NONE: no parity<br>EVEN: even parity<br>ODD: odd parity |                           |                                                                                                                                                     |       |     |
| GET MODBUS STOP                                                                                                                     | ASCII<br>READ<br>COMMAND  | #GMBSTOP<CR><br>Result:<br>#GMBSTOP:<MBStop> <CR>                                                                                                   | ASCII |     |
|                                                                                                                                     | TX                        | #1,GMBSTOP<CR>                                                                                                                                      |       |     |
|                                                                                                                                     | RX                        | #1,GMBPAR:ONE<CR>                                                                                                                                   |       |     |
|                                                                                                                                     |                           | Current stopbit(s):ONE                                                                                                                              |       |     |
| Shows the current configured parity of the serial interface.<br>MBParity<br>NONE: no parity<br>EVEN: even parity<br>ODD: odd parity |                           |                                                                                                                                                     |       |     |
| GET MODBUS PARAMS                                                                                                                   | ASCII<br>READ<br>COMMAND  | #GMBPARAMS<CR><br>Result:<br>#GMBPARAMS:<MBUnitDec>,<MBFLASHDec>,<MBUnitHex>,<MBFLASHHex>,<MBBaudrateDec>,<MBBaudrateHex>,<MBParity>,<MBStops> <CR> | ASCII |     |
|                                                                                                                                     | TX                        | #1,GMBPARAMS<CR>                                                                                                                                    |       |     |
|                                                                                                                                     | RX                        | #1,GMBPARAMS:1,0x1,15,0xF,115200,0x1C200,NONE,ONE <CR>                                                                                              |       |     |
|                                                                                                                                     |                           | Current MODBUS unit ID used:1                                                                                                                       |       |     |
|                                                                                                                                     |                           | Current MODBUS unit ID in FLASH:15                                                                                                                  |       |     |
|                                                                                                                                     |                           | Current baudrate in FLASH:115200                                                                                                                    |       |     |
|                                                                                                                                     |                           | Current parity in FLASH:NONE                                                                                                                        |       |     |
|                                                                                                                                     |                           | Current stopbit(s) in FLASH:ONE                                                                                                                     |       |     |
| Returns the complete settings for serial interface                                                                                  |                           |                                                                                                                                                     |       |     |
| <b>ASCII COMMANDS</b>                                                                                                               |                           |                                                                                                                                                     |       |     |
| RESET                                                                                                                               | ASCII<br>WRITE<br>COMMAND | #RST<CR><br>Result:<br>#OK<CR>                                                                                                                      | ASCII | NO  |
|                                                                                                                                     | TX                        | #1,RST<CR>                                                                                                                                          |       |     |
|                                                                                                                                     | RX                        | N/A                                                                                                                                                 |       |     |
| Executes a software reset (Reboot) of the module.                                                                                   |                           |                                                                                                                                                     |       |     |
| FACTORY RESET                                                                                                                       | ASCII<br>WRITE<br>COMMAND | #FRST<CR><br>Result:<br>#OK<CR>                                                                                                                     | ASCII | NO  |
|                                                                                                                                     | TX                        | #1,FRST<CR>                                                                                                                                         |       |     |
|                                                                                                                                     | RX                        | N/A                                                                                                                                                 |       |     |
| Performs a factory reset of all internal saved parameters                                                                           |                           |                                                                                                                                                     |       |     |
| SET MODBUS<br>WATCHDOG TIMER                                                                                                        | ASCII<br>WRITE<br>COMMAND | #SMBWATCHDOG:<WDTIME> <CR><br>Result:<br>#OK<CR>                                                                                                    | ASCII | YES |

|                                                                                                                                                                                                                                                                                                                                               |                          |                                                               |       |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------------------------------------|-------|--|
|                                                                                                                                                                                                                                                                                                                                               | WDTIME                   | 100                                                           |       |  |
|                                                                                                                                                                                                                                                                                                                                               | TX                       | #1,SMBWATCHDOG:100<CR>                                        |       |  |
|                                                                                                                                                                                                                                                                                                                                               | RX                       | #1,OK<CR>                                                     |       |  |
| Enables or disables the WATCHDOG Timer for the IO module.<br>WDTIME:<br>1..65535: Time for Watchdog in 1/100s<br>=0: Watchdog is deactivated<br>HINT: The Watchdog is internally handled every 100ms. If the IO module receives no valid frame within this time period, the outputs are set to predefined values!                             |                          |                                                               |       |  |
| GET MODBUS<br>WATCHDOG TIMER                                                                                                                                                                                                                                                                                                                  | ASCII<br>READ<br>COMMAND | #GMBWATCHDOG<CR><br>Result:<br>#GMBWATCHDOG:<WDTIME> <CR>     | ASCII |  |
|                                                                                                                                                                                                                                                                                                                                               | TX                       | #1,GMBWATCHDOG<CR>                                            |       |  |
|                                                                                                                                                                                                                                                                                                                                               | RX                       | #1,GMBWATCHDOG:0,0x0<CR>                                      |       |  |
|                                                                                                                                                                                                                                                                                                                                               |                          | Current watchdog time:0 -> 0,0s                               |       |  |
| Shows the actual configured time for the telegram watchdog function of the IO module.<br>WDTIME:<br>1..65535: Time for Watchdog in 1/100s<br>=0: Watchdog is deactivated<br>HINT: The Watchdog is internally handled every 100ms. If the IO module receives no valid frame within this time period, the outputs are set to predefined values! |                          |                                                               |       |  |
| <b>CPU PARAMETERS</b>                                                                                                                                                                                                                                                                                                                         |                          |                                                               |       |  |
| GET CPU VOLTAGE                                                                                                                                                                                                                                                                                                                               | ASCII<br>READ<br>COMMAND | #GCPUTEMP<CR><br>Result:<br>#GCPUTEMP:<CPUTemp> <CR>          | ASCII |  |
|                                                                                                                                                                                                                                                                                                                                               | TX                       | #1,GCPUTEMP<CR>                                               |       |  |
|                                                                                                                                                                                                                                                                                                                                               | RX                       | #1,GCPUTEMP:37.3360<CR>                                       |       |  |
|                                                                                                                                                                                                                                                                                                                                               |                          | Current internal temperature of CPU:37.3360°C                 |       |  |
| Current internal temperature of CPU in ° Celsius.                                                                                                                                                                                                                                                                                             |                          |                                                               |       |  |
| GET CPU VOLTAGE                                                                                                                                                                                                                                                                                                                               | ASCII<br>READ<br>COMMAND | #GCPUVOLT<CR><br>Result:<br>#GCPUVOLT:<CPUVoltage> <CR>       | ASCII |  |
|                                                                                                                                                                                                                                                                                                                                               | TX                       | #1,GCPUVOLT<CR>                                               |       |  |
|                                                                                                                                                                                                                                                                                                                                               | RX                       | #1,GCPUVOLT:3.3690<CR>                                        |       |  |
|                                                                                                                                                                                                                                                                                                                                               |                          | Current supply voltage of CPU:3.3690V                         |       |  |
| Current internal supply voltage of CPU in Volt.                                                                                                                                                                                                                                                                                               |                          |                                                               |       |  |
| GET CPU BACKUP                                                                                                                                                                                                                                                                                                                                | ASCII<br>READ<br>COMMAND | #GCPUBACK<CR><br>Result:<br>#GCPUBACK:<CPUBackupVoltage> <CR> | ASCII |  |
|                                                                                                                                                                                                                                                                                                                                               | TX                       | #1,GCPUBACK<CR>                                               |       |  |
|                                                                                                                                                                                                                                                                                                                                               | RX                       | #1,GCPUBACK:0.0006<CR>                                        |       |  |
|                                                                                                                                                                                                                                                                                                                                               |                          | Current backup voltage of CPU:0.0006V                         |       |  |
| Current internal backup capacitor voltage of CPU in Volt.                                                                                                                                                                                                                                                                                     |                          |                                                               |       |  |

| Register<br>NAME                                                                                                                                                                                                                                                                                        | MODBUS<br>Register            | Register<br>VALUE                  | NEW REAL<br>VALUE | NEW<br>VALUE | DATA TYPE     | DO<br>WRITE |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------|-------------------|--------------|---------------|-------------|
| PRODUCT DATA                                                                                                                                                                                                                                                                                            |                               |                                    |                   |              |               |             |
| HW_GROUP                                                                                                                                                                                                                                                                                                | 3x65201<br>4x65201<br>I:65200 | 16384,0x4000<br>B:40 00            |                   |              | UINT16<br>R/O |             |
| This is the group of hardware of the current product                                                                                                                                                                                                                                                    |                               |                                    |                   |              |               |             |
| SW_GROUP                                                                                                                                                                                                                                                                                                | 3x65202<br>4x65202<br>I:65201 | 32802,0x8022<br>B:80 22            |                   |              | UINT16<br>R/O |             |
| This is the group of software of the current product                                                                                                                                                                                                                                                    |                               |                                    |                   |              |               |             |
| SW_VERSION                                                                                                                                                                                                                                                                                              | 3x65203<br>4x65203<br>I:65202 | 4608,0x1200<br>B:12 00             |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                                                                         |                               | SW VERSION:1.2.0                   |                   |              |               |             |
| This is the current software version of the firmware                                                                                                                                                                                                                                                    |                               |                                    |                   |              |               |             |
| SW_AUTHOR                                                                                                                                                                                                                                                                                               | 3x65204<br>4x65204<br>I:65203 | 18771,0x4953<br>B:49 53            |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                                                                         |                               |                                    |                   |              |               |             |
| This is the current software author of the firmware                                                                                                                                                                                                                                                     |                               |                                    |                   |              |               |             |
| MODBUS SETTINGS                                                                                                                                                                                                                                                                                         |                               |                                    |                   |              |               |             |
| UNIT_ID                                                                                                                                                                                                                                                                                                 | 3x65222<br>4x65222<br>I:65221 | 1,0x0001<br>B:00 01                |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                                                                         |                               | UNIT ID:1                          |                   |              |               |             |
| If the host reads this register, the current defined unit ID is returned.                                                                                                                                                                                                                               |                               |                                    |                   |              |               |             |
| FLASH UNIT_ID                                                                                                                                                                                                                                                                                           | 3x65223<br>4x65223<br>I:65222 | 15,0x000F<br>B:00 0F               |                   | 27           | UINT16<br>R/W | NO          |
|                                                                                                                                                                                                                                                                                                         |                               | UNIT ID:15                         |                   |              |               |             |
| If the host reads this register, the current defined unit ID from the FLASH is returned. This UnitID is used if DIP switch for UnitID is set to 15                                                                                                                                                      |                               |                                    |                   |              |               |             |
| HINT:This settings will be active after you repower or reset your device !!                                                                                                                                                                                                                             |                               |                                    |                   |              |               |             |
| BAUD_RATE                                                                                                                                                                                                                                                                                               | 3x65224<br>4x65224<br>I:65223 | 115200,0x0001C200<br>B:00 01 C2 00 | 57600             | 57600        | UINT32<br>R/W | NO          |
|                                                                                                                                                                                                                                                                                                         |                               | 115200Bd                           | ENTER BAUD RATE   |              |               |             |
| This is the current configured baud rate in the FLASH<br>For ULTRA SLIM IOs RESI-xxx-SIO: This baudrate is only used, if DIP switch mode DIP1=ON+DIP2=ON (BR) (default is 57600bd)<br>For BIG IOs RESI-xxx-SIO: This baudrate is only used, if DIP switch mode DIP7=ON (PARAMETER) (default is 57600bd) |                               |                                    |                   |              |               |             |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                                          |  |                 |               |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------|--|-----------------|---------------|-----|
| Valid baud rates are:<br>300bd, 600bd, 900bd, 1200bd, 2400bd, 4800bd,<br>9600bd, 19200bd, 38400bd, 57600bd, 115200bd, 128000bd<br>230400bd, 250000bd, 256000bd                                                                                                                                                                                                                                                                                                                                                       |                               |                                          |  |                 |               |     |
| HINT:This settings will be active after you repower or reset your device !!                                                                                                                                                                                                                                                                                                                                                                                                                                          |                               |                                          |  |                 |               |     |
| PARITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3x65226<br>4x65226<br>I:65225 | 0,0x0000<br>B:00 00                      |  | 1:EVEN PARITY   | UINT16<br>R/W | NO  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | NO PARITY                                |  | SELECT PARITY   |               |     |
| If the register is read out, the currently set parity of the serial interface is returned.<br>Writing a value to this register will change the new parity in FLASH. This will only take effect after a restart of the module. This can be triggered by writing to the RESET SYSTEM register.                                                                                                                                                                                                                         |                               |                                          |  |                 |               |     |
| Parity values are<br>0: no parity<br>1: even parity<br>2: odd parity                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               |                                          |  |                 |               |     |
| STOP BITS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3x65227<br>4x65227<br>I:65226 | 1,0x0001<br>B:00 01                      |  | 2:TWO STOPBITS  | UINT16<br>R/W | NO  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | ONE STOPBIT                              |  | SELECT STOPBITS |               |     |
| If the register is read out, the currently set number of stop bits of the serial interface is returned.<br>Writing a value to this register will change the new number of stop bits in the FLASH. This will only take effect after a restart of the module. This can be triggered by writing to the RESET SYSTEM register.                                                                                                                                                                                           |                               |                                          |  |                 |               |     |
| Values for stop bits are<br>1: one stop bit<br>2: two stop bits                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                                          |  |                 |               |     |
| MODBUS TIMING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3x65228<br>4x65228<br>I:65227 | 0,0x0000<br>B:00 00                      |  | 10              | UINT16<br>R/W | NO  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | Actual timing:0ms                        |  |                 |               |     |
| If the host reads this register, the current defined timing for MODBUS telegrams is returned. This timing is a time in ms which extends the standard 1.5 character timeout between two consecutive bytes on the serial line.<br>If you write a new value to this register, the new settings are stored into the internal FLASH. Reboot the device to activate the new settings.                                                                                                                                      |                               |                                          |  |                 |               |     |
| MODBUS WATCHDOG TIME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3x65229<br>4x65229<br>I:65228 | 0,0x0000<br>B:00 00                      |  | 50              | UINT16<br>R/W | YES |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | Actual watchdog time in 1/100s:0 -> 0,0s |  |                 |               |     |
| Writing a value onto this register defines a new time for the internal communication watchdog timer. The value is a timespan in 1/100s.<br>=0: The communication watchdog is disabled<br>=1..65535: Communication watchdog will be trigegred after x 1/100s pause on communication line<br><br>In case of an communication watchdog, the module sets all outputs to the states defined in the configuration output registers<br><br>Reading this registe will return the current stored time from the internal FLASH |                               |                                          |  |                 |               |     |
| CPU DATA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |                                          |  |                 |               |     |
| SERIAL1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 3x65521<br>4x65521<br>I:65520 | 40,0x0028<br>B:00 28                     |  |                 | UINT16<br>R/O |     |

|                                                                                                                                                                                                                                                                                                                                                                          |                                            |                         |  |  |               |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------------------------|--|--|---------------|--|
| Serial number of module as 96 bit unsigned integer number                                                                                                                                                                                                                                                                                                                |                                            |                         |  |  |               |  |
| SERIAL2                                                                                                                                                                                                                                                                                                                                                                  | 3x65522<br>4x65522<br>I:65521              | 41,0x0029<br>B:00 29    |  |  | UINT16<br>R/O |  |
| SERIAL3                                                                                                                                                                                                                                                                                                                                                                  | 3x65523<br>4x65523<br>I:65522              | 22292,0x5714<br>B:57 14 |  |  | UINT16<br>R/O |  |
| SERIAL4                                                                                                                                                                                                                                                                                                                                                                  | 3x65524<br>4x65524<br>I:65523              | 21827,0x5543<br>B:55 43 |  |  | UINT16<br>R/O |  |
| SERIAL5                                                                                                                                                                                                                                                                                                                                                                  | 3x65525<br>4x65525<br>I:65524              | 13365,0x3435<br>B:34 35 |  |  | UINT16<br>R/O |  |
| SERIAL6                                                                                                                                                                                                                                                                                                                                                                  | 3x65526<br>4x65526<br>I:65525              | 8249,0x2039<br>B:20 39  |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                                                                          | SERIAL:280029001457435535343920            |                         |  |  |               |  |
| Serial number of module as 96 bit unsigned integer number                                                                                                                                                                                                                                                                                                                |                                            |                         |  |  |               |  |
| CPU TEMPERATURE                                                                                                                                                                                                                                                                                                                                                          | 3x65527<br>4x65527<br>I:65526              | 3770,0x0EBA<br>B:0E BA  |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                                                                          | Current internal temperature of CPU:37,7°C |                         |  |  |               |  |
| Current internal temperature of CPU in ° Celsius multiplied by 10.                                                                                                                                                                                                                                                                                                       |                                            |                         |  |  |               |  |
| CPU VOLTAGE                                                                                                                                                                                                                                                                                                                                                              | 3x65528<br>4x65528<br>I:65527              | 336,0x0150<br>B:01 50   |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                                                                          | Current supply voltage of CPU:3,36V        |                         |  |  |               |  |
| Current internal supply voltage of CPU in Volt multiplied by 1000.                                                                                                                                                                                                                                                                                                       |                                            |                         |  |  |               |  |
| CPU BACKUP VOLTAGE                                                                                                                                                                                                                                                                                                                                                       | 3x65529<br>4x65529<br>I:65528              | 0,0x0000<br>B:00 00     |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                                                                          | Current backup voltage of CPU:0,00V        |                         |  |  |               |  |
| Current internal backup capacitor voltage of CPU in Volt multiplied by 1000.                                                                                                                                                                                                                                                                                             |                                            |                         |  |  |               |  |
| DIP SWITCH STATUS                                                                                                                                                                                                                                                                                                                                                        |                                            |                         |  |  |               |  |
| DIP SWITCH                                                                                                                                                                                                                                                                                                                                                               | 3x65300<br>4x65300<br>I:65299              | 65,0x0041<br>B:00 41    |  |  | UINT16<br>R/O |  |
| Returns the current setting of the Dip switches.<br>Bit 0: DIP Switch 1 (=0:OFF, =1:ON)<br>Bit 1: DIP Switch 2 (=0:OFF, =1:ON)<br>Bit 2: DIP Switch 3 (=0:OFF, =1:ON)<br>Bit 3: DIP Switch 4 (=0:OFF, =1:ON)<br>Bit 4: DIP Switch 5 (=0:OFF, =1:ON)<br>Bit 5: DIP Switch 6 (=0:OFF, =1:ON)<br>Bit 6: DIP Switch 7 (=0:OFF, =1:ON)<br>Bit 7: DIP Switch 8 (=0:OFF, =1:ON) |                                            |                         |  |  |               |  |

|                                                                                                                                                      |                               |                     |  |                         |               |    |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------|--|-------------------------|---------------|----|
| CONVERTER STATUS                                                                                                                                     |                               |                     |  |                         |               |    |
| CONVERTER STATUS                                                                                                                                     | 3x65534<br>4x65534<br>I:65533 | 0,0x0000<br>B:00 00 |  |                         | UINT16<br>R/O |    |
| Current status of the converter                                                                                                                      |                               |                     |  |                         |               |    |
| FACTORY RESET                                                                                                                                        | 3x65535<br>4x65535<br>I:65534 | 0,0x0000<br>B:00 00 |  | 1:PERFORM FACTORY RESET | UINT16<br>R/W | NO |
| Performs a factory reset of all internal saved parameters                                                                                            |                               |                     |  |                         |               |    |
| SOFTWARE RESET                                                                                                                                       |                               |                     |  |                         |               |    |
| RESET                                                                                                                                                | 1x65536<br>2x65536<br>I:65535 | 0,0x00<br>B:00      |  | N/A:NO CHANGE           | BIT<br>R/W    | NO |
| Performs a software reset, whenever 1 is written to this register. If the host writes to this register 1, the module executes a soft reset (reboot). |                               |                     |  |                         |               |    |
| RESET                                                                                                                                                | 3x65536<br>4x65535<br>I:65535 | 0,0x0000<br>B:00 00 |  | N/A:NO CHANGE           | UINT16<br>R/W | NO |
| Performs a software reset, whenever 1 is written to this register. If the host writes to this register 1, the module executes a soft reset (reboot). |                               |                     |  |                         |               |    |

| Command NAME                                                                                                                                                                                                                                                                                                                                                                                                     | ASCII command type | ASCII command structure                                                 | NEW REAL VALUE | NEW VALUE | DATA TYPE | DO WRITE |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------|----------------|-----------|-----------|----------|
| ASCII COMMANDS                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                                                                         |                |           |           |          |
| DIGITAL INPUTS                                                                                                                                                                                                                                                                                                                                                                                                   |                    |                                                                         |                |           |           |          |
| GET DIGITAL INPUTS                                                                                                                                                                                                                                                                                                                                                                                               | ASCII READ COMMAND | #GDIS<CR><br>Result:<br>#GDIS:<DISDec>,<DISHex><CR>                     |                |           | ASCII     |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                  | TX                 | #1,GDIS<CR>                                                             |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                  | RX                 | #1,GDIS:2147483648,0x80000000<CR>                                       |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                  |                    | Actual status of digital inputs:1000.0000.0000.0000.0000.0000.0000.0000 |                |           |           |          |
| Returns the actual state of all digital inputs as decimal number and as hexadecimal number.<br>DISDec, DISHex<br>The current state of all digital inputs:<br>Bit 0: State of DI1 (=0:OFF, =1:ON)<br>Bit 1: State of DI2 (=0:OFF, =1:ON)<br>Bit 2: State of DI3 (=0:OFF, =1:ON)<br>...<br>Bit 29: State of DI30 (=0:OFF, =1:ON)<br>Bit 30: State of DI31 (=0:OFF, =1:ON)<br>Bit 31: State of DI32 (=0:OFF, =1:ON) |                    |                                                                         |                |           |           |          |
| GET DIGITAL INPUT Dlx                                                                                                                                                                                                                                                                                                                                                                                            | ASCII READ COMMAND | #GDI<DINR><CR><br>Result:<br>#GDI<DINR>:<DlxDec>,<DlxHex><CR>           |                |           | ASCII     |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                  | DINR               | 1                                                                       |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                  | TX                 | #1,GDI1<CR>                                                             |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                  | RX                 | #1,GDI1:0,0x0<CR>                                                       |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                  |                    | Actual status of digital input DI1:0=OFF                                |                |           |           |          |
| <DINR>: 1=DI1..32=DI32                                                                                                                                                                                                                                                                                                                                                                                           |                    |                                                                         |                |           |           |          |
| Returns the actual state of the digital input Dlx as decimal number and as hexadecimal number.<br>DlxDec, DlxHex:<br>The current state of the digital input x:<br>=0: Digital input is OFF<br>=1: Digital input is ON                                                                                                                                                                                            |                    |                                                                         |                |           |           |          |
| GET ALL CHANGES                                                                                                                                                                                                                                                                                                                                                                                                  | ASCII READ COMMAND | #GAC<CR><br>Result:<br>#GAC:<ChangesDec>,<ChangesHex><CR>               |                |           | ASCII     |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                  | TX                 | #1,GAC<CR>                                                              |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                  | RX                 | #1,GAC:1,0x1<CR>                                                        |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                  |                    | Actual change counter:1                                                 |                |           |           |          |
| Returns the counter for changes on all digital inputs.<br>As soon as the module detects a short keypress or long key press or long key release event, this counter is incremented by 1.<br>If this values has changed sience the last polling request, the host knows, that at least one digital input has changed its state.                                                                                    |                    |                                                                         |                |           |           |          |

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|                                                                                                                                                                                                               |                          |                                                                                                                                                               |       |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--|
| SHORT KEY ALL DIS<br>PART x                                                                                                                                                                                   | ASCII<br>READ<br>COMMAND | #SKADISP<PART> <CR><br>Result:<br>#SKADISP<PART>:<ShortKeyDInDec>,...,<ShortKeyDIn+15Dec>,<br><ShortKeyDInHex>,...,<ShortKeyDIn+15Hex> <CR>                   | ASCII |  |
|                                                                                                                                                                                                               | PART                     | 2                                                                                                                                                             |       |  |
|                                                                                                                                                                                                               | TX                       | #1,SKADISP2<CR>                                                                                                                                               |       |  |
|                                                                                                                                                                                                               | RX                       | #1,SKADISP2:0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0x0,0x0,0x0,0x0,0x0,0x0,0x0,0x0,0x0,0x0,0x0,0x0,0x0,0x0,0x0,0x0<CR>                                               |       |  |
|                                                                                                                                                                                                               |                          | Actual counter for short keypress events on DI17:0                                                                                                            |       |  |
|                                                                                                                                                                                                               |                          | Actual counter for short keypress events on DI18:0                                                                                                            |       |  |
|                                                                                                                                                                                                               |                          | Actual counter for short keypress events on DI19:0                                                                                                            |       |  |
|                                                                                                                                                                                                               |                          | Actual counter for short keypress events on DI20:0                                                                                                            |       |  |
|                                                                                                                                                                                                               |                          | Actual counter for short keypress events on DI21:0                                                                                                            |       |  |
|                                                                                                                                                                                                               |                          | Actual counter for short keypress events on DI22:0                                                                                                            |       |  |
|                                                                                                                                                                                                               |                          | Actual counter for short keypress events on DI23:0                                                                                                            |       |  |
|                                                                                                                                                                                                               |                          | Actual counter for short keypress events on DI24:0                                                                                                            |       |  |
|                                                                                                                                                                                                               |                          | Actual counter for short keypress events on DI25:0                                                                                                            |       |  |
|                                                                                                                                                                                                               |                          | Actual counter for short keypress events on DI26:0                                                                                                            |       |  |
|                                                                                                                                                                                                               |                          | Actual counter for short keypress events on DI27:0                                                                                                            |       |  |
|                                                                                                                                                                                                               |                          | Actual counter for short keypress events on DI28:0                                                                                                            |       |  |
|                                                                                                                                                                                                               |                          | Actual counter for short keypress events on DI29:0                                                                                                            |       |  |
|                                                                                                                                                                                                               |                          | Actual counter for short keypress events on DI30:0                                                                                                            |       |  |
|                                                                                                                                                                                                               |                          | Actual counter for short keypress events on DI31:0                                                                                                            |       |  |
|                                                                                                                                                                                                               |                          | Actual counter for short keypress events on DI32:0                                                                                                            |       |  |
| <PART>: 1..2, 1=DI1-DI16, 2=DI17-DI32                                                                                                                                                                         |                          |                                                                                                                                                               |       |  |
| Returns for each digital input the counter for short keypress events. As soon as the module detects a short keypress on a digital input, the counter for the affected digital input is incremented by 1.      |                          |                                                                                                                                                               |       |  |
| The parameter <PART> defines the part of the digital inputs. The command returns maximal 16 digital inputs.                                                                                                   |                          |                                                                                                                                                               |       |  |
| SHORT KEY DIx                                                                                                                                                                                                 | ASCII<br>READ<br>COMMAND | #SKDI<DINR> <CR><br>Result:<br>#SKDI<DINR>:<ShortKeyDec>,<ShortKeyHex> <CR>                                                                                   | ASCII |  |
|                                                                                                                                                                                                               | DINR                     | 1                                                                                                                                                             |       |  |
|                                                                                                                                                                                                               | TX                       | #1,SKDI1<CR>                                                                                                                                                  |       |  |
|                                                                                                                                                                                                               | RX                       | #1,SKDI1:0,0x0<CR>                                                                                                                                            |       |  |
|                                                                                                                                                                                                               |                          | Actual counter for short keypress events on digital input DI1:0                                                                                               |       |  |
| <DINR>: 1=DI1..32=DI32                                                                                                                                                                                        |                          |                                                                                                                                                               |       |  |
| Returns for digital input <DINR> the counter for short keypress events.<br>As soon as the module detects a short keypress on a digital input, the counter for the affected digital input is incremented by 1. |                          |                                                                                                                                                               |       |  |
| LONG KEY START ALL DIS<br>PART x                                                                                                                                                                              | ASCII<br>READ<br>COMMAND | #LKSADISP<PART> <CR><br>Result:<br>#LKSADISP<PART>:<LongKeyStartDInDec>,...,<LongKeyStartDIn+15Dec>,<br><LongKeyStartDInHex>,...,<LongKeyStartDIn+15Hex> <CR> | ASCII |  |
|                                                                                                                                                                                                               | PART                     | 2                                                                                                                                                             |       |  |

The parameter <PART> defines the part of the digital inputs. The command returns maximal 16 digital inputs.

Returns for digital input <DINR> the counter for long keypress start events.  
As soon as the module detects the start of a long keypress on a digital input, the counter for the affected digital input is incremented by 1.

[illegible]

|                                                                                                                                                                                                                            |                          |                                                                                                                              |  |       |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------|--|-------|--|
| <DINR>: 1=DI1..32=DI32                                                                                                                                                                                                     |                          |                                                                                                                              |  |       |  |
| Returns for digital input <DINR> the counter for long keypress end events.<br>As soon as the module detects the end of a long keypress on a digital input, the counter for the affected digital input is incremented by 1. |                          |                                                                                                                              |  |       |  |
| RISE ALL DIS<br>PART x                                                                                                                                                                                                     | ASCII<br>READ<br>COMMAND | #RADISP<PART><CR><br>Result:<br>#RADISP<PART>:<RiseDInDec>, ..., <RiseDIn+15Dec>,<br><RiseDInHex>, ..., <RiseDIn+15Hex> <CR> |  | ASCII |  |
|                                                                                                                                                                                                                            | PART                     | 2                                                                                                                            |  |       |  |
|                                                                                                                                                                                                                            | TX                       | #1,RADISP2<CR>                                                                                                               |  |       |  |
|                                                                                                                                                                                                                            | RX                       | #1,RADISP2:0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1,0x0,0x0,0x0,0x0,0x0,0x0,0x0,0x0,0x0,0x0,0x0,0x0,0x0,0x0,0x1<CR>                   |  |       |  |
|                                                                                                                                                                                                                            |                          | Actual counter for rising edges on DI17:0                                                                                    |  |       |  |
|                                                                                                                                                                                                                            |                          | Actual counter for rising edges on DI18:0                                                                                    |  |       |  |
|                                                                                                                                                                                                                            |                          | Actual counter for rising edges on DI19:0                                                                                    |  |       |  |
|                                                                                                                                                                                                                            |                          | Actual counter for rising edges on DI20:0                                                                                    |  |       |  |
|                                                                                                                                                                                                                            |                          | Actual counter for rising edges on DI21:0                                                                                    |  |       |  |
|                                                                                                                                                                                                                            |                          | Actual counter for rising edges on DI22:0                                                                                    |  |       |  |
|                                                                                                                                                                                                                            |                          | Actual counter for rising edges on DI23:0                                                                                    |  |       |  |

[illegible]

|                                                                                                                                                                                                                  |                           |                                                                   |       |    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------|-------|----|
|                                                                                                                                                                                                                  |                           | Actual counter for falling edges on DI29:0                        |       |    |
|                                                                                                                                                                                                                  |                           | Actual counter for falling edges on DI30:0                        |       |    |
|                                                                                                                                                                                                                  |                           | Actual counter for falling edges on DI31:0                        |       |    |
|                                                                                                                                                                                                                  |                           | Actual counter for falling edges on DI32:0                        |       |    |
| <PART>: 1..2, 1=DI1-DI16, 2=DI17-DI32                                                                                                                                                                            |                           |                                                                   |       |    |
| Returns for each digital input the counter for falling edges. As soon as the module detects a falling edge on a digital input, the falling edge counter for the affected digital input is incremented by 1.      |                           |                                                                   |       |    |
| The parameter <PART> defines the part of the digital inputs. The command returns maximal 16 digital inputs.                                                                                                      |                           |                                                                   |       |    |
| FALL Dix                                                                                                                                                                                                         | ASCII<br>READ<br>COMMAND  | #FDI<DINR> <CR><br>Result:<br>#FDI<DINR>:<FallDec>,<FallHex> <CR> | ASCII |    |
|                                                                                                                                                                                                                  | DINR                      | 1                                                                 |       |    |
|                                                                                                                                                                                                                  | TX                        | #1,FDI1<CR>                                                       |       |    |
|                                                                                                                                                                                                                  | RX                        | #1,FDI1:0,0x0<CR>                                                 |       |    |
|                                                                                                                                                                                                                  |                           | Actual counter for falling edges on digital input DI1:0           |       |    |
| <DINR>: 1=DI1..32=DI32                                                                                                                                                                                           |                           |                                                                   |       |    |
| Returns for digital input <DINR> the counter for falling edges.<br>As soon as the module detects a falling edge on a digital input, the falling edge counter for the affected digital input is incremented by 1. |                           |                                                                   |       |    |
| RESET COUNTERS                                                                                                                                                                                                   | ASCII<br>WRITE<br>COMMAND | #RC <CR><br>Result:<br>#OK <CR>                                   | ASCII | NO |
|                                                                                                                                                                                                                  | TX                        | #1,RC<CR>                                                         |       |    |
|                                                                                                                                                                                                                  | RX                        | N/A                                                               |       |    |
| Resets all internal counters for digital inputs and events on this digital inputs to 0.                                                                                                                          |                           |                                                                   |       |    |
| <b>DIGITAL INPUTS EVENTS</b>                                                                                                                                                                                     |                           |                                                                   |       |    |
| EVENTS ON                                                                                                                                                                                                        | ASCII<br>WRITE<br>COMMAND | #EVTON<CR><br>Result:<br>#OK <CR>                                 | ASCII | NO |
|                                                                                                                                                                                                                  | TX                        | #1,EVTON<CR>                                                      |       |    |
|                                                                                                                                                                                                                  | RX                        | #1,OK<CR>                                                         |       |    |
| Activates event sending of changes on digital inputs                                                                                                                                                             |                           |                                                                   |       |    |
| Whenever a change is detected on the digital inputs, the IO module sends immediately<br>#<BusAdr>,EVT:DIS:<AlIDISasDec>,<AlIDISasHex> <CR>                                                                       |                           |                                                                   |       |    |
| EVENTS OFF                                                                                                                                                                                                       | ASCII<br>WRITE<br>COMMAND | #EVTOFF<CR><br>Result:<br>#OK <CR>                                | ASCII | NO |
|                                                                                                                                                                                                                  | TX                        | #1,EVTOFF<CR>                                                     |       |    |
|                                                                                                                                                                                                                  | RX                        | #1,OK<CR>                                                         |       |    |
| Deactivates event sending of changes on digital inputs                                                                                                                                                           |                           |                                                                   |       |    |
| Whenever a change is detected on the digital inputs, the IO module sends immediately<br>#<BusAdr>,EVT:DIS:<AlIDISasDec>,<AlIDISasHex> <CR>                                                                       |                           |                                                                   |       |    |

| Command NAME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ASCII command type  | ASCII command structure                                                       | NEW REAL VALUE | NEW VALUE | DATA TYPE | DO WRITE |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------|----------------|-----------|-----------|----------|
| ASCII COMMANDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |                                                                               |                |           |           |          |
| DIGITAL OUTPUTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                     |                                                                               |                |           |           |          |
| UPDATE DIGITAL INPUTS AND OUTPUTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ASCII WRITE COMMAND | #UDIOS:<OutAllDOS> <CR><br>Result:<br>#UDIOS:<InAllDISDec>,<InAllDISHex> <CR> |                |           | ASCII     | YES      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DO1                 | 0:OFF                                                                         |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DO2                 | 0:OFF                                                                         |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DO3                 | 0:OFF                                                                         |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DO4                 | 0:OFF                                                                         |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DO5                 | 0:OFF                                                                         |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DO6                 | 0:OFF                                                                         |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DO7                 | 0:OFF                                                                         |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DO8                 | 0:OFF                                                                         |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DO9                 | 0:OFF                                                                         |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DO10                | 0:OFF                                                                         |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DO11                | 0:OFF                                                                         |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DO12                | 0:OFF                                                                         |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TX                  | #1,UDIOS:0<CR>                                                                |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | RX                  | #1,UDIOS:2147483648,0x80000000<CR>                                            |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                     | Actual status of digital inputs:1000.0000.0000.0000.0000.0000.0000.0000       |                |           |           |          |
| <p>Sets all digital outputs to the new state OutAllDOS and gives back the current status of all digital inputs InAllDIS as decimal and hexadecimal value</p> <p>OutAllDOS: The new state for all digital outputs<br/>Bit 0: State of DO1 (=0:OFF, =1:ON)<br/>Bit 1: State of DO2 (=0:OFF, =1:ON)<br/>Bit 2: State of DO3 (=0:OFF, =1:ON)<br/>...<br/>Bit 9: State of DO10 (=0:OFF, =1:ON)<br/>Bit 10: State of DO10 (=0:OFF, =1:ON)<br/>Bit 11: State of DO12 (=0:OFF, =1:ON)</p> <p>InAllDIS: The current state for all digital inputs<br/>Bit 0: State of DI1 (=0:OFF, =1:ON)<br/>Bit 1: State of DI2 (=0:OFF, =1:ON)<br/>Bit 2: State of DI3 (=0:OFF, =1:ON)<br/>...<br/>Bit 29: State of DI30 (=0:OFF, =1:ON)<br/>Bit 30: State of DI31 (=0:OFF, =1:ON)<br/>Bit 31: State of DI32 (=0:OFF, =1:ON)</p> |                     |                                                                               |                |           |           |          |
| SET DIGITAL OUTPUTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ASCII WRITE COMMAND | #SDOS:<OutAllDOS> <CR><br>Result:<br>#OK<CR>                                  |                |           | ASCII     | YES      |

|                                                                                                                                                                                                                                                                                                                                                                       |                           |                                                      |       |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------------------------------------------|-------|----|
|                                                                                                                                                                                                                                                                                                                                                                       | DO1                       | 0:OFF                                                |       |    |
|                                                                                                                                                                                                                                                                                                                                                                       | DO2                       | 0:OFF                                                |       |    |
|                                                                                                                                                                                                                                                                                                                                                                       | DO3                       | 0:OFF                                                |       |    |
|                                                                                                                                                                                                                                                                                                                                                                       | DO4                       | 0:OFF                                                |       |    |
|                                                                                                                                                                                                                                                                                                                                                                       | DO5                       | 0:OFF                                                |       |    |
|                                                                                                                                                                                                                                                                                                                                                                       | DO6                       | 0:OFF                                                |       |    |
|                                                                                                                                                                                                                                                                                                                                                                       | DO7                       | 0:OFF                                                |       |    |
|                                                                                                                                                                                                                                                                                                                                                                       | DO8                       | 0:OFF                                                |       |    |
|                                                                                                                                                                                                                                                                                                                                                                       | DO9                       | 0:OFF                                                |       |    |
|                                                                                                                                                                                                                                                                                                                                                                       | DO10                      | 0:OFF                                                |       |    |
|                                                                                                                                                                                                                                                                                                                                                                       | DO11                      | 0:OFF                                                |       |    |
|                                                                                                                                                                                                                                                                                                                                                                       | DO12                      | 0:OFF                                                |       |    |
|                                                                                                                                                                                                                                                                                                                                                                       | TX                        | #1,SDOS:0<CR>                                        |       |    |
|                                                                                                                                                                                                                                                                                                                                                                       | RX                        | #1,OK<CR>                                            |       |    |
| <div>Sets all digital outputs to the new state OutAllDOS<br/>The new state for all digital outputs<br/>Bit 0: State of DO1 (=0:OFF, =1:ON)<br/>Bit 1: State of DO2 (=0:OFF, =1:ON)<br/>Bit 2: State of DO3 (=0:OFF, =1:ON)<br/>...<br/>Bit 9: State of DO10 (=0:OFF, =1:ON)<br/>Bit 10: State of DO11 (=0:OFF, =1:ON)<br/>Bit 11: State of DO12 (=0:OFF, =1:ON)</div> |                           |                                                      |       |    |
| SET DIGITAL OUTPUT DOx                                                                                                                                                                                                                                                                                                                                                | ASCII<br>WRITE<br>COMMAND | #SDO<DONR>:<Out> <CR><br>Result:<br>#OK<CR>          | ASCII | NO |
|                                                                                                                                                                                                                                                                                                                                                                       | DONR                      | 2                                                    |       |    |
|                                                                                                                                                                                                                                                                                                                                                                       | DOx                       | 0:OFF                                                |       |    |
|                                                                                                                                                                                                                                                                                                                                                                       | TX                        | #1,SDO2:0<CR>                                        |       |    |
|                                                                                                                                                                                                                                                                                                                                                                       | RX                        | N/A                                                  |       |    |
| <DONR>: 1=DO1..12=DO12                                                                                                                                                                                                                                                                                                                                                |                           |                                                      |       |    |
| <div>Sets the new state for digital output DOx. The state is defined with &lt;Out&gt;.<br/>Out<br/>The new state of the digital output DOx:<br/>=0: digital output is OFF<br/>=1: digital output is ON</div>                                                                                                                                                          |                           |                                                      |       |    |
| GET DIGITAL OUTPUTS                                                                                                                                                                                                                                                                                                                                                   | ASCII<br>READ<br>COMMAND  | #GDOS<CR><br>Result:<br>#GDOS:<DOSDec>,<DOSHex> <CR> | ASCII |    |
|                                                                                                                                                                                                                                                                                                                                                                       | TX                        | #1,GDOS<CR>                                          |       |    |
|                                                                                                                                                                                                                                                                                                                                                                       | RX                        | N/A                                                  |       |    |
|                                                                                                                                                                                                                                                                                                                                                                       |                           | Actual status of digital outputs:0000.0000.0000      |       |    |

|                                                                                                                                                                                                                                                                                                                                                                                                                                       |                           |                                                                 |       |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------------------------------------------------------|-------|-----|
| <div>Returns the actual state of the digital outputs as decimal number and as hexadecimal number.<br/>DOSDec, DOSHex<br/>The current state of the digital outputs:<br/>Bit 0: State of DO1 (=0:OFF, =1:ON)<br/>Bit 1: State of DO2 (=0:OFF, =1:ON)<br/>Bit 2: State of DO3 (=0:OFF, =1:ON)<br/>...<br/>Bit 9: State of DO10 (=0:OFF, =1:ON)<br/>Bit 10: State of DO11 (=0:OFF, =1:ON)<br/>Bit 11: State of DO12 (=0:OFF, =1:ON)</div> |                           |                                                                 |       |     |
| GET DIGITAL OUTPUT DOx                                                                                                                                                                                                                                                                                                                                                                                                                | ASCII<br>READ<br>COMMAND  | #GDO<DONR> <CR><br>Result:<br>#GDO<DONR>:<DOxDec>,<DOxHex> <CR> | ASCII |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                       | DONR                      | 2                                                               |       |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                       | TX                        | #1,GDO2<CR>                                                     |       |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                       | RX                        | N/A                                                             |       |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                       |                           | Actual status of digital output DO2:N/A=ON                      |       |     |
| <div>Returns the actual state of the digital output DOx as decimal number and as hexadecimal number.<br/>DOxDec, DOxHex<br/>The current state of the digital output DOx:<br/>=0: relay output is OFF<br/>=1: relay output is ON</div>                                                                                                                                                                                                 |                           |                                                                 |       |     |
| DIGITAL OUTPUTS: PULSE OUTPUT                                                                                                                                                                                                                                                                                                                                                                                                         |                           |                                                                 |       |     |
| PULSE DOx                                                                                                                                                                                                                                                                                                                                                                                                                             | ASCII<br>WRITE<br>COMMAND | #PDO<DONR>:<Time> <CR><br>Result:<br>#OK<CR>                    | ASCII | YES |
|                                                                                                                                                                                                                                                                                                                                                                                                                                       | DONR                      | 2                                                               |       |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                       | TIME                      | 200                                                             |       |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                       | TX                        | #1,PDO2:200<CR>                                                 |       |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                       | RX                        | #1,OK<CR>                                                       |       |     |
| <DONR>: 1=DO1..12=DO12                                                                                                                                                                                                                                                                                                                                                                                                                |                           |                                                                 |       |     |
| <Time>: 0..65535*100ms                                                                                                                                                                                                                                                                                                                                                                                                                |                           |                                                                 |       |     |
| <div>This command switches the digital output DOx on for the pulse duration &lt;PulseTimeIn100ms&gt;*100ms.<br/>PulseTimeIn100ms: A duration in 100ms units.<br/>The corresponding digital output is switched on for this time period.</div>                                                                                                                                                                                          |                           |                                                                 |       |     |
| GET PULSE TIMER DOx                                                                                                                                                                                                                                                                                                                                                                                                                   | ASCII<br>READ<br>COMMAND  | #GPT<DONR> <CR><br>Result:<br>#GPT:<TimeDec>,<TimeHex> <CR>     | ASCII |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                       | DONR                      | 2                                                               |       |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                       | TX                        | #1,GPT2<CR>                                                     |       |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                       | RX                        | N/A                                                             |       |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                       |                           | #WERT!                                                          |       |     |
| <DONR>: 1=DO1..12=DO12                                                                                                                                                                                                                                                                                                                                                                                                                |                           |                                                                 |       |     |
| <div>Returns the remaining timer value of the pulse for digital output DOx in ms.<br/>PulseTimeInMSDec, PulseTimeInMSHex<br/>The remaining time of the pulse in Milliseconds</div>                                                                                                                                                                                                                                                    |                           |                                                                 |       |     |

**FAN COIL #1-#3**

|                  |                           |                                             |       |     |
|------------------|---------------------------|---------------------------------------------|-------|-----|
| SET FAN COIL FCx | ASCII<br>WRITE<br>COMMAND | #SFC<FCNR>:<Mode><CR><br>Result:<br>#OK<CR> | ASCII | YES |
|                  | FCNR                      | 1                                           |       |     |
|                  | MODE                      | 9999:DEACTIVATED                            |       |     |
|                  | TX                        | #1,SFC1:9999<CR>                            |       |     |
|                  | RX                        | #1,OK<CR>                                   |       |     |

Sets a new mode for FAN COIL functionality on RO1, RO2 and RO3 of fan coil group.

Fan coil groups: 1:RO1,RO2,RO3, 2:RO5,RO6,RO7, 3:RO9,RO10,RO11

=9999: This function is not used

=0: All three ROs are OFF

=1: STAGE 1: RO1 is ON, RO2,RO3 are OFF

=2: STAGE 2: RO2 is ON, RO1,RO3 are OFF

=3: STAGE 3: RO3 is ON, RO1,RO2 are OFF

In this mode the module inserts a pause with no outputs on, when switching from one stage to another stage. Also a minimum time for each stage is maintained by the module

|                  |                          |                                                                 |       |  |
|------------------|--------------------------|-----------------------------------------------------------------|-------|--|
| GET FAN COIL FCx | ASCII<br>READ<br>COMMAND | #GFC<FCNR><CR><br>Result:<br>#GFC<FCNR>:<ModeDec>,<ModeHex><CR> | ASCII |  |
|                  | FCNR                     | 1                                                               |       |  |
|                  | TX                       | #1,GFC1<CR>                                                     |       |  |
|                  | RX                       | N/A                                                             |       |  |
|                  |                          | Current mode for FC:N/A->???                                    |       |  |

Current mode for FAN COIL functionality on RO1, RO2 and RO3 of fan coil group:

=9999: This function is not used

=0: All three ROs are OFF

=1: STAGE 1: RO1 is ON, RO2,RO3 are OFF

=2: STAGE 2: RO2 is ON, RO1,RO3 are OFF

=3: STAGE 3: RO3 is ON, RO1,RO2 are OFF

In this mode the module inserts a pause with no outputs on, when switching from one stage to another stage. Also a minimum time for each stage is maintained by the module

|                    |                           |                                               |       |     |
|--------------------|---------------------------|-----------------------------------------------|-------|-----|
| SET PAUSE TIME FCx | ASCII<br>WRITE<br>COMMAND | #SPTFC<FCNR>:<Time><CR><br>Result:<br>#OK<CR> | ASCII | YES |
|                    | FCNR                      | 1                                             |       |     |
|                    | TIME                      | 3,123                                         |       |     |
|                    | TX                        | #1,SPTFC1:3123<CR>                            |       |     |
|                    | RX                        | #1,OK<CR>                                     |       |     |

Sets a new pause time with no relays ON between stage switching. Time is defined in 1ms units (0 to 65,535 Seconds selectable)

|                    |                          |                                                                     |       |  |
|--------------------|--------------------------|---------------------------------------------------------------------|-------|--|
| GET PAUSE TIME FCx | ASCII<br>READ<br>COMMAND | #GPTFC<FCNR><CR><br>Result:<br>#GPTFC<FCNR>:<TimeDec>,<TimeHex><CR> | ASCII |  |
|                    | FCNR                     | 1                                                                   |       |  |
|                    | TX                       | #1,GPTFC1<CR>                                                       |       |  |

|                                                                                                                                                                                 |                           |                                                                     |       |     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------------------------------------------|-------|-----|
|                                                                                                                                                                                 | RX                        | N/A                                                                 |       |     |
|                                                                                                                                                                                 |                           | #WERT!                                                              |       |     |
| Returns the pause time with no relays ON between stage switching. Time is defined in 1ms units (0 to 65,535 Seconds selectable)                                                 |                           |                                                                     |       |     |
| SET STAGE TIME FCx                                                                                                                                                              | ASCII<br>WRITE<br>COMMAND | #SSTFC<FCNR>:<Time><CR><br>Result:<br>#OK<CR>                       | ASCII | YES |
|                                                                                                                                                                                 | FCNR                      | 1                                                                   |       |     |
|                                                                                                                                                                                 | TIME                      | 7,250                                                               |       |     |
|                                                                                                                                                                                 | TX                        | #1,SSTFC1:7250<CR>                                                  |       |     |
|                                                                                                                                                                                 | RX                        | #1,OK<CR>                                                           |       |     |
| Sets the minimum time for a stage in 1ms units. If the module activates a new stage 1 to 3, it keeps this stage at least for this time span, before chaning to another stage.   |                           |                                                                     |       |     |
| GET STAGE TIME FCx                                                                                                                                                              | ASCII<br>READ<br>COMMAND  | #GSTFC<FCNR><CR><br>Result:<br>#GSTFC<FCNR>:<TimeDec>,<TimeHex><CR> | ASCII |     |
|                                                                                                                                                                                 | FCNR                      | 1                                                                   |       |     |
|                                                                                                                                                                                 | TX                        | #1,GSTFC1<CR>                                                       |       |     |
|                                                                                                                                                                                 | RX                        | N/A                                                                 |       |     |
|                                                                                                                                                                                 |                           | #WERT!                                                              |       |     |
| Returns the minium time for a stage in 1ms units. If the module activates a new stage 1 to 3, it keeps this stage at least for this time span, before chaning to another stage. |                           |                                                                     |       |     |

| Command NAME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ASCII command type  | ASCII command structure                                | NEW REAL VALUE | NEW VALUE | DATA TYPE | DO WRITE |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------------------------------------|----------------|-----------|-----------|----------|
| ASCII COMMANDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |                                                        |                |           |           |          |
| DIGITAL OUTPUTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                     |                                                        |                |           |           |          |
| INITIAL & WATCHDOG STATE FOR DIGITAL OUTPUTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                     |                                                        |                |           |           |          |
| SET INITIAL & WATCHDOG STATE FOR DIGITAL OUTPUTS                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ASCII WRITE COMMAND | #SCDOS:<OutAllDOS> <CR><br>Result:<br>#OK<CR>          |                |           | ASCII     | YES      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DO1                 | 0:OFF                                                  |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DO2                 | 0:OFF                                                  |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DO3                 | 0:OFF                                                  |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DO4                 | 0:OFF                                                  |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DO5                 | 0:OFF                                                  |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DO6                 | 0:OFF                                                  |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DO7                 | 0:OFF                                                  |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DO8                 | 0:OFF                                                  |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DO9                 | 0:OFF                                                  |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DO10                | 0:OFF                                                  |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DO11                | 0:OFF                                                  |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DO12                | 0:OFF                                                  |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | TX                  | #1,SCDOS:0<CR>                                         |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | RX                  | #1,OK<CR>                                              |                |           |           |          |
| <p>This command sets all digital outputs to a new state for controller restart and watchdog function. The state is saved in FRAM. This state is used after power on and after a communication watchdog timeout, if a watchdog time is configured.</p> <p>OutAllDOS<br/>The new state for the digital outputs:<br/>Bit 0: New state of DO1 (=0:OFF, =1:ON)<br/>Bit 1: New state of DO2 (=0:OFF, =1:ON)<br/>...<br/>Bit 10: New state of DO11 (=0:OFF, =1:ON)<br/>Bit 11: New state of DO12 (=0:OFF, =1:ON)</p> |                     |                                                        |                |           |           |          |
| GET INITIAL & WATCHDOG STATE FOR DIGITAL OUTPUTS                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ASCII READ COMMAND  | #GCDOS<CR><br>Result:<br>#GCDOS:<DOSDec>,<DOSHex> <CR> |                |           | ASCII     |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | TX                  | #1,GCDOS<CR>                                           |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | RX                  | #1,GCDOS:0,0x0<CR>                                     |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                     | Init & watchdog configuration for digital outputs:     |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                     | DO1-DO12:0000.0000.0000                                |                |           |           |          |

Returns the actual initial and watchdog state of the digital outputs as decimal number and as hexadecimal number. This state is used after power on and after a communication watchdog timeout, if a watchdog time is configured

DOSDec, DOSHex  
The current state of the digital outputs:  
Bit 0: State of DO1 (=0:OFF, =1:ON)  
Bit 1: State of DO2 (=0:OFF, =1:ON)  
...  
Bit 10: State of DO11 (=0:OFF, =1:ON)  
Bit 11: State of DO12 (=0:OFF, =1:ON)

| Register NAME<br>Command NAME                                       | MODBUS<br>Register<br>ASCII<br>Command | Register VALUE<br>ASCII Command | NEW REAL<br>VALUE | NEW<br>VALUE | DATA TYPE  | DO<br>WRITE |
|---------------------------------------------------------------------|----------------------------------------|---------------------------------|-------------------|--------------|------------|-------------|
| STATUS DIGITAL INPUTS                                               |                                        |                                 |                   |              |            |             |
| DI1                                                                 | 1x00001<br>2x00001<br>I:0              | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
|                                                                     |                                        | Actual state of DI1:0=OFF       |                   |              |            |             |
| Current state of the digital input DIx<br>=0:DI is OFF, =1:DI is ON |                                        |                                 |                   |              |            |             |
| DI2                                                                 | 1x00002<br>2x00002<br>I:1              | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
|                                                                     |                                        | Actual state of DI2:0=OFF       |                   |              |            |             |
| DI3                                                                 | 1x00003<br>2x00003<br>I:2              | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
|                                                                     |                                        | Actual state of DI3:0=OFF       |                   |              |            |             |
| DI4                                                                 | 1x00004<br>2x00004<br>I:3              | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
|                                                                     |                                        | Actual state of DI4:0=OFF       |                   |              |            |             |
| DI5                                                                 | 1x00005<br>2x00005<br>I:4              | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
|                                                                     |                                        | Actual state of DI5:0=OFF       |                   |              |            |             |
| DI6                                                                 | 1x00006<br>2x00006<br>I:5              | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
|                                                                     |                                        | Actual state of DI6:0=OFF       |                   |              |            |             |
| DI7                                                                 | 1x00007<br>2x00007<br>I:6              | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
|                                                                     |                                        | Actual state of DI7:0=OFF       |                   |              |            |             |
| DI8                                                                 | 1x00008<br>2x00008<br>I:7              | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
|                                                                     |                                        | Actual state of DI8:0=OFF       |                   |              |            |             |
| DI9                                                                 | 1x00009<br>2x00009<br>I:8              | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
|                                                                     |                                        | Actual state of DI9:0=OFF       |                   |              |            |             |

|      |                            |                            |  |  |            |  |
|------|----------------------------|----------------------------|--|--|------------|--|
| DI10 | 1x00010<br>2x00010<br>I:9  | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI10:0=OFF |  |  |            |  |
| DI11 | 1x00011<br>2x00011<br>I:10 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI11:0=OFF |  |  |            |  |
| DI12 | 1x00012<br>2x00012<br>I:11 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI12:0=OFF |  |  |            |  |
| DI13 | 1x00013<br>2x00013<br>I:12 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI13:0=OFF |  |  |            |  |
| DI14 | 1x00014<br>2x00014<br>I:13 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI14:0=OFF |  |  |            |  |
| DI15 | 1x00015<br>2x00015<br>I:14 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI15:0=OFF |  |  |            |  |
| DI16 | 1x00016<br>2x00016<br>I:15 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI16:0=OFF |  |  |            |  |
| DI17 | 1x00017<br>2x00017<br>I:16 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI17:0=OFF |  |  |            |  |
| DI18 | 1x00018<br>2x00018<br>I:17 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI18:0=OFF |  |  |            |  |
| DI19 | 1x00019<br>2x00019<br>I:18 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI19:0=OFF |  |  |            |  |
| DI20 | 1x00020<br>2x00020<br>I:19 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI20:0=OFF |  |  |            |  |

|      |                            |                            |  |  |            |  |
|------|----------------------------|----------------------------|--|--|------------|--|
| DI21 | 1x00021<br>2x00021<br>I:20 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI21:0=OFF |  |  |            |  |
| DI22 | 1x00022<br>2x00022<br>I:21 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI22:0=OFF |  |  |            |  |
| DI23 | 1x00023<br>2x00023<br>I:22 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI23:0=OFF |  |  |            |  |
| DI24 | 1x00024<br>2x00024<br>I:23 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI24:0=OFF |  |  |            |  |
| DI25 | 1x00025<br>2x00025<br>I:24 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI25:0=OFF |  |  |            |  |
| DI26 | 1x00026<br>2x00026<br>I:25 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI26:0=OFF |  |  |            |  |
| DI27 | 1x00027<br>2x00027<br>I:26 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI27:0=OFF |  |  |            |  |
| DI28 | 1x00028<br>2x00028<br>I:27 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI28:0=OFF |  |  |            |  |
| DI29 | 1x00029<br>2x00029<br>I:28 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI29:0=OFF |  |  |            |  |
| DI30 | 1x00030<br>2x00030<br>I:29 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI30:0=OFF |  |  |            |  |
| DI31 | 1x00031<br>2x00031<br>I:30 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                            | Actual state of DI31:0=OFF |  |  |            |  |

|                                                                      |                            |                           |  |                          |            |    |
|----------------------------------------------------------------------|----------------------------|---------------------------|--|--------------------------|------------|----|
| DI32                                                                 | 1x00032<br>2x00032<br>I:31 | 1,0x01<br>B:01            |  |                          | BIT<br>R/O |    |
|                                                                      |                            | Actual state of DI32:1=ON |  |                          |            |    |
| STATUS DIGITAL OUTPUTS                                               |                            |                           |  |                          |            |    |
| DO1                                                                  | 1x00033<br>2x00033<br>I:32 | 0,0x00<br>B:00            |  | 1                        | BIT<br>R/W | NO |
|                                                                      |                            | Actual state of DO1:0=OFF |  | ENTER NEW STATE (0 or 1) |            |    |
| Current state of the digital output DOx<br>=0:DO is OFF, =1:DO is ON |                            |                           |  |                          |            |    |
| Writing on this register changes the state of the digital output     |                            |                           |  |                          |            |    |
| DO2                                                                  | 1x00034<br>2x00034<br>I:33 | 0,0x00<br>B:00            |  | 0                        | BIT<br>R/W | NO |
|                                                                      |                            | Actual state of DO2:0=OFF |  | ENTER NEW STATE (0 or 1) |            |    |
| DO3                                                                  | 1x00035<br>2x00035<br>I:34 | 0,0x00<br>B:00            |  | 0                        | BIT<br>R/W | NO |
|                                                                      |                            | Actual state of DO3:0=OFF |  | ENTER NEW STATE (0 or 1) |            |    |
| DO4                                                                  | 1x00036<br>2x00036<br>I:35 | 0,0x00<br>B:00            |  | 0                        | BIT<br>R/W | NO |
|                                                                      |                            | Actual state of DO4:0=OFF |  | ENTER NEW STATE (0 or 1) |            |    |
| DO5                                                                  | 1x00037<br>2x00037<br>I:36 | 0,0x00<br>B:00            |  | 0                        | BIT<br>R/W | NO |
|                                                                      |                            | Actual state of DO5:0=OFF |  | ENTER NEW STATE (0 or 1) |            |    |
| DO6                                                                  | 1x00038<br>2x00038<br>I:37 | 0,0x00<br>B:00            |  | 0                        | BIT<br>R/W | NO |
|                                                                      |                            | Actual state of DO6:0=OFF |  | ENTER NEW STATE (0 or 1) |            |    |
| DO7                                                                  | 1x00039<br>2x00039<br>I:38 | 0,0x00<br>B:00            |  | 0                        | BIT<br>R/W | NO |
|                                                                      |                            | Actual state of DO7:0=OFF |  | ENTER NEW STATE (0 or 1) |            |    |
| DO8                                                                  | 1x00040<br>2x00040<br>I:39 | 0,0x00<br>B:00            |  | 0                        | BIT<br>R/W | NO |
|                                                                      |                            | Actual state of DO8:0=OFF |  | ENTER NEW STATE (0 or 1) |            |    |
| DO9                                                                  | 1x00041<br>2x00041<br>I:40 | 0,0x00<br>B:00            |  | 0                        | BIT<br>R/W | NO |
|                                                                      |                            | Actual state of DO9:0=OFF |  | ENTER NEW STATE (0 or 1) |            |    |

|                                                                                                                                                  |                               |                            |  |                          |            |    |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------|--|--------------------------|------------|----|
| DO10                                                                                                                                             | 1x00042<br>2x00042<br>I:41    | 0,0x00<br>B:00             |  | 0                        | BIT<br>R/W | NO |
|                                                                                                                                                  |                               | Actual state of DO10:0=OFF |  | ENTER NEW STATE (0 or 1) |            |    |
| DO11                                                                                                                                             | 1x00043<br>2x00043<br>I:42    | 0,0x00<br>B:00             |  | 0                        | BIT<br>R/W | NO |
|                                                                                                                                                  |                               | Actual state of DO11:0=OFF |  | ENTER NEW STATE (0 or 1) |            |    |
| DO12                                                                                                                                             | 1x00044<br>2x00044<br>I:43    | 0,0x00<br>B:00             |  | 0                        | BIT<br>R/W | NO |
|                                                                                                                                                  |                               | Actual state of DO12:0=OFF |  | ENTER NEW STATE (0 or 1) |            |    |
| DIGITAL INPUTS: RESET                                                                                                                            |                               |                            |  |                          |            |    |
| RESET COUNTERS                                                                                                                                   | 1x10000<br>2x10000<br>I:9999  | 0,0x00<br>B:00             |  | 1:PERFORM RESET          | BIT<br>R/W | NO |
| If this register is written to 1, all internal edge counters and event counters are set to 0. 0 is always returned when reading.                 |                               |                            |  |                          |            |    |
| STATUS REAL DIGITAL INPUTS                                                                                                                       |                               |                            |  |                          |            |    |
| DI1                                                                                                                                              | 1x15001<br>2x14001<br>I:15000 | 0,0x00<br>B:00             |  |                          | BIT<br>R/O |    |
|                                                                                                                                                  |                               | Actual state of DI1:0=OFF  |  |                          |            |    |
| Current state of the digital input DIx with the internal software filter to suppress glitches or spike on this line<br>=0:DI is OFF, =1:DI is ON |                               |                            |  |                          |            |    |
| DI2                                                                                                                                              | 1x15002<br>2x15002<br>I:15001 | 0,0x00<br>B:00             |  |                          | BIT<br>R/O |    |
|                                                                                                                                                  |                               | Actual state of DI2:0=OFF  |  |                          |            |    |
| DI3                                                                                                                                              | 1x15003<br>2x15003<br>I:15002 | 0,0x00<br>B:00             |  |                          | BIT<br>R/O |    |
|                                                                                                                                                  |                               | Actual state of DI3:0=OFF  |  |                          |            |    |
| DI4                                                                                                                                              | 1x15004<br>2x15004<br>I:15003 | 0,0x00<br>B:00             |  |                          | BIT<br>R/O |    |
|                                                                                                                                                  |                               | Actual state of DI4:0=OFF  |  |                          |            |    |
| DI5                                                                                                                                              | 1x15005<br>2x15005<br>I:15004 | 0,0x00<br>B:00             |  |                          | BIT<br>R/O |    |
|                                                                                                                                                  |                               | Actual state of DI5:0=OFF  |  |                          |            |    |
| DI6                                                                                                                                              | 1x15006<br>2x15006<br>I:15005 | 0,0x00<br>B:00             |  |                          | BIT<br>R/O |    |
|                                                                                                                                                  |                               | Actual state of DI6:0=OFF  |  |                          |            |    |

|      |                               |                            |  |  |            |  |
|------|-------------------------------|----------------------------|--|--|------------|--|
| DI7  | 1x15007<br>2x15007<br>I:15006 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI7:0=OFF  |  |  |            |  |
| DI8  | 1x15008<br>2x15008<br>I:15007 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI8:0=OFF  |  |  |            |  |
| DI9  | 1x15009<br>2x15009<br>I:15008 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI9:0=OFF  |  |  |            |  |
| DI10 | 1x15010<br>2x15010<br>I:15009 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI10:0=OFF |  |  |            |  |
| DI11 | 1x15011<br>2x15011<br>I:15010 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI11:0=OFF |  |  |            |  |
| DI12 | 1x15012<br>2x15012<br>I:15011 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI12:0=OFF |  |  |            |  |
| DI13 | 1x15013<br>2x15013<br>I:15012 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI13:0=OFF |  |  |            |  |
| DI14 | 1x15014<br>2x15014<br>I:15013 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI14:0=OFF |  |  |            |  |
| DI15 | 1x15015<br>2x15015<br>I:15014 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI15:0=OFF |  |  |            |  |
| DI16 | 1x15016<br>2x15016<br>I:15015 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI16:0=OFF |  |  |            |  |
| DI17 | 1x15017<br>2x15017<br>I:15016 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI17:0=OFF |  |  |            |  |

|      |                               |                            |  |  |            |  |
|------|-------------------------------|----------------------------|--|--|------------|--|
| DI18 | 1x15018<br>2x15018<br>I:15017 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI18:0=OFF |  |  |            |  |
| DI19 | 1x15019<br>2x15019<br>I:15018 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI19:0=OFF |  |  |            |  |
| DI20 | 1x15020<br>2x15020<br>I:15019 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI20:0=OFF |  |  |            |  |
| DI21 | 1x15021<br>2x15021<br>I:15020 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI21:0=OFF |  |  |            |  |
| DI22 | 1x15022<br>2x15022<br>I:15021 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI22:0=OFF |  |  |            |  |
| D23  | 1x15023<br>2x15023<br>I:15022 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of D23:0=OFF  |  |  |            |  |
| DI24 | 1x15024<br>2x15024<br>I:15023 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI24:0=OFF |  |  |            |  |
| DI25 | 1x15025<br>2x15025<br>I:15024 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI25:0=OFF |  |  |            |  |
| DI26 | 1x15026<br>2x15026<br>I:15025 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI26:0=OFF |  |  |            |  |
| DI27 | 1x15027<br>2x15027<br>I:15026 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI27:0=OFF |  |  |            |  |
| DI28 | 1x15028<br>2x15028<br>I:15027 | 0,0x00<br>B:00             |  |  | BIT<br>R/O |  |
|      |                               | Actual state of DI28:0=OFF |  |  |            |  |

|                                                                                                                                                          |                               |                                      |  |  |            |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------|--|--|------------|--|--|
| DI29                                                                                                                                                     | 1x15029<br>2x15029<br>I:15028 | 0,0x00<br>B:00                       |  |  | BIT<br>R/O |  |  |
|                                                                                                                                                          |                               | Actual state of DI29:0=OFF           |  |  |            |  |  |
| DI30                                                                                                                                                     | 1x15030<br>2x15030<br>I:15029 | 0,0x00<br>B:00                       |  |  | BIT<br>R/O |  |  |
|                                                                                                                                                          |                               | Actual state of DI30:0=OFF           |  |  |            |  |  |
| DI31                                                                                                                                                     | 1x15031<br>2x15031<br>I:15030 | 0,0x00<br>B:00                       |  |  | BIT<br>R/O |  |  |
|                                                                                                                                                          |                               | Actual state of DI31:0=OFF           |  |  |            |  |  |
| DI32                                                                                                                                                     | 1x15032<br>2x15032<br>I:15031 | 1,0x01<br>B:01                       |  |  | BIT<br>R/O |  |  |
|                                                                                                                                                          |                               | Actual state of DI32:1=ON            |  |  |            |  |  |
| STATUS DIGITAL INPUTS                                                                                                                                    |                               |                                      |  |  |            |  |  |
| UNFILTERED DI1                                                                                                                                           | 1x15033<br>2x15033<br>I:15032 | 0,0x00<br>B:00                       |  |  | BIT<br>R/O |  |  |
|                                                                                                                                                          |                               | Actual state of UNFILTERED DI1:0=OFF |  |  |            |  |  |
| Current state of the real digital input DIx without the internal software filter to suppress glitches or spike on thie line<br>=0:DI is OFF, =1:DI is ON |                               |                                      |  |  |            |  |  |
| UNFILTERED DI2                                                                                                                                           | 1x15034<br>2x15034<br>I:15033 | 0,0x00<br>B:00                       |  |  | BIT<br>R/O |  |  |
|                                                                                                                                                          |                               | Actual state of UNFILTERED DI2:0=OFF |  |  |            |  |  |
| UNFILTERED DI3                                                                                                                                           | 1x15035<br>2x15035<br>I:15034 | 0,0x00<br>B:00                       |  |  | BIT<br>R/O |  |  |
|                                                                                                                                                          |                               | Actual state of UNFILTERED DI3:0=OFF |  |  |            |  |  |
| UNFILTERED DI4                                                                                                                                           | 1x15036<br>2x15036<br>I:15035 | 0,0x00<br>B:00                       |  |  | BIT<br>R/O |  |  |
|                                                                                                                                                          |                               | Actual state of UNFILTERED DI4:0=OFF |  |  |            |  |  |
| UNFILTERED DI5                                                                                                                                           | 1x15037<br>2x15037<br>I:15036 | 0,0x00<br>B:00                       |  |  | BIT<br>R/O |  |  |
|                                                                                                                                                          |                               | Actual state of UNFILTERED DI5:0=OFF |  |  |            |  |  |
| UNFILTERED DI6                                                                                                                                           | 1x15038<br>2x15038<br>I:15037 | 0,0x00<br>B:00                       |  |  | BIT<br>R/O |  |  |
|                                                                                                                                                          |                               | Actual state of UNFILTERED DI6:0=OFF |  |  |            |  |  |

|                 |                               |                                       |  |  |            |  |
|-----------------|-------------------------------|---------------------------------------|--|--|------------|--|
| UNFILTERED DI7  | 1x15039<br>2x15039<br>I:15038 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI7:0=OFF  |  |  |            |  |
| UNFILTERED DI8  | 1x15040<br>2x15040<br>I:15039 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI8:0=OFF  |  |  |            |  |
| UNFILTERED DI9  | 1x15041<br>2x15041<br>I:15040 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI9:0=OFF  |  |  |            |  |
| UNFILTERED DI10 | 1x15042<br>2x15042<br>I:15041 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI10:0=OFF |  |  |            |  |
| UNFILTERED DI11 | 1x15043<br>2x15043<br>I:15042 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI11:0=OFF |  |  |            |  |
| UNFILTERED DI12 | 1x15044<br>2x15044<br>I:15043 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI12:0=OFF |  |  |            |  |
| UNFILTERED DI13 | 1x15045<br>2x15045<br>I:15044 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI13:0=OFF |  |  |            |  |
| UNFILTERED DI14 | 1x15046<br>2x15046<br>I:15045 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI14:0=OFF |  |  |            |  |
| UNFILTERED DI15 | 1x15047<br>2x15047<br>I:15046 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI15:0=OFF |  |  |            |  |
| UNFILTERED DI16 | 1x15048<br>2x15048<br>I:15047 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI16:0=OFF |  |  |            |  |
| UNFILTERED DI17 | 1x15049<br>2x15049<br>I:15048 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI17:0=OFF |  |  |            |  |

|                 |                               |                                       |  |  |            |  |
|-----------------|-------------------------------|---------------------------------------|--|--|------------|--|
| UNFILTERED DI18 | 1x15050<br>2x15050<br>I:15049 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI18:0=OFF |  |  |            |  |
| UNFILTERED DI19 | 1x15051<br>2x15051<br>I:15050 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI19:0=OFF |  |  |            |  |
| UNFILTERED DI20 | 1x15052<br>2x15052<br>I:15051 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI20:0=OFF |  |  |            |  |
| UNFILTERED DI21 | 1x15053<br>2x15053<br>I:15052 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI21:0=OFF |  |  |            |  |
| UNFILTERED DI22 | 1x15054<br>2x15054<br>I:15053 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI22:0=OFF |  |  |            |  |
| UNFILTERED DI23 | 1x15055<br>2x15055<br>I:15054 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI23:0=OFF |  |  |            |  |
| UNFILTERED DI24 | 1x15056<br>2x15056<br>I:15055 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI24:0=OFF |  |  |            |  |
| UNFILTERED DI25 | 1x15057<br>2x15057<br>I:15056 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI25:0=OFF |  |  |            |  |
| UNFILTERED DI26 | 1x15058<br>2x15058<br>I:15057 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI26:0=OFF |  |  |            |  |
| UNFILTERED DI27 | 1x15059<br>2x15059<br>I:15058 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI27:0=OFF |  |  |            |  |
| UNFILTERED DI28 | 1x15060<br>2x15060<br>I:15059 | 0,0x00<br>B:00                        |  |  | BIT<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI28:0=OFF |  |  |            |  |

|                                                                      |                               |                                       |  |                          |            |    |
|----------------------------------------------------------------------|-------------------------------|---------------------------------------|--|--------------------------|------------|----|
| UNFILTERED DI29                                                      | 1x15061<br>2x15061<br>I:15060 | 0,0x00<br>B:00                        |  |                          | BIT<br>R/O |    |
|                                                                      |                               | Actual state of UNFILTERED DI29:0=OFF |  |                          |            |    |
| UNFILTERED DI30                                                      | 1x15062<br>2x15062<br>I:15061 | 0,0x00<br>B:00                        |  |                          | BIT<br>R/O |    |
|                                                                      |                               | Actual state of UNFILTERED DI30:0=OFF |  |                          |            |    |
| UNFILTERED DI31                                                      | 1x15063<br>2x15063<br>I:15062 | 0,0x00<br>B:00                        |  |                          | BIT<br>R/O |    |
|                                                                      |                               | Actual state of UNFILTERED DI31:0=OFF |  |                          |            |    |
| UNFILTERED DI32                                                      | 1x15064<br>2x15064<br>I:15063 | 0,0x00<br>B:00                        |  |                          | BIT<br>R/O |    |
|                                                                      |                               | Actual state of UNFILTERED DI32:0=OFF |  |                          |            |    |
| STATUS DIGITAL OUTPUTS                                               |                               |                                       |  |                          |            |    |
| DO1                                                                  | 1x16001<br>2x16001<br>I:16000 | 0,0x00<br>B:00                        |  | 1                        | BIT<br>R/W | NO |
|                                                                      |                               | Actual state of DO1:0=OFF             |  | ENTER NEW STATE (0 or 1) |            |    |
| Current state of the digital output DOx<br>=0:DO is OFF, =1:DO is ON |                               |                                       |  |                          |            |    |
| Writing on this register changes the state of the digital output     |                               |                                       |  |                          |            |    |
| DO2                                                                  | 1x16002<br>2x16002<br>I:16001 | 0,0x00<br>B:00                        |  | 0                        | BIT<br>R/W | NO |
|                                                                      |                               | Actual state of DO2:0=OFF             |  | ENTER NEW STATE (0 or 1) |            |    |
| DO3                                                                  | 1x16003<br>2x16003<br>I:16002 | 0,0x00<br>B:00                        |  | 0                        | BIT<br>R/W | NO |
|                                                                      |                               | Actual state of DO3:0=OFF             |  | ENTER NEW STATE (0 or 1) |            |    |
| DO4                                                                  | 1x16004<br>2x16004<br>I:16003 | 0,0x00<br>B:00                        |  | 0                        | BIT<br>R/W | NO |
|                                                                      |                               | Actual state of DO4:0=OFF             |  | ENTER NEW STATE (0 or 1) |            |    |
| DO5                                                                  | 1x16005<br>2x16005<br>I:16004 | 0,0x00<br>B:00                        |  | 0                        | BIT<br>R/W | NO |
|                                                                      |                               | Actual state of DO5:0=OFF             |  | ENTER NEW STATE (0 or 1) |            |    |
| DO6                                                                  | 1x16006<br>2x16006<br>I:16005 | 0,0x00<br>B:00                        |  | 0                        | BIT<br>R/W | NO |
|                                                                      |                               | Actual state of DO6:0=OFF             |  | ENTER NEW STATE (0 or 1) |            |    |

|      |                               |                            |  |                          |            |    |
|------|-------------------------------|----------------------------|--|--------------------------|------------|----|
| DO7  | 1x16007<br>2x16007<br>I:16006 | 0,0x00<br>B:00             |  | 0                        | BIT<br>R/W | NO |
|      |                               | Actual state of DO7:0=OFF  |  | ENTER NEW STATE (0 or 1) |            |    |
| DO8  | 1x16008<br>2x16008<br>I:16007 | 0,0x00<br>B:00             |  | 0                        | BIT<br>R/W | NO |
|      |                               | Actual state of DO8:0=OFF  |  | ENTER NEW STATE (0 or 1) |            |    |
| DO9  | 1x16009<br>2x16009<br>I:16008 | 0,0x00<br>B:00             |  | 0                        | BIT<br>R/W | NO |
|      |                               | Actual state of DO9:0=OFF  |  | ENTER NEW STATE (0 or 1) |            |    |
| DO10 | 1x16010<br>2x16010<br>I:16009 | 0,0x00<br>B:00             |  | 0                        | BIT<br>R/W | NO |
|      |                               | Actual state of DO10:0=OFF |  | ENTER NEW STATE (0 or 1) |            |    |
| DO11 | 1x16011<br>2x16011<br>I:16010 | 0,0x00<br>B:00             |  | 0                        | BIT<br>R/W | NO |
|      |                               | Actual state of DO11:0=OFF |  | ENTER NEW STATE (0 or 1) |            |    |
| DO12 | 1x16012<br>2x16012<br>I:16011 | 0,0x00<br>B:00             |  | 0                        | BIT<br>R/W | NO |
|      |                               | Actual state of DO12:0=OFF |  | ENTER NEW STATE (0 or 1) |            |    |

| Register NAME<br>Command NAME                                    | MODBUS<br>Register<br>ASCII<br>Command | Register VALUE<br>ASCII Command | NEW REAL<br>VALUE | NEW<br>VALUE | DATA TYPE  | DO<br>WRITE |
|------------------------------------------------------------------|----------------------------------------|---------------------------------|-------------------|--------------|------------|-------------|
| <b>DIGITAL INPUTS: DIGITAL INPUT HAS CHANGED IT'S STATE</b>      |                                        |                                 |                   |              |            |             |
| DI HAS CHANGED DI1                                               | 1x20001<br>2x20001<br>I:20000          | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
| If the digital input has changed this bit inverts its last state |                                        |                                 |                   |              |            |             |
| DI HAS CHANGED DI2                                               | 1x20002<br>2x20002<br>I:20001          | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
| DI HAS CHANGED DI3                                               | 1x20003<br>2x20003<br>I:20002          | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
| DI HAS CHANGED DI4                                               | 1x20004<br>2x20004<br>I:20003          | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
| DI HAS CHANGED DI5                                               | 1x20005<br>2x20005<br>I:20004          | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
| DI HAS CHANGED DI6                                               | 1x20006<br>2x20006<br>I:20005          | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
| DI HAS CHANGED DI7                                               | 1x20007<br>2x20007<br>I:20006          | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
| DI HAS CHANGED DI8                                               | 1x20008<br>2x20008<br>I:20007          | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
| DI HAS CHANGED DI9                                               | 1x20009<br>2x20009<br>I:20008          | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
| DI HAS CHANGED DI10                                              | 1x20010<br>2x20010<br>I:20009          | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
| DI HAS CHANGED DI11                                              | 1x20011<br>2x20011<br>I:20010          | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |
| DI HAS CHANGED DI12                                              | 1x20012<br>2x20012<br>I:20011          | 0,0x00<br>B:00                  |                   |              | BIT<br>R/O |             |

|                     |                               |                |  |  |            |  |
|---------------------|-------------------------------|----------------|--|--|------------|--|
| DI HAS CHANGED DI13 | 1x20013<br>2x20013<br>I:20012 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| DI HAS CHANGED DI14 | 1x20014<br>2x20014<br>I:20013 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| DI HAS CHANGED DI15 | 1x20015<br>2x20015<br>I:20014 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| DI HAS CHANGED DI16 | 1x20016<br>2x20016<br>I:20015 | 1,0x01<br>B:01 |  |  | BIT<br>R/O |  |
| DI HAS CHANGED DI17 | 1x20017<br>2x20017<br>I:20016 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| DI HAS CHANGED DI18 | 1x20018<br>2x20018<br>I:20017 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| DI HAS CHANGED DI19 | 1x20019<br>2x20019<br>I:20018 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| DI HAS CHANGED DI20 | 1x20020<br>2x20020<br>I:20019 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| DI HAS CHANGED DI21 | 1x20021<br>2x20021<br>I:20020 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| DI HAS CHANGED DI22 | 1x20022<br>2x20022<br>I:20021 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| DI HAS CHANGED DI23 | 1x20023<br>2x20023<br>I:20022 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| DI HAS CHANGED DI24 | 1x20024<br>2x20024<br>I:20023 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| DI HAS CHANGED DI25 | 1x20025<br>2x20025<br>I:20024 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| DI HAS CHANGED DI26 | 1x20026<br>2x20026<br>I:20025 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| DI HAS CHANGED DI27 | 1x20027<br>2x20027<br>I:20026 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |

|                                                                                             |                               |                |  |  |            |  |
|---------------------------------------------------------------------------------------------|-------------------------------|----------------|--|--|------------|--|
| DI HAS CHANGED DI28                                                                         | 1x20028<br>2x20028<br>I:20027 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| DI HAS CHANGED DI29                                                                         | 1x20029<br>2x20029<br>I:20028 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| DI HAS CHANGED DI30                                                                         | 1x20030<br>2x20030<br>I:20029 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| DI HAS CHANGED DI31                                                                         | 1x20031<br>2x20031<br>I:20030 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| DI HAS CHANGED DI32                                                                         | 1x20032<br>2x20032<br>I:20031 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| <b>DIGITAL INPUTS: SHORT KEYPRESS EVENT ON DIGITAL INPUT DETECTED</b>                       |                               |                |  |  |            |  |
| SHORT KEYPRESS<br>ON DI1                                                                    | 1x20033<br>2x20033<br>I:20032 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| If a short keypress event was detected on the digital input this bit inverts its last state |                               |                |  |  |            |  |
| SHORT KEYPRESS<br>ON DI2                                                                    | 1x20034<br>2x20034<br>I:20033 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI3                                                                    | 1x20035<br>2x20035<br>I:20034 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI4                                                                    | 1x20036<br>2x20036<br>I:20035 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI5                                                                    | 1x20037<br>2x20037<br>I:20036 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI6                                                                    | 1x20038<br>2x20038<br>I:20037 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI7                                                                    | 1x20039<br>2x20039<br>I:20038 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI8                                                                    | 1x20040<br>2x20040<br>I:20039 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI9                                                                    | 1x20041<br>2x20041<br>I:20040 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |

|                           |                               |                |  |  |            |  |
|---------------------------|-------------------------------|----------------|--|--|------------|--|
| SHORT KEYPRESS<br>ON DI10 | 1x20042<br>2x20042<br>I:20041 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI11 | 1x20043<br>2x20043<br>I:20042 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI12 | 1x20044<br>2x20044<br>I:20043 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI13 | 1x20045<br>2x20045<br>I:20044 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI14 | 1x20046<br>2x20046<br>I:20045 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI15 | 1x20047<br>2x20047<br>I:20046 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI16 | 1x20048<br>2x20048<br>I:20047 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI17 | 1x20049<br>2x20049<br>I:20048 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI18 | 1x20050<br>2x20050<br>I:20049 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI19 | 1x20051<br>2x20051<br>I:20050 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI20 | 1x20052<br>2x20052<br>I:20051 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI21 | 1x20053<br>2x20053<br>I:20052 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI22 | 1x20054<br>2x20054<br>I:20053 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI23 | 1x20055<br>2x20055<br>I:20054 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI24 | 1x20056<br>2x20056<br>I:20055 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |

|                                                                                                  |                               |                |  |  |            |  |
|--------------------------------------------------------------------------------------------------|-------------------------------|----------------|--|--|------------|--|
| SHORT KEYPRESS<br>ON DI25                                                                        | 1x20057<br>2x20057<br>I:20056 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI26                                                                        | 1x20058<br>2x20058<br>I:20057 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI27                                                                        | 1x20059<br>2x20059<br>I:20058 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI28                                                                        | 1x20060<br>2x20060<br>I:20059 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI29                                                                        | 1x20061<br>2x20061<br>I:20060 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI30                                                                        | 1x20062<br>2x20062<br>I:20061 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI31                                                                        | 1x20063<br>2x20063<br>I:20062 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| SHORT KEYPRESS<br>ON DI32                                                                        | 1x20064<br>2x20064<br>I:20063 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| <b>DIGITAL INPUTS: LONG KEYPRESS START EVENT ON DIGITAL INPUT DETECTED</b>                       |                               |                |  |  |            |  |
| LONG KEYPRESS START<br>ON DI1                                                                    | 1x20065<br>2x20065<br>I:20064 | 1,0x01<br>B:01 |  |  | BIT<br>R/O |  |
| If a long keypress start event was detected on the digital input this bit inverts its last state |                               |                |  |  |            |  |
| LONG KEYPRESS START<br>ON DI2                                                                    | 1x20066<br>2x20066<br>I:20065 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI3                                                                    | 1x20067<br>2x20067<br>I:20066 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI4                                                                    | 1x20068<br>2x20068<br>I:20067 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI5                                                                    | 1x20069<br>2x20069<br>I:20068 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI6                                                                    | 1x20070<br>2x20070<br>I:20069 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |

|                                |                               |                |  |  |            |  |
|--------------------------------|-------------------------------|----------------|--|--|------------|--|
| LONG KEYPRESS START<br>ON DI7  | 1x20071<br>2x20071<br>I:20070 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI8  | 1x20072<br>2x20072<br>I:20071 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI9  | 1x20073<br>2x20073<br>I:20072 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI10 | 1x20074<br>2x20074<br>I:20073 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI11 | 1x20075<br>2x20075<br>I:20074 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI12 | 1x20076<br>2x20076<br>I:20075 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI13 | 1x20077<br>2x20077<br>I:20076 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI14 | 1x20078<br>2x20078<br>I:20077 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI15 | 1x20079<br>2x20079<br>I:20078 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI16 | 1x20080<br>2x20080<br>I:20079 | 1,0x01<br>B:01 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI17 | 1x20081<br>2x20081<br>I:20080 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI18 | 1x20082<br>2x20082<br>I:20081 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI19 | 1x20083<br>2x20083<br>I:20082 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI20 | 1x20084<br>2x20084<br>I:20083 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI21 | 1x20085<br>2x20085<br>I:20084 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |

|                                                                                                |                               |                |  |  |            |  |
|------------------------------------------------------------------------------------------------|-------------------------------|----------------|--|--|------------|--|
| LONG KEYPRESS START<br>ON DI22                                                                 | 1x20086<br>2x20086<br>I:20085 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI23                                                                 | 1x20087<br>2x20087<br>I:20086 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI24                                                                 | 1x20088<br>2x20088<br>I:20087 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI25                                                                 | 1x20089<br>2x20089<br>I:20088 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI26                                                                 | 1x20090<br>2x20090<br>I:20089 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI27                                                                 | 1x20091<br>2x20091<br>I:20090 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI28                                                                 | 1x20092<br>2x20092<br>I:20091 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI29                                                                 | 1x20093<br>2x20093<br>I:20092 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI30                                                                 | 1x20094<br>2x20094<br>I:20093 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI31                                                                 | 1x20095<br>2x20095<br>I:20094 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS START<br>ON DI32                                                                 | 1x20096<br>2x20096<br>I:20095 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| <b>DIGITAL INPUTS: LONG KEYPRESS END EVENT ON DIGITAL INPUT DETECTED</b>                       |                               |                |  |  |            |  |
| LONG KEYPRESS END<br>ON DI1                                                                    | 1x20097<br>2x20097<br>I:20096 | 1,0x01<br>B:01 |  |  | BIT<br>R/O |  |
| If a long keypress end event was detected on the digital input this bit inverts its last state |                               |                |  |  |            |  |
| LONG KEYPRESS END<br>ON DI2                                                                    | 1x20098<br>2x20098<br>I:20097 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI3                                                                    | 1x20099<br>2x20099<br>I:20098 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |

|                              |                               |                |  |  |            |  |
|------------------------------|-------------------------------|----------------|--|--|------------|--|
| LONG KEYPRESS END<br>ON DI4  | 1x20100<br>2x20100<br>I:20099 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI5  | 1x20101<br>2x20101<br>I:20100 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI6  | 1x20102<br>2x20102<br>I:20101 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI7  | 1x20103<br>2x20103<br>I:20102 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI8  | 1x20104<br>2x20104<br>I:20103 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI9  | 1x20105<br>2x20105<br>I:20104 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI10 | 1x20106<br>2x20106<br>I:20105 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI11 | 1x20107<br>2x20107<br>I:20106 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI12 | 1x20108<br>2x20108<br>I:20107 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI13 | 1x20109<br>2x20109<br>I:20108 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI14 | 1x20110<br>2x20110<br>I:20109 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI15 | 1x20111<br>2x20111<br>I:20110 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI16 | 1x20112<br>2x20112<br>I:20111 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI17 | 1x20113<br>2x20113<br>I:20112 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI18 | 1x20114<br>2x20114<br>I:20113 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |

|                                                       |                               |                |  |  |            |  |
|-------------------------------------------------------|-------------------------------|----------------|--|--|------------|--|
| LONG KEYPRESS END<br>ON DI19                          | 1x20115<br>2x20115<br>I:20114 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI20                          | 1x20116<br>2x20116<br>I:20115 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI21                          | 1x20117<br>2x20117<br>I:20116 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI22                          | 1x20118<br>2x20118<br>I:20117 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI23                          | 1x20119<br>2x20119<br>I:20118 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI24                          | 1x20120<br>2x20120<br>I:20119 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI25                          | 1x20121<br>2x20121<br>I:20120 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI26                          | 1x20122<br>2x20122<br>I:20121 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI27                          | 1x20123<br>2x20123<br>I:20122 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI28                          | 1x20124<br>2x20124<br>I:20123 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI29                          | 1x20125<br>2x20125<br>I:20124 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI30                          | 1x20126<br>2x20126<br>I:20125 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI31                          | 1x20127<br>2x20127<br>I:20126 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| LONG KEYPRESS END<br>ON DI32                          | 1x20128<br>2x20128<br>I:20127 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| DIGITAL INPUTS: RISING EDGE ON DIGITAL INPUT DETECTED |                               |                |  |  |            |  |

|                                                                                    |                               |                |  |  |            |  |
|------------------------------------------------------------------------------------|-------------------------------|----------------|--|--|------------|--|
| RISING EDGE<br>ON DI1                                                              | 1x20129<br>2x20129<br>I:20128 | 1,0x01<br>B:01 |  |  | BIT<br>R/O |  |
| If a rising edge was detected on the digital input this bit inverts its last state |                               |                |  |  |            |  |
| RISING EDGE<br>ON DI2                                                              | 1x20130<br>2x20130<br>I:20129 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI3                                                              | 1x20131<br>2x20131<br>I:20130 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI4                                                              | 1x20132<br>2x20132<br>I:20131 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI5                                                              | 1x20133<br>2x20133<br>I:20132 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI6                                                              | 1x20134<br>2x20134<br>I:20133 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI7                                                              | 1x20135<br>2x20135<br>I:20134 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI8                                                              | 1x20136<br>2x20136<br>I:20135 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI9                                                              | 1x20137<br>2x20137<br>I:20136 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI10                                                             | 1x20138<br>2x20138<br>I:20137 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI11                                                             | 1x20139<br>2x20139<br>I:20138 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI12                                                             | 1x20140<br>2x20140<br>I:20139 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI13                                                             | 1x20141<br>2x20141<br>I:20140 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI14                                                             | 1x20142<br>2x20142<br>I:20141 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |

|                        |                               |                |  |  |            |  |
|------------------------|-------------------------------|----------------|--|--|------------|--|
| RISING EDGE<br>ON DI15 | 1x20143<br>2x20143<br>I:20142 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI16 | 1x20144<br>2x20144<br>I:20143 | 1,0x01<br>B:01 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI17 | 1x20145<br>2x20145<br>I:20144 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI18 | 1x20146<br>2x20146<br>I:20145 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI19 | 1x20147<br>2x20147<br>I:20146 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI20 | 1x20148<br>2x20148<br>I:20147 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI21 | 1x20149<br>2x20149<br>I:20148 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI22 | 1x20150<br>2x20150<br>I:20149 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI23 | 1x20151<br>2x20151<br>I:20150 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI24 | 1x20152<br>2x20152<br>I:20151 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI25 | 1x20153<br>2x20153<br>I:20152 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI26 | 1x20154<br>2x20154<br>I:20153 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI27 | 1x20155<br>2x20155<br>I:20154 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI28 | 1x20156<br>2x20156<br>I:20155 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI29 | 1x20157<br>2x20157<br>I:20156 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |

|                                                                                     |                               |                |  |  |            |  |
|-------------------------------------------------------------------------------------|-------------------------------|----------------|--|--|------------|--|
| RISING EDGE<br>ON DI30                                                              | 1x20158<br>2x20158<br>I:20157 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI31                                                              | 1x20159<br>2x20159<br>I:20158 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| RISING EDGE<br>ON DI32                                                              | 1x20160<br>2x20160<br>I:20159 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| <b>DIGITAL INPUTS: FALLING EDGE ON DIGITAL INPUT DETECTED</b>                       |                               |                |  |  |            |  |
| FALLING EDGE<br>ON DI1                                                              | 1x20161<br>2x20161<br>I:20160 | 1,0x01<br>B:01 |  |  | BIT<br>R/O |  |
| If a falling edge was detected on the digital input this bit inverts its last state |                               |                |  |  |            |  |
| FALLING EDGE<br>ON DI2                                                              | 1x20162<br>2x20162<br>I:20161 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI3                                                              | 1x20163<br>2x20163<br>I:20162 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI4                                                              | 1x20164<br>2x20164<br>I:20163 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI5                                                              | 1x20165<br>2x20165<br>I:20164 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI6                                                              | 1x20166<br>2x20166<br>I:20165 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI7                                                              | 1x20167<br>2x20167<br>I:20166 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI8                                                              | 1x20168<br>2x20168<br>I:20167 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI9                                                              | 1x20169<br>2x20169<br>I:20168 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI10                                                             | 1x20170<br>2x20170<br>I:20169 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI11                                                             | 1x20171<br>2x20171<br>I:20170 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |

|                         |                               |                |  |  |            |  |
|-------------------------|-------------------------------|----------------|--|--|------------|--|
| FALLING EDGE<br>ON DI12 | 1x20172<br>2x20172<br>I:20171 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI13 | 1x20173<br>2x20173<br>I:20172 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI14 | 1x20174<br>2x20174<br>I:20173 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI15 | 1x20175<br>2x20175<br>I:20174 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI16 | 1x20176<br>2x20176<br>I:20175 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI17 | 1x20177<br>2x20177<br>I:20176 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI18 | 1x20178<br>2x20178<br>I:20177 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI19 | 1x20179<br>2x20179<br>I:20178 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI20 | 1x20180<br>2x20180<br>I:20179 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI21 | 1x20181<br>2x20181<br>I:20180 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI22 | 1x20182<br>2x20182<br>I:20181 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI23 | 1x20183<br>2x20183<br>I:20182 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI24 | 1x20184<br>2x20184<br>I:20183 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI25 | 1x20185<br>2x20185<br>I:20184 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI26 | 1x20186<br>2x20186<br>I:20185 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |

|                         |                               |                |  |  |            |  |
|-------------------------|-------------------------------|----------------|--|--|------------|--|
| FALLING EDGE<br>ON DI27 | 1x20187<br>2x20187<br>I:20186 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI28 | 1x20188<br>2x20188<br>I:20187 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI29 | 1x20189<br>2x20189<br>I:20188 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI30 | 1x20190<br>2x20190<br>I:20189 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI31 | 1x20191<br>2x20191<br>I:20190 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |
| FALLING EDGE<br>ON DI32 | 1x20192<br>2x20192<br>I:20191 | 0,0x00<br>B:00 |  |  | BIT<br>R/O |  |

| Register NAME<br>Command NAME                                       | MODBUS<br>Register<br>ASCII<br>Command | Register VALUE<br>ASCII Command | NEW REAL<br>VALUE | NEW<br>VALUE | DATA TYPE     | DO<br>WRITE |
|---------------------------------------------------------------------|----------------------------------------|---------------------------------|-------------------|--------------|---------------|-------------|
| STATUS DIGITAL INPUTS                                               |                                        |                                 |                   |              |               |             |
| DI1                                                                 | 3x00001<br>4x00001<br>I:0              | 0,0x0000<br>B:00 00             |                   |              | UINT16<br>R/O |             |
|                                                                     |                                        | Actual state of DI1:0=OFF       |                   |              |               |             |
| Current state of the digital input DIx<br>=0:DI is OFF, =1:DI is ON |                                        |                                 |                   |              |               |             |
| DI2                                                                 | 3x00002<br>4x00002<br>I:1              | 0,0x0000<br>B:00 00             |                   |              | UINT16<br>R/O |             |
|                                                                     |                                        | Actual state of DI2:0=OFF       |                   |              |               |             |
| DI3                                                                 | 3x00003<br>4x00003<br>I:2              | 0,0x0000<br>B:00 00             |                   |              | UINT16<br>R/O |             |
|                                                                     |                                        | Actual state of DI3:0=OFF       |                   |              |               |             |
| DI4                                                                 | 3x00004<br>4x00004<br>I:3              | 0,0x0000<br>B:00 00             |                   |              | UINT16<br>R/O |             |
|                                                                     |                                        | Actual state of DI4:0=OFF       |                   |              |               |             |
| DI5                                                                 | 3x00005<br>4x00005<br>I:4              | 0,0x0000<br>B:00 00             |                   |              | UINT16<br>R/O |             |
|                                                                     |                                        | Actual state of DI5:0=OFF       |                   |              |               |             |
| DI6                                                                 | 3x00006<br>4x00006<br>I:5              | 0,0x0000<br>B:00 00             |                   |              | UINT16<br>R/O |             |
|                                                                     |                                        | Actual state of DI6:0=OFF       |                   |              |               |             |
| DI7                                                                 | 3x00007<br>4x00007<br>I:6              | 0,0x0000<br>B:00 00             |                   |              | UINT16<br>R/O |             |
|                                                                     |                                        | Actual state of DI7:0=OFF       |                   |              |               |             |
| DI8                                                                 | 3x00008<br>4x00008<br>I:7              | 0,0x0000<br>B:00 00             |                   |              | UINT16<br>R/O |             |
|                                                                     |                                        | Actual state of DI8:0=OFF       |                   |              |               |             |
| DI9                                                                 | 3x00009<br>4x00009<br>I:8              | 0,0x0000<br>B:00 00             |                   |              | UINT16<br>R/O |             |
|                                                                     |                                        | Actual state of DI9:0=OFF       |                   |              |               |             |

|      |                            |                            |  |  |               |  |
|------|----------------------------|----------------------------|--|--|---------------|--|
| DI10 | 3x00010<br>4x00010<br>I:9  | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI10:0=OFF |  |  |               |  |
| DI11 | 3x00011<br>4x00011<br>I:10 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI11:0=OFF |  |  |               |  |
| DI12 | 3x00012<br>4x00012<br>I:11 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI12:0=OFF |  |  |               |  |
| DI13 | 3x00013<br>4x00013<br>I:12 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI13:0=OFF |  |  |               |  |
| DI14 | 3x00014<br>4x00014<br>I:13 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI14:0=OFF |  |  |               |  |
| DI15 | 3x00015<br>4x00015<br>I:14 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI15:0=OFF |  |  |               |  |
| DI16 | 3x00016<br>4x00016<br>I:15 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI16:0=OFF |  |  |               |  |
| DI17 | 3x00017<br>4x00017<br>I:16 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI17:0=OFF |  |  |               |  |
| DI18 | 3x00018<br>4x00018<br>I:17 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI18:0=OFF |  |  |               |  |
| DI19 | 3x00019<br>4x00019<br>I:18 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI19:0=OFF |  |  |               |  |
| DI20 | 3x00020<br>4x00020<br>I:19 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI20:0=OFF |  |  |               |  |

|      |                            |                            |  |  |               |  |
|------|----------------------------|----------------------------|--|--|---------------|--|
| DI21 | 3x00021<br>4x00021<br>I:20 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI21:0=OFF |  |  |               |  |
| DI22 | 3x00022<br>4x00022<br>I:21 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI22:0=OFF |  |  |               |  |
| DI23 | 3x00023<br>4x00023<br>I:22 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI23:0=OFF |  |  |               |  |
| DI24 | 3x00024<br>4x00024<br>I:23 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI24:0=OFF |  |  |               |  |
| DI25 | 3x00025<br>4x00025<br>I:24 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI25:0=OFF |  |  |               |  |
| DI26 | 3x00026<br>4x00026<br>I:25 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI26:0=OFF |  |  |               |  |
| DI27 | 3x00027<br>4x00027<br>I:26 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI27:0=OFF |  |  |               |  |
| DI28 | 3x00028<br>4x00028<br>I:27 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI28:0=OFF |  |  |               |  |
| DI29 | 3x00029<br>4x00029<br>I:28 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI29:0=OFF |  |  |               |  |
| DI30 | 3x00030<br>4x00030<br>I:29 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI30:0=OFF |  |  |               |  |
| DI31 | 3x00031<br>4x00031<br>I:30 | 0,0x0000<br>B:00 00        |  |  | UINT16<br>R/O |  |
|      |                            | Actual state of DI31:0=OFF |  |  |               |  |

|                                                                      |                            |                           |  |                          |               |    |
|----------------------------------------------------------------------|----------------------------|---------------------------|--|--------------------------|---------------|----|
| DI32                                                                 | 3x00032<br>4x00032<br>I:31 | 1,0x0001<br>B:00 01       |  |                          | UINT16<br>R/O |    |
|                                                                      |                            | Actual state of DI32:1=ON |  |                          |               |    |
| STATUS DIGITAL OUTPUTS                                               |                            |                           |  |                          |               |    |
| DO1                                                                  | 3x00033<br>4x00033<br>I:32 | 1,0x0001<br>B:00 01       |  | 1                        | UINT16<br>R/W | NO |
|                                                                      |                            | Actual state of DO1:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| Current state of the digital output DOx<br>=0:DO is OFF, =1:DO is ON |                            |                           |  |                          |               |    |
| Writing on this register changes the state of the digital output     |                            |                           |  |                          |               |    |
| DO2                                                                  | 3x00034<br>4x00034<br>I:33 | 1,0x0001<br>B:00 01       |  | 0                        | UINT16<br>R/W | NO |
|                                                                      |                            | Actual state of DO2:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| DO3                                                                  | 3x00035<br>4x00035<br>I:34 | 1,0x0001<br>B:00 01       |  | 0                        | UINT16<br>R/W | NO |
|                                                                      |                            | Actual state of DO3:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| DO4                                                                  | 3x00036<br>4x00036<br>I:35 | 1,0x0001<br>B:00 01       |  | 0                        | UINT16<br>R/W | NO |
|                                                                      |                            | Actual state of DO4:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| DO5                                                                  | 3x00037<br>4x00037<br>I:36 | 1,0x0001<br>B:00 01       |  | 0                        | UINT16<br>R/W | NO |
|                                                                      |                            | Actual state of DO5:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| DO6                                                                  | 3x00038<br>4x00038<br>I:37 | 1,0x0001<br>B:00 01       |  | 0                        | UINT16<br>R/W | NO |
|                                                                      |                            | Actual state of DO6:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| DO7                                                                  | 3x00039<br>4x00039<br>I:38 | 1,0x0001<br>B:00 01       |  | 0                        | UINT16<br>R/W | NO |
|                                                                      |                            | Actual state of DO7:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| DO8                                                                  | 3x00040<br>4x00040<br>I:39 | 1,0x0001<br>B:00 01       |  | 0                        | UINT16<br>R/W | NO |
|                                                                      |                            | Actual state of DO8:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| DO9                                                                  | 3x00041<br>4x00041<br>I:40 | 1,0x0001<br>B:00 01       |  | 0                        | UINT16<br>R/W | NO |
|                                                                      |                            | Actual state of DO9:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |

|                                                                                                                                                                                                                                                                                    |                               |                            |  |                          |               |    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------|--|--------------------------|---------------|----|
| DO10                                                                                                                                                                                                                                                                               | 3x00042<br>4x00042<br>I:41    | 1,0x0001<br>B:00 01        |  | 0                        | UINT16<br>R/W | NO |
|                                                                                                                                                                                                                                                                                    |                               | Actual state of DO10:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| DO11                                                                                                                                                                                                                                                                               | 3x00043<br>4x00043<br>I:42    | 1,0x0001<br>B:00 01        |  | 0                        | UINT16<br>R/W | NO |
|                                                                                                                                                                                                                                                                                    |                               | Actual state of DO11:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| DO12                                                                                                                                                                                                                                                                               | 3x00044<br>4x00044<br>I:43    | 1,0x0001<br>B:00 01        |  | 0                        | UINT16<br>R/W | NO |
|                                                                                                                                                                                                                                                                                    |                               | Actual state of DO12:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| DIGITAL INPUTS: RESET                                                                                                                                                                                                                                                              |                               |                            |  |                          |               |    |
| RESET COUNTERS                                                                                                                                                                                                                                                                     | 3x10000<br>4x10000<br>I:9999  | 0,0x0000<br>B:00 00        |  | 1:PERFORM RESET          | UINT16<br>R/W | NO |
| If this register is written to 1, all internal edge counters and event counters are set to 0. 0 is always returned when reading.                                                                                                                                                   |                               |                            |  |                          |               |    |
| HAS DIS CHANGED                                                                                                                                                                                                                                                                    | 3x10001<br>4x10001<br>I:10000 | 16,0x0010<br>B:00 10       |  |                          | UINT16<br>R/O |    |
|                                                                                                                                                                                                                                                                                    |                               | 16 event(s)                |  |                          |               |    |
| As soon as the module registrates an event on one of the available digital inputs, this global event counter is incremented by 1.<br>Possible events are:<br>Detection of a short keypress<br>Detection of the start of a long keypress<br>Detection of the end of a long keypress |                               |                            |  |                          |               |    |
| STATUS OF ALL DIS<br>DI1..DI16                                                                                                                                                                                                                                                     | 3x10002<br>4x10002<br>I:10001 | 0,0x0000<br>B:00 00        |  |                          | UINT16<br>R/O |    |
|                                                                                                                                                                                                                                                                                    |                               | Actual state of DI1:0=OFF  |  |                          |               |    |
|                                                                                                                                                                                                                                                                                    |                               | Actual state of DI2:0=OFF  |  |                          |               |    |
|                                                                                                                                                                                                                                                                                    |                               | Actual state of DI3:0=OFF  |  |                          |               |    |
|                                                                                                                                                                                                                                                                                    |                               | Actual state of DI4:0=OFF  |  |                          |               |    |
|                                                                                                                                                                                                                                                                                    |                               | Actual state of DI5:0=OFF  |  |                          |               |    |
|                                                                                                                                                                                                                                                                                    |                               | Actual state of DI6:0=OFF  |  |                          |               |    |
|                                                                                                                                                                                                                                                                                    |                               | Actual state of DI7:0=OFF  |  |                          |               |    |
|                                                                                                                                                                                                                                                                                    |                               | Actual state of DI8:0=OFF  |  |                          |               |    |
|                                                                                                                                                                                                                                                                                    |                               | Actual state of DI9:0=OFF  |  |                          |               |    |
|                                                                                                                                                                                                                                                                                    |                               | Actual state of DI10:0=OFF |  |                          |               |    |
|                                                                                                                                                                                                                                                                                    |                               | Actual state of DI11:0=OFF |  |                          |               |    |
|                                                                                                                                                                                                                                                                                    |                               | Actual state of DI12:0=OFF |  |                          |               |    |
|                                                                                                                                                                                                                                                                                    |                               | Actual state of DI13:0=OFF |  |                          |               |    |
|                                                                                                                                                                                                                                                                                    |                               | Actual state of DI14:0=OFF |  |                          |               |    |
|                                                                                                                                                                                                                                                                                    |                               | Actual state of DI15:0=OFF |  |                          |               |    |

|                                                                                                                                                                                                                       |                               |                            |   |               |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------|---|---------------|---------------|
|                                                                                                                                                                                                                       |                               | Actual state of DI16:0=OFF |   |               |               |
| Actual state of all digital inputs DI1..DI12<br>Bit 0: =0:DI1 is OFF, =1:DI1 is ON<br>Bit 1: =0:DI2 is OFF, =1:DI2 is ON<br>...<br>Bit 14: =0:DI15 is OFF, =1:DI15 is ON<br>Bit 15: =0:DI16 is OFF, =1:DI16 is ON     |                               |                            |   |               |               |
| STATUS OF ALL DIS<br>DI17..DI32                                                                                                                                                                                       | 3x10003<br>4x10003<br>I:10002 | 32768,0x8000<br>B:80 00    |   | UINT16<br>R/O |               |
|                                                                                                                                                                                                                       |                               | Actual state of DI17:0=OFF |   |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DI18:0=OFF |   |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DI19:0=OFF |   |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DI20:0=OFF |   |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DI21:0=OFF |   |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DI22:0=OFF |   |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DI23:0=OFF |   |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DI24:0=OFF |   |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DI25:0=OFF |   |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DI26:0=OFF |   |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DI27:0=OFF |   |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DI28:0=OFF |   |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DI29:0=OFF |   |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DI30:0=OFF |   |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DI31:0=OFF |   |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DI32:1=ON  |   |               |               |
| Actual state of all digital inputs DI1..DI12<br>Bit 0: =0:DI17 is OFF, =1:DI17 is ON<br>Bit 1: =0:DI18 is OFF, =1:DI18 is ON<br>...<br>Bit 14: =0:DI31 is OFF, =1:DI31 is ON<br>Bit 15: =0:DI32 is OFF, =1:DI32 is ON |                               |                            |   |               |               |
| <b>STATUS OF DIGITAL OUTPUTS</b>                                                                                                                                                                                      |                               |                            |   |               |               |
| STATUS OF ALL DOS<br>DO1-DO12                                                                                                                                                                                         | 3x10004<br>4x10004<br>I:10003 | 65535,0xFFFF<br>B:FF FF    |   | 0x0FFF        | UINT16<br>R/W |
|                                                                                                                                                                                                                       |                               | Actual state of DO1:1=ON   | 1 |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DO2:1=ON   | 1 |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DO3:1=ON   | 1 |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DO4:1=ON   | 1 |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DO5:1=ON   | 1 |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DO6:1=ON   | 1 |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DO7:1=ON   | 1 |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DO8:1=ON   | 1 |               |               |
|                                                                                                                                                                                                                       |                               | Actual state of DO9:1=ON   | 1 |               |               |

|                                                                                                                                                                                                                          |                               |                           |   |               |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------|---|---------------|--|
|                                                                                                                                                                                                                          |                               | Actual state of DO10:1=ON | 1 |               |  |
|                                                                                                                                                                                                                          |                               | Actual state of DO11:1=ON | 1 |               |  |
|                                                                                                                                                                                                                          |                               | Actual state of DO12:1=ON | 1 |               |  |
| Actual state of all digital outputs<br>Bit 0: =0:DO1 is OFF, =1:DO1 is ON<br>Bit 1: =0:DO2 is OFF, =1:DO2 is ON<br>...<br>Bit 10: =0:DO11 is OFF, =1:DO11 is ON<br>Bit 11: =0:DO12 is OFF, =1:DO12 is ON                 |                               |                           |   |               |  |
| Write on this register sets all digital outputs to a new state                                                                                                                                                           |                               |                           |   |               |  |
| <b>STATUS OF DIGITAL OUTPUTS</b>                                                                                                                                                                                         |                               |                           |   |               |  |
| REAL STATUS OF ALL DOS<br>DO1-DO12                                                                                                                                                                                       | 3x10501<br>4x10501<br>I:10500 | 65535,0xFFFF<br>B:FF FF   |   | UINT16<br>R/O |  |
|                                                                                                                                                                                                                          |                               | Real state of DO1:1=ON    |   |               |  |
|                                                                                                                                                                                                                          |                               | Real state of DO2:1=ON    |   |               |  |
|                                                                                                                                                                                                                          |                               | Real state of DO3:1=ON    |   |               |  |
|                                                                                                                                                                                                                          |                               | Real state of DO4:1=ON    |   |               |  |
|                                                                                                                                                                                                                          |                               | Real state of DO5:1=ON    |   |               |  |
|                                                                                                                                                                                                                          |                               | Real state of DO6:1=ON    |   |               |  |
|                                                                                                                                                                                                                          |                               | Real state of DO7:1=ON    |   |               |  |
|                                                                                                                                                                                                                          |                               | Real state of DO8:1=ON    |   |               |  |
|                                                                                                                                                                                                                          |                               | Real state of DO9:1=ON    |   |               |  |
|                                                                                                                                                                                                                          |                               | Real state of DO10:1=ON   |   |               |  |
|                                                                                                                                                                                                                          |                               | Real state of DO11:1=ON   |   |               |  |
|                                                                                                                                                                                                                          |                               | Real state of DO12:1=ON   |   |               |  |
| Actual state of all digital outputs in the DO chips<br>Bit 0: =0:DO1 is OFF, =1:DO1 is ON<br>Bit 1: =0:DO2 is OFF, =1:DO2 is ON<br>...<br>Bit 10: =0:DO11 is OFF, =1:DO11 is ON<br>Bit 11: =0:DO12 is OFF, =1:DO12 is ON |                               |                           |   |               |  |
| Write on this register sets all digital outputs to a new state                                                                                                                                                           |                               |                           |   |               |  |
| <b>STATUS REAL DIGITAL INPUTS</b>                                                                                                                                                                                        |                               |                           |   |               |  |
| DI1                                                                                                                                                                                                                      | 3x15001<br>4x15001<br>I:15000 | 0,0x0000<br>B:00          |   | UINT16<br>R/O |  |
|                                                                                                                                                                                                                          |                               | Actual state of DI1:0=OFF |   |               |  |
| Current state of the digital input DIx with the internal software filter to suppress glitches or spike on thie line<br>=0:DI is OFF, =1:DI is ON                                                                         |                               |                           |   |               |  |
| DI2                                                                                                                                                                                                                      | 3x15002<br>4x15002<br>I:15001 | 1,0x0001<br>B:00          |   | UINT16<br>R/O |  |
|                                                                                                                                                                                                                          |                               | Actual state of DI2:1=ON  |   |               |  |

|      |                               |                           |  |  |               |  |
|------|-------------------------------|---------------------------|--|--|---------------|--|
| DI3  | 3x15003<br>4x15003<br>I:15002 | 2,0x0002<br>B:00          |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI3:2=ON  |  |  |               |  |
| DI4  | 3x15004<br>4x15004<br>I:15003 | 3,0x0003<br>B:00          |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI4:3=ON  |  |  |               |  |
| DI5  | 3x15005<br>4x15005<br>I:15004 | 4,0x0004<br>B:00          |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI5:4=ON  |  |  |               |  |
| DI6  | 3x15006<br>4x15006<br>I:15005 | 5,0x0005<br>B:00          |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI6:5=ON  |  |  |               |  |
| DI7  | 3x15007<br>4x15007<br>I:15006 | 6,0x0006<br>B:00          |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI7:6=ON  |  |  |               |  |
| DI8  | 3x15008<br>4x15008<br>I:15007 | 7,0x0007<br>B:00          |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI8:7=ON  |  |  |               |  |
| DI9  | 3x15009<br>4x15009<br>I:15008 | 0,0x0000<br>B:00          |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI9:0=OFF |  |  |               |  |
| DI10 | 3x15010<br>4x15010<br>I:15009 | 1,0x0001<br>B:00          |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI10:1=ON |  |  |               |  |
| DI11 | 3x15011<br>4x15011<br>I:15010 | 2,0x0002<br>B:00          |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI11:2=ON |  |  |               |  |
| DI12 | 3x15012<br>4x15012<br>I:15011 | 3,0x0003<br>B:00          |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI12:3=ON |  |  |               |  |
| DI13 | 3x15013<br>4x15013<br>I:15012 | 4,0x0004<br>B:00          |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI13:4=ON |  |  |               |  |

|      |                               |                            |  |  |               |  |
|------|-------------------------------|----------------------------|--|--|---------------|--|
| DI14 | 3x15014<br>4x15014<br>I:15013 | 5,0x0005<br>B:00           |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI14:5=ON  |  |  |               |  |
| DI15 | 3x15015<br>4x15015<br>I:15014 | 6,0x0006<br>B:00           |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI15:6=ON  |  |  |               |  |
| DI16 | 3x15016<br>4x15016<br>I:15015 | 7,0x0007<br>B:00           |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI16:7=ON  |  |  |               |  |
| DI17 | 3x15017<br>4x15017<br>I:15016 | 0,0x0000<br>B:00           |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI17:0=OFF |  |  |               |  |
| DI18 | 3x15018<br>4x15018<br>I:15017 | 1,0x0001<br>B:00           |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI18:1=ON  |  |  |               |  |
| DI19 | 3x15019<br>4x15019<br>I:15018 | 2,0x0002<br>B:00           |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI19:2=ON  |  |  |               |  |
| DI20 | 3x15020<br>4x15020<br>I:15019 | 0,0x0000<br>B:00           |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI20:0=OFF |  |  |               |  |
| DI21 | 3x15021<br>4x15021<br>I:15020 | 1,0x0001<br>B:00           |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI21:1=ON  |  |  |               |  |
| DI22 | 3x15022<br>4x15022<br>I:15021 | 2,0x0002<br>B:00           |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI22:2=ON  |  |  |               |  |
| D23  | 3x15023<br>4x15023<br>I:15022 | 3,0x0003<br>B:00           |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of D23:3=ON   |  |  |               |  |
| DI24 | 3x15024<br>4x15024<br>I:15023 | 4,0x0004<br>B:00           |  |  | UINT16<br>R/O |  |
|      |                               | Actual state of DI24:4=ON  |  |  |               |  |

|                                                                                                                                                          |                               |                                     |  |  |               |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------------|--|--|---------------|--|
| DI25                                                                                                                                                     | 3x15025<br>4x15025<br>I:15024 | 5,0x0005<br>B:00                    |  |  | UINT16<br>R/O |  |
|                                                                                                                                                          |                               | Actual state of DI25:5=ON           |  |  |               |  |
| DI26                                                                                                                                                     | 3x15026<br>4x15026<br>I:15025 | 6,0x0006<br>B:00                    |  |  | UINT16<br>R/O |  |
|                                                                                                                                                          |                               | Actual state of DI26:6=ON           |  |  |               |  |
| DI27                                                                                                                                                     | 3x15027<br>4x15027<br>I:15026 | 7,0x0007<br>B:00                    |  |  | UINT16<br>R/O |  |
|                                                                                                                                                          |                               | Actual state of DI27:7=ON           |  |  |               |  |
| DI28                                                                                                                                                     | 3x15028<br>4x15028<br>I:15027 | 0,0x0000<br>B:00                    |  |  | UINT16<br>R/O |  |
|                                                                                                                                                          |                               | Actual state of DI28:0=OFF          |  |  |               |  |
| DI29                                                                                                                                                     | 3x15029<br>4x15029<br>I:15028 | 1,0x0001<br>B:00                    |  |  | UINT16<br>R/O |  |
|                                                                                                                                                          |                               | Actual state of DI29:1=ON           |  |  |               |  |
| DI30                                                                                                                                                     | 3x15030<br>4x15030<br>I:15029 | 2,0x0002<br>B:00                    |  |  | UINT16<br>R/O |  |
|                                                                                                                                                          |                               | Actual state of DI30:2=ON           |  |  |               |  |
| DI31                                                                                                                                                     | 3x15031<br>4x15031<br>I:15030 | 3,0x0003<br>B:00                    |  |  | UINT16<br>R/O |  |
|                                                                                                                                                          |                               | Actual state of DI31:3=ON           |  |  |               |  |
| DI32                                                                                                                                                     | 3x15032<br>4x15032<br>I:15031 | 260,0x0104<br>B:01                  |  |  | UINT16<br>R/O |  |
|                                                                                                                                                          |                               | Actual state of DI32:260=ON         |  |  |               |  |
| STATUS DIGITAL INPUTS                                                                                                                                    |                               |                                     |  |  |               |  |
| UNFILTERED DI1                                                                                                                                           | 3x15033<br>4x15033<br>I:15032 | 5,0x0005<br>B:00                    |  |  | UINT16<br>R/O |  |
|                                                                                                                                                          |                               | Actual state of UNFILTERED DI1:5=ON |  |  |               |  |
| Current state of the real digital input DIx without the internal software filter to suppress glitches or spike on thie line<br>=0:DI is OFF, =1:DI is ON |                               |                                     |  |  |               |  |
| UNFILTERED DI2                                                                                                                                           | 3x15034<br>4x15034<br>I:15033 | 6,0x0006<br>B:00                    |  |  | UINT16<br>R/O |  |
|                                                                                                                                                          |                               | Actual state of UNFILTERED DI2:6=ON |  |  |               |  |

|                 |                               |                                      |  |  |               |  |
|-----------------|-------------------------------|--------------------------------------|--|--|---------------|--|
| UNFILTERED DI3  | 3x15035<br>4x15035<br>I:15034 | 7,0x0007<br>B:00                     |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI3:7=ON  |  |  |               |  |
| UNFILTERED DI4  | 3x15036<br>4x15036<br>I:15035 | 0,0x0000<br>B:00                     |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI4:0=OFF |  |  |               |  |
| UNFILTERED DI5  | 3x15037<br>4x15037<br>I:15036 | 1,0x0001<br>B:00                     |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI5:1=ON  |  |  |               |  |
| UNFILTERED DI6  | 3x15038<br>4x15038<br>I:15037 | 2,0x0002<br>B:00                     |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI6:2=ON  |  |  |               |  |
| UNFILTERED DI7  | 3x15039<br>4x15039<br>I:15038 | 0,0x0000<br>B:00                     |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI7:0=OFF |  |  |               |  |
| UNFILTERED DI8  | 3x15040<br>4x15040<br>I:15039 | 1,0x0001<br>B:00                     |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI8:1=ON  |  |  |               |  |
| UNFILTERED DI9  | 3x15041<br>4x15041<br>I:15040 | 2,0x0002<br>B:00                     |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI9:2=ON  |  |  |               |  |
| UNFILTERED DI10 | 3x15042<br>4x15042<br>I:15041 | 3,0x0003<br>B:00                     |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI10:3=ON |  |  |               |  |
| UNFILTERED DI11 | 3x15043<br>4x15043<br>I:15042 | 4,0x0004<br>B:00                     |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI11:4=ON |  |  |               |  |
| UNFILTERED DI12 | 3x15044<br>4x15044<br>I:15043 | 5,0x0005<br>B:00                     |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI12:5=ON |  |  |               |  |
| UNFILTERED DI13 | 3x15045<br>4x15045<br>I:15044 | 6,0x0006<br>B:00                     |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI13:6=ON |  |  |               |  |

|                 |                               |                                       |  |  |               |  |
|-----------------|-------------------------------|---------------------------------------|--|--|---------------|--|
| UNFILTERED DI14 | 3x15046<br>4x15046<br>I:15045 | 7,0x0007<br>B:00                      |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI14:7=ON  |  |  |               |  |
| UNFILTERED DI15 | 3x15047<br>4x15047<br>I:15046 | 0,0x0000<br>B:00                      |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI15:0=OFF |  |  |               |  |
| UNFILTERED DI16 | 3x15048<br>4x15048<br>I:15047 | 1,0x0001<br>B:00                      |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI16:1=ON  |  |  |               |  |
| UNFILTERED DI17 | 3x15049<br>4x15049<br>I:15048 | 2,0x0002<br>B:00                      |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI17:2=ON  |  |  |               |  |
| UNFILTERED DI18 | 3x15050<br>4x15050<br>I:15049 | 3,0x0003<br>B:00                      |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI18:3=ON  |  |  |               |  |
| UNFILTERED DI19 | 3x15051<br>4x15051<br>I:15050 | 4,0x0004<br>B:00                      |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI19:4=ON  |  |  |               |  |
| UNFILTERED DI20 | 3x15052<br>4x15052<br>I:15051 | 5,0x0005<br>B:00                      |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI20:5=ON  |  |  |               |  |
| UNFILTERED DI21 | 3x15053<br>4x15053<br>I:15052 | 6,0x0006<br>B:00                      |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI21:6=ON  |  |  |               |  |
| UNFILTERED DI22 | 3x15054<br>4x15054<br>I:15053 | 7,0x0007<br>B:00                      |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI22:7=ON  |  |  |               |  |
| UNFILTERED DI23 | 3x15055<br>4x15055<br>I:15054 | 0,0x0000<br>B:00                      |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI23:0=OFF |  |  |               |  |
| UNFILTERED DI24 | 3x15056<br>4x15056<br>I:15055 | 1,0x0001<br>B:00                      |  |  | UINT16<br>R/O |  |
|                 |                               | Actual state of UNFILTERED DI24:1=ON  |  |  |               |  |

|                                                                      |                               |                                        |  |                          |               |    |
|----------------------------------------------------------------------|-------------------------------|----------------------------------------|--|--------------------------|---------------|----|
| UNFILTERED DI25                                                      | 3x15057<br>4x15057<br>I:15056 | 2,0x0002<br>B:00                       |  |                          | UINT16<br>R/O |    |
|                                                                      |                               | Actual state of UNFILTERED DI25:2=ON   |  |                          |               |    |
| UNFILTERED DI26                                                      | 3x15058<br>4x15058<br>I:15057 | 0,0x0000<br>B:00                       |  |                          | UINT16<br>R/O |    |
|                                                                      |                               | Actual state of UNFILTERED DI26:0=OFF  |  |                          |               |    |
| UNFILTERED DI27                                                      | 3x15059<br>4x15059<br>I:15058 | 1,0x0001<br>B:00                       |  |                          | UINT16<br>R/O |    |
|                                                                      |                               | Actual state of UNFILTERED DI27:1=ON   |  |                          |               |    |
| UNFILTERED DI28                                                      | 3x15060<br>4x15060<br>I:15059 | 2,0x0002<br>B:00                       |  |                          | UINT16<br>R/O |    |
|                                                                      |                               | Actual state of UNFILTERED DI28:2=ON   |  |                          |               |    |
| UNFILTERED DI29                                                      | 3x15061<br>4x15061<br>I:15060 | 3,0x0003<br>B:00                       |  |                          | UINT16<br>R/O |    |
|                                                                      |                               | Actual state of UNFILTERED DI29:3=ON   |  |                          |               |    |
| UNFILTERED DI30                                                      | 3x15062<br>4x15062<br>I:15061 | 4,0x0004<br>B:00                       |  |                          | UINT16<br>R/O |    |
|                                                                      |                               | Actual state of UNFILTERED DI30:4=ON   |  |                          |               |    |
| UNFILTERED DI31                                                      | 3x15063<br>4x15063<br>I:15062 | 5,0x0005<br>B:00                       |  |                          | UINT16<br>R/O |    |
|                                                                      |                               | Actual state of UNFILTERED DI31:5=ON   |  |                          |               |    |
| UNFILTERED DI32                                                      | 3x15064<br>4x15064<br>I:15063 | 262,0x0106<br>B:01                     |  |                          | UINT16<br>R/O |    |
|                                                                      |                               | Actual state of UNFILTERED DI32:262=ON |  |                          |               |    |
| STATUS DIGITAL OUTPUTS                                               |                               |                                        |  |                          |               |    |
| DO1                                                                  | 3x16001<br>4x16001<br>I:16000 | 1,0x0001<br>B:00 01                    |  | 1                        | UINT16<br>R/W | NO |
|                                                                      |                               | Actual state of DO1:1=ON               |  | ENTER NEW STATE (0 or 1) |               |    |
| Current state of the digital output DOx<br>=0:DO is OFF, =1:DO is ON |                               |                                        |  |                          |               |    |
| Writing on this register changes the state of the digital output     |                               |                                        |  |                          |               |    |
| DO2                                                                  | 3x16002<br>4x16002<br>I:16001 | 1,0x0001<br>B:00 01                    |  | 0                        | UINT16<br>R/W | NO |
|                                                                      |                               | Actual state of DO2:1=ON               |  | ENTER NEW STATE (0 or 1) |               |    |

|      |                               |                           |  |                          |               |    |
|------|-------------------------------|---------------------------|--|--------------------------|---------------|----|
| DO3  | 3x16003<br>4x16003<br>I:16002 | 1,0x0001<br>B:00 01       |  | 0                        | UINT16<br>R/W | NO |
|      |                               | Actual state of DO3:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| DO4  | 3x16004<br>4x16004<br>I:16003 | 1,0x0001<br>B:00 01       |  | 0                        | UINT16<br>R/W | NO |
|      |                               | Actual state of DO4:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| DO5  | 3x16005<br>4x16005<br>I:16004 | 1,0x0001<br>B:00 01       |  | 0                        | UINT16<br>R/W | NO |
|      |                               | Actual state of DO5:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| DO6  | 3x16006<br>4x16006<br>I:16005 | 1,0x0001<br>B:00 01       |  | 0                        | UINT16<br>R/W | NO |
|      |                               | Actual state of DO6:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| DO7  | 3x16007<br>4x16007<br>I:16006 | 1,0x0001<br>B:00 01       |  | 0                        | UINT16<br>R/W | NO |
|      |                               | Actual state of DO7:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| DO8  | 3x16008<br>4x16008<br>I:16007 | 1,0x0001<br>B:00 01       |  | 0                        | UINT16<br>R/W | NO |
|      |                               | Actual state of DO8:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| DO9  | 3x16009<br>4x16009<br>I:16008 | 1,0x0001<br>B:00 01       |  | 0                        | UINT16<br>R/W | NO |
|      |                               | Actual state of DO9:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| DO10 | 3x16010<br>4x16010<br>I:16009 | 1,0x0001<br>B:00 01       |  | 0                        | UINT16<br>R/W | NO |
|      |                               | Actual state of DO10:1=ON |  | ENTER NEW STATE (0 or 1) |               |    |
| DO11 | 3x16011<br>4x16011<br>I:16010 | 1,0x0001<br>B:00 01       |  | 0                        | UINT16<br>R/W | NO |
|      |                               | Actual state of DO11:1=ON |  | ENTER NEW STATE (0 or 1) |               |    |
| DO12 | 3x16012<br>4x16012<br>I:16011 | 1,0x0001<br>B:00 01       |  | 0                        | UINT16<br>R/W | NO |
|      |                               | Actual state of DO12:1=ON |  | ENTER NEW STATE (0 or 1) |               |    |

| Register NAME<br>Command NAME                                                                                                                                                                          | MODBUS<br>Register<br>ASCII<br>Command | Register VALUE<br>ASCII Command | NEW REAL<br>VALUE | NEW<br>VALUE | DATA TYPE     | DO<br>WRITE |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------------------------|-------------------|--------------|---------------|-------------|
| <b>PULSE TIME FOR DIGITAL OUTPUTS</b>                                                                                                                                                                  |                                        |                                 |                   |              |               |             |
| PULSE TIME DO1                                                                                                                                                                                         | 3x20001<br>4x20001<br>I:20000          | 0,0x0000<br>B:00 00             | 200               | 20,0         | UINT16<br>R/W | YES         |
| Generate a pulse on digital output x in 100ms units (0,1 to 6553,5 Seconds selectable)<br>If you write onto this register, the digital output will be switched on for the desired time in 100ms units. |                                        |                                 |                   |              |               |             |
| PULSE TIME DO2                                                                                                                                                                                         | 3x20002<br>4x20002<br>I:20001          | 0,0x0000<br>B:00 00             | 300               | 30,0         | UINT16<br>R/W | NO          |
| PULSE TIME DO3                                                                                                                                                                                         | 3x20003<br>4x20003<br>I:20002          | 0,0x0000<br>B:00 00             | 400               | 40,0         | UINT16<br>R/W | NO          |
| PULSE TIME DO4                                                                                                                                                                                         | 3x20004<br>4x20004<br>I:20003          | 0,0x0000<br>B:00 00             | 500               | 50,0         | UINT16<br>R/W | NO          |
| PULSE TIME DO5                                                                                                                                                                                         | 3x20005<br>4x20005<br>I:20004          | 0,0x0000<br>B:00 00             | 20                | 2,0          | UINT16<br>R/W | NO          |
| PULSE TIME DO6                                                                                                                                                                                         | 3x20006<br>4x20006<br>I:20005          | 0,0x0000<br>B:00 00             | 20                | 2,0          | UINT16<br>R/W | NO          |
| PULSE TIME DO7                                                                                                                                                                                         | 3x20007<br>4x20007<br>I:20006          | 0,0x0000<br>B:00 00             | 20                | 2,0          | UINT16<br>R/W | NO          |
| PULSE TIME DO8                                                                                                                                                                                         | 3x20008<br>4x20008<br>I:20007          | 0,0x0000<br>B:00 00             | 20                | 2,0          | UINT16<br>R/W | NO          |
| PULSE TIME DO9                                                                                                                                                                                         | 3x20009<br>4x20009<br>I:20008          | 0,0x0000<br>B:00 00             | 20                | 2,0          | UINT16<br>R/W | NO          |
| PULSE TIME DO10                                                                                                                                                                                        | 3x20010<br>4x20010<br>I:20009          | 0,0x0000<br>B:00 00             | 20                | 2,0          | UINT16<br>R/W | NO          |
| PULSE TIME DO11                                                                                                                                                                                        | 3x20011<br>4x20011<br>I:20010          | 0,0x0000<br>B:00 00             | 20                | 2,0          | UINT16<br>R/W | NO          |
| PULSE TIME DO12                                                                                                                                                                                        | 3x20012<br>4x20012<br>I:20011          | 0,0x0000<br>B:00 00             | 20                | 2,0          | UINT16<br>R/W | NO          |

**PULSE STATUS FOR DIGITAL OUTPUTS**

|                                                                  |                               |                                   |  |  |               |  |
|------------------------------------------------------------------|-------------------------------|-----------------------------------|--|--|---------------|--|
| PULSE TIMER DO1                                                  | 3x21001<br>4x21001<br>I:21000 | 19503,0x00004C2F<br>B:00 00 4C 2F |  |  | UINT32<br>R/O |  |
|                                                                  |                               | 19,5 seconds                      |  |  |               |  |
| Remaining time of the pulse on digital output x in Milliseconds. |                               |                                   |  |  |               |  |
| PULSE TIMER DO2                                                  | 3x21003<br>4x21003<br>I:21002 | 0,0x00000000<br>B:00 00 00 00     |  |  | UINT32<br>R/O |  |
|                                                                  |                               | 0,0 seconds                       |  |  |               |  |
| PULSE TIMER DO3                                                  | 3x21005<br>4x21005<br>I:21004 | 0,0x00000000<br>B:00 00 00 00     |  |  | UINT32<br>R/O |  |
|                                                                  |                               | 0,0 seconds                       |  |  |               |  |
| PULSE TIMER DO4                                                  | 3x21007<br>4x21007<br>I:21006 | 0,0x00000000<br>B:00 00 00 00     |  |  | UINT32<br>R/O |  |
|                                                                  |                               | 0,0 seconds                       |  |  |               |  |
| PULSE TIMER DO5                                                  | 3x21009<br>4x21009<br>I:21008 | 0,0x00000000<br>B:00 00 00 00     |  |  | UINT32<br>R/O |  |
|                                                                  |                               | 0,0 seconds                       |  |  |               |  |
| PULSE TIMER DO6                                                  | 3x21011<br>4x21011<br>I:21010 | 0,0x00000000<br>B:00 00 00 00     |  |  | UINT32<br>R/O |  |
|                                                                  |                               | 0,0 seconds                       |  |  |               |  |
| PULSE TIMER DO7                                                  | 3x21013<br>4x21013<br>I:21012 | 0,0x00000000<br>B:00 00 00 00     |  |  | UINT32<br>R/O |  |
|                                                                  |                               | 0,0 seconds                       |  |  |               |  |
| PULSE TIMER DO8                                                  | 3x21015<br>4x21015<br>I:21014 | 0,0x00000000<br>B:00 00 00 00     |  |  | UINT32<br>R/O |  |
|                                                                  |                               | 0,0 seconds                       |  |  |               |  |
| PULSE TIMER DO9                                                  | 3x21017<br>4x21017<br>I:21016 | 0,0x00000000<br>B:00 00 00 00     |  |  | UINT32<br>R/O |  |
|                                                                  |                               | 0,0 seconds                       |  |  |               |  |
| PULSE TIMER DO10                                                 | 3x21019<br>4x21019<br>I:21018 | 0,0x00000000<br>B:00 00 00 00     |  |  | UINT32<br>R/O |  |
|                                                                  |                               | 0,0 seconds                       |  |  |               |  |

|                                                                  |                               |                                   |  |  |                |  |
|------------------------------------------------------------------|-------------------------------|-----------------------------------|--|--|----------------|--|
| PULSE TIMER DO11                                                 | 3x21021<br>4x21021<br>I:21020 | 0,0x00000000<br>B:00 00 00 00     |  |  | UINT32<br>R/O  |  |
|                                                                  |                               | 0,0 seconds                       |  |  |                |  |
| PULSE TIMER DO12                                                 | 3x21023<br>4x21023<br>I:21022 | 0,0x00000000<br>B:00 00 00 00     |  |  | UINT32<br>R/O  |  |
|                                                                  |                               | 0,0 seconds                       |  |  |                |  |
| <b>PULSE STATUS FOR DIGITAL OUTPUTS</b>                          |                               |                                   |  |  |                |  |
| PULSE TIMER DO1                                                  | 3x21025<br>4x21025<br>I:21024 | 19003,0x00004A3B<br>B:4A 3B 00 00 |  |  | UINT32R<br>R/O |  |
|                                                                  |                               | 19,0 seconds                      |  |  |                |  |
| Remaining time of the pulse on digital output x in Milliseconds. |                               |                                   |  |  |                |  |
| PULSE TIMER DO2                                                  | 3x21027<br>4x21027<br>I:21026 | 0,0x00000000<br>B:00 00 00 00     |  |  | UINT32R<br>R/O |  |
|                                                                  |                               | 0,0 seconds                       |  |  |                |  |
| PULSE TIMER DO3                                                  | 3x21029<br>4x21029<br>I:21028 | 0,0x00000000<br>B:00 00 00 00     |  |  | UINT32R<br>R/O |  |
|                                                                  |                               | 0,0 seconds                       |  |  |                |  |
| PULSE TIMER DO4                                                  | 3x21031<br>4x21031<br>I:21030 | 0,0x00000000<br>B:00 00 00 00     |  |  | UINT32R<br>R/O |  |
|                                                                  |                               | 0,0 seconds                       |  |  |                |  |
| PULSE TIMER DO5                                                  | 3x21033<br>4x21033<br>I:21032 | 0,0x00000000<br>B:00 00 00 00     |  |  | UINT32R<br>R/O |  |
|                                                                  |                               | 0,0 seconds                       |  |  |                |  |
| PULSE TIMER DO6                                                  | 3x21035<br>4x21035<br>I:21034 | 0,0x00000000<br>B:00 00 00 00     |  |  | UINT32R<br>R/O |  |
|                                                                  |                               | 0,0 seconds                       |  |  |                |  |
| PULSE TIMER DO7                                                  | 3x21037<br>4x21037<br>I:21036 | 0,0x00000000<br>B:00 00 00 00     |  |  | UINT32R<br>R/O |  |
|                                                                  |                               | 0,0 seconds                       |  |  |                |  |
| PULSE TIMER DO8                                                  | 3x21039<br>4x21039<br>I:21038 | 0,0x00000000<br>B:00 00 00 00     |  |  | UINT32R<br>R/O |  |
|                                                                  |                               | 0,0 seconds                       |  |  |                |  |

|                  |                               |                               |  |  |                |  |
|------------------|-------------------------------|-------------------------------|--|--|----------------|--|
| PULSE TIMER DO9  | 3x21041<br>4x21041<br>I:21040 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32R<br>R/O |  |
|                  |                               | 0,0 seconds                   |  |  |                |  |
| PULSE TIMER DO10 | 3x21043<br>4x21043<br>I:21042 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32R<br>R/O |  |
|                  |                               | 0,0 seconds                   |  |  |                |  |
| PULSE TIMER DO11 | 3x21045<br>4x21045<br>I:21044 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32R<br>R/O |  |
|                  |                               | 0,0 seconds                   |  |  |                |  |
| PULSE TIMER DO12 | 3x21047<br>4x21047<br>I:21046 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32R<br>R/O |  |
|                  |                               | 0,0 seconds                   |  |  |                |  |

| Register NAME<br>Command NAME                                                                                                                                                                                                                                   | MODBUS<br>Register<br>ASCII<br>Command | Register VALUE<br>ASCII Command | NEW REAL<br>VALUE | NEW<br>VALUE | DATA TYPE     | DO<br>WRITE |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------------------------|-------------------|--------------|---------------|-------------|
| <b>DIGITAL INPUTS</b>                                                                                                                                                                                                                                           |                                        |                                 |                   |              |               |             |
| STATUS DI1 A                                                                                                                                                                                                                                                    | 3x05001<br>4x05001<br>I:5000           | 0,0x0000<br>B:00 00             |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                                 |                                        | DI:0,CC:0,REC:0,FEC:0           |                   |              |               |             |
| Status for the digital input Dlx<br>Bit 0-4: Lower 5 bits of CHANGE COUNTER<br>Bit 5-9: Lower 5 bits of RISING EDGE COUNTER<br>Bit 10-14: Lower 5 bits of FALLING EDGE COUNTER<br>Bit 15: Current Status of Dlx =0: Dlx si OFF, =1: Dlx is ON                   |                                        |                                 |                   |              |               |             |
| STATUS DI1 B                                                                                                                                                                                                                                                    | 3x05002<br>4x05002<br>I:5001           | 0,0x0000<br>B:00 00             |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                                 |                                        | DI:0,SKE:0,LKSE:0,LKEE:0        |                   |              |               |             |
| Status for the digital input Dlx<br>Bit 0-4: Lower 5 bits of SHORT KEYPRESS EVENTS<br>Bit 5-9: Lower 5 bits of LONG KEYPRESS START EVENTS<br>Bit 10-14: Lower 5 bits of LONG KEYPRESS END EVENTS<br>Bit 15: Current Status of Dlx =0: Dlx si OFF, =1: Dlx is ON |                                        |                                 |                   |              |               |             |
| STATUS DI2 A                                                                                                                                                                                                                                                    | 3x05003<br>4x05003<br>I:5002           | 0,0x0000<br>B:00 00             |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                                 |                                        | DI:0,CC:0,REC:0,FEC:0           |                   |              |               |             |
| STATUS DI2 B                                                                                                                                                                                                                                                    | 3x05004<br>4x05004<br>I:5003           | 0,0x0000<br>B:00 00             |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                                 |                                        | DI:0,SKE:0,LKSE:0,LKEE:0        |                   |              |               |             |
| STATUS DI3 A                                                                                                                                                                                                                                                    | 3x05005<br>4x05005<br>I:5004           | 0,0x0000<br>B:00 00             |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                                 |                                        | DI:0,CC:0,REC:0,FEC:0           |                   |              |               |             |
| STATUS DI3 B                                                                                                                                                                                                                                                    | 3x05006<br>4x05006<br>I:5005           | 0,0x0000<br>B:00 00             |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                                 |                                        | DI:0,SKE:0,LKSE:0,LKEE:0        |                   |              |               |             |
| STATUS DI4 A                                                                                                                                                                                                                                                    | 3x05007<br>4x05007<br>I:5006           | 0,0x0000<br>B:00 00             |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                                 |                                        | DI:0,CC:0,REC:0,FEC:0           |                   |              |               |             |

|              |                              |                          |  |  |               |  |
|--------------|------------------------------|--------------------------|--|--|---------------|--|
| STATUS DI4 B | 3x05008<br>4x05008<br>I:5007 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|              |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI5 A | 3x05009<br>4x05009<br>I:5008 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|              |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI5 B | 3x05010<br>4x05010<br>I:5009 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|              |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI6 A | 3x05011<br>4x05011<br>I:5010 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|              |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI6 B | 3x05012<br>4x05012<br>I:5011 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|              |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI7 A | 3x05013<br>4x05013<br>I:5012 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|              |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI7 B | 3x05014<br>4x05014<br>I:5013 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|              |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI8 A | 3x05015<br>4x05015<br>I:5014 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|              |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI8 B | 3x05016<br>4x05016<br>I:5015 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|              |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI9 A | 3x05017<br>4x05017<br>I:5016 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|              |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI9 B | 3x05018<br>4x05018<br>I:5017 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|              |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |

|               |                              |                          |  |  |               |  |
|---------------|------------------------------|--------------------------|--|--|---------------|--|
| STATUS DI10 A | 3x05019<br>4x05019<br>I:5018 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI10 B | 3x05020<br>4x05020<br>I:5019 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI11 A | 3x05021<br>4x05021<br>I:5020 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI11 B | 3x05022<br>4x05022<br>I:5021 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI12 A | 3x05023<br>4x05023<br>I:5022 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI12 B | 3x05024<br>4x05024<br>I:5023 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI13 A | 3x05025<br>4x05025<br>I:5024 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI13 B | 3x05026<br>4x05026<br>I:5025 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI14 A | 3x05027<br>4x05027<br>I:5026 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI14 B | 3x05028<br>4x05028<br>I:5027 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI15 A | 3x05029<br>4x05029<br>I:5028 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |

|               |                              |                          |  |  |               |  |
|---------------|------------------------------|--------------------------|--|--|---------------|--|
| STATUS DI15 B | 3x05030<br>4x05030<br>I:5029 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI16 A | 3x05031<br>4x05031<br>I:5030 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI16 B | 3x05032<br>4x05032<br>I:5031 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI17 A | 3x05033<br>4x05033<br>I:5032 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI17 B | 3x05034<br>4x05034<br>I:5033 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI18 A | 3x05035<br>4x05035<br>I:5034 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI18 B | 3x05036<br>4x05036<br>I:5035 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI19 A | 3x05037<br>4x05037<br>I:5036 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI19 B | 3x05038<br>4x05038<br>I:5037 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI20 A | 3x05039<br>4x05039<br>I:5038 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI20 B | 3x05040<br>4x05040<br>I:5039 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |

|               |                              |                          |  |  |               |  |
|---------------|------------------------------|--------------------------|--|--|---------------|--|
| STATUS DI21 A | 3x05041<br>4x05041<br>I:5040 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI21 B | 3x05042<br>4x05042<br>I:5041 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI22 A | 3x05043<br>4x05043<br>I:5042 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI22 B | 3x05044<br>4x05044<br>I:5043 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI23 A | 3x05045<br>4x05045<br>I:5044 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI23 B | 3x05046<br>4x05046<br>I:5045 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI24 A | 3x05047<br>4x05047<br>I:5046 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI24 B | 3x05048<br>4x05048<br>I:5047 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI25 A | 3x05049<br>4x05049<br>I:5048 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI25 B | 3x05050<br>4x05050<br>I:5049 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI26 A | 3x05051<br>4x05051<br>I:5050 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |

|               |                              |                          |  |  |               |  |
|---------------|------------------------------|--------------------------|--|--|---------------|--|
| STATUS DI26 B | 3x05052<br>4x05052<br>I:5051 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI27 A | 3x05053<br>4x05053<br>I:5052 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI27 B | 3x05054<br>4x05054<br>I:5053 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI28 A | 3x05055<br>4x05055<br>I:5054 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI28 B | 3x05056<br>4x05056<br>I:5055 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI29 A | 3x05057<br>4x05057<br>I:5056 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI29 B | 3x05058<br>4x05058<br>I:5057 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI30 A | 3x05059<br>4x05059<br>I:5058 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI30 B | 3x05060<br>4x05060<br>I:5059 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |
| STATUS DI31 A | 3x05061<br>4x05061<br>I:5060 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,CC:0,REC:0,FEC:0    |  |  |               |  |
| STATUS DI31 B | 3x05062<br>4x05062<br>I:5061 | 0,0x0000<br>B:00 00      |  |  | UINT16<br>R/O |  |
|               |                              | DI:0,SKE:0,LKSE:0,LKEE:0 |  |  |               |  |

|                                                                                                                                                             |                              |                               |  |  |               |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------|--|--|---------------|--|
| STATUS DI32 A                                                                                                                                               | 3x05063<br>4x05063<br>I:5062 | 0,0x0000<br>B:00 00           |  |  | UINT16<br>R/O |  |
|                                                                                                                                                             |                              | DI:0,CC:0,REC:0,FEC:0         |  |  |               |  |
| STATUS DI32 B                                                                                                                                               | 3x05064<br>4x05064<br>I:5063 | 0,0x0000<br>B:00 00           |  |  | UINT16<br>R/O |  |
|                                                                                                                                                             |                              | DI:0,SKE:0,LKSE:0,LKEE:0      |  |  |               |  |
| <b>STATUS</b>                                                                                                                                               |                              |                               |  |  |               |  |
| FILTER PATTERN DI1                                                                                                                                          | 3x05065<br>4x05065<br>I:5064 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| The internal pattern for corresponding digital input for AC/DC filtering. The internal used state is created out of this internal pattern via oversampling. |                              |                               |  |  |               |  |
| FILTER PATTERN DI2                                                                                                                                          | 3x05067<br>4x05067<br>I:5066 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI3                                                                                                                                          | 3x05069<br>4x05069<br>I:5068 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI4                                                                                                                                          | 3x05071<br>4x05071<br>I:5070 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI5                                                                                                                                          | 3x05073<br>4x05073<br>I:5072 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI6                                                                                                                                          | 3x05075<br>4x05075<br>I:5074 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI7                                                                                                                                          | 3x05077<br>4x05077<br>I:5076 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI8                                                                                                                                          | 3x05079<br>4x05079<br>I:5078 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI9                                                                                                                                          | 3x05081<br>4x05081<br>I:5080 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI10                                                                                                                                         | 3x05083<br>4x05083<br>I:5082 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI11                                                                                                                                         | 3x05085<br>4x05085<br>I:5084 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |

|                     |                              |                               |  |  |               |  |
|---------------------|------------------------------|-------------------------------|--|--|---------------|--|
| FILTER PATTERN DI12 | 3x05087<br>4x05087<br>I:5086 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI13 | 3x05089<br>4x05089<br>I:5088 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI14 | 3x05091<br>4x05091<br>I:5090 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI15 | 3x05093<br>4x05093<br>I:5092 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI16 | 3x05095<br>4x05095<br>I:5094 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI17 | 3x05097<br>4x05097<br>I:5096 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI18 | 3x05099<br>4x05099<br>I:5098 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI19 | 3x05101<br>4x05101<br>I:5100 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI20 | 3x05103<br>4x05103<br>I:5102 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI21 | 3x05105<br>4x05105<br>I:5104 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI22 | 3x05107<br>4x05107<br>I:5106 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI23 | 3x05109<br>4x05109<br>I:5108 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI24 | 3x05111<br>4x05111<br>I:5110 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI25 | 3x05113<br>4x05113<br>I:5112 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI26 | 3x05115<br>4x05115<br>I:5114 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                       |                              |                               |  |  |               |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------|--|--|---------------|--|
| FILTER PATTERN DI27                                                                                                                                                                                                                                                                                                                                                                                                                   | 3x05117<br>4x05117<br>I:5116 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI28                                                                                                                                                                                                                                                                                                                                                                                                                   | 3x05119<br>4x05119<br>I:5118 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI29                                                                                                                                                                                                                                                                                                                                                                                                                   | 3x05121<br>4x05121<br>I:5120 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI30                                                                                                                                                                                                                                                                                                                                                                                                                   | 3x05123<br>4x05123<br>I:5122 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI31                                                                                                                                                                                                                                                                                                                                                                                                                   | 3x05125<br>4x05125<br>I:5124 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| FILTER PATTERN DI32                                                                                                                                                                                                                                                                                                                                                                                                                   | 3x05127<br>4x05127<br>I:5126 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI1</b>                                                                                                                                                                                                                                                                                                                                                                                   |                              |                               |  |  |               |  |
| RISE DI1                                                                                                                                                                                                                                                                                                                                                                                                                              | 3x07001<br>4x07001<br>I:7000 | 3,0x0003<br>B:00 03           |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                       |                              | 3 event(s)                    |  |  |               |  |
| Counter for rising edges on the digital input DIx. If the module detects a rising edge on the digital input, this counter is incremented by 1.<br>After power on or a soft reset this counter is set always to 0.<br>With the function RESET COUNTER this counter is also set to 0.                                                                                                                                                   |                              |                               |  |  |               |  |
| FALL DI1                                                                                                                                                                                                                                                                                                                                                                                                                              | 3x07002<br>4x07002<br>I:7001 | 3,0x0003<br>B:00 03           |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                       |                              | 3 event(s)                    |  |  |               |  |
| Counter for falling edges on the digital input DIx. If the module detects a falling edge on the digital input, this counter is incremented by 1.<br>After power on or a soft reset this counter is set always to 0.<br>With the function RESET COUNTER this counter is also set to 0.                                                                                                                                                 |                              |                               |  |  |               |  |
| CHANGE DI1                                                                                                                                                                                                                                                                                                                                                                                                                            | 3x07003<br>4x07003<br>I:7002 | 4,0x0004<br>B:00 04           |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                       |                              | 4 event(s)                    |  |  |               |  |
| Counter for events on the digital input DIx. If the module detects an event on the digital input, this counter is incremented by 1.<br>After power on or a soft reset this counter is set always to 0. With the function RESET COUNTER this counter is also set to 0.<br>The following events are available:<br>Detection of a short keypress<br>Detection of the start of a long keypress<br>Detection of the end of a long keypress |                              |                               |  |  |               |  |
| SHORT KEYPRESS DI1                                                                                                                                                                                                                                                                                                                                                                                                                    | 3x07004<br>4x07004<br>I:7003 | 2,0x0002<br>B:00 02           |  |  | UINT16<br>R/O |  |

|                                                                                                                                                                                                                                                                                                                                    |                              |                     |  |  |               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|---------------------|--|--|---------------|
|                                                                                                                                                                                                                                                                                                                                    |                              | 2 event(s)          |  |  |               |
| Counter for short keypress events on the digital input DIx. If the module detects a short keypress on the digital input, this counter is incremented by 1.<br>After power on or a soft reset this counter is set always to 0.<br>With the function RESET COUNTER this counter is also set to 0.                                    |                              |                     |  |  |               |
| LONG KEYPRESS START DI1                                                                                                                                                                                                                                                                                                            | 3x07005<br>4x07005<br>I:7004 | 1,0x0001<br>B:00 01 |  |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                                    |                              | 1 event(s)          |  |  |               |
| Counter for start events of long keypress actions on the digital input DIx. If the module detects the start of a long keypress action on the digital input, this counter is incremented by 1.<br>After power on or a soft reset this counter is set always to 0.<br>With the function RESET COUNTER this counter is also set to 0. |                              |                     |  |  |               |
| LONG KEYPRESS END DI1                                                                                                                                                                                                                                                                                                              | 3x07006<br>4x07006<br>I:7005 | 1,0x0001<br>B:00 01 |  |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                                    |                              | 1 event(s)          |  |  |               |
| Counter for end events of long keypress actions on the digital input DIx. If the module detects the end of a long keypress action on the digital input, this counter is incremented by 1.<br>After power on or a soft reset this counter is set always to 0.<br>With the function RESET COUNTER this counter is also set to 0.     |                              |                     |  |  |               |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI2</b>                                                                                                                                                                                                                                                                                |                              |                     |  |  |               |
| RISE DI2                                                                                                                                                                                                                                                                                                                           | 3x07011<br>4x07011<br>I:7010 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                                    |                              | 4 event(s)          |  |  |               |
| FALL DI2                                                                                                                                                                                                                                                                                                                           | 3x07012<br>4x07012<br>I:7011 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                                    |                              | 4 event(s)          |  |  |               |
| CHANGE DI2                                                                                                                                                                                                                                                                                                                         | 3x07013<br>4x07013<br>I:7012 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                                    |                              | 6 event(s)          |  |  |               |
| SHORT KEYPRESS DI2                                                                                                                                                                                                                                                                                                                 | 3x07014<br>4x07014<br>I:7013 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                                    |                              | 2 event(s)          |  |  |               |
| LONG KEYPRESS START DI2                                                                                                                                                                                                                                                                                                            | 3x07015<br>4x07015<br>I:7014 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                                    |                              | 2 event(s)          |  |  |               |
| LONG KEYPRESS END DI2                                                                                                                                                                                                                                                                                                              | 3x07016<br>4x07016<br>I:7015 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                                    |                              | 2 event(s)          |  |  |               |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI3</b>                                                                                                                                                                                                                                                                                |                              |                     |  |  |               |

|                                                     |                              |                     |  |  |               |  |
|-----------------------------------------------------|------------------------------|---------------------|--|--|---------------|--|
| RISE DI3                                            | 3x07021<br>4x07021<br>I:7020 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 4 event(s)          |  |  |               |  |
| FALL DI3                                            | 3x07022<br>4x07022<br>I:7021 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI3                                          | 3x07023<br>4x07023<br>I:7022 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI3                                  | 3x07024<br>4x07024<br>I:7023 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI3                             | 3x07025<br>4x07025<br>I:7024 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI3                               | 3x07026<br>4x07026<br>I:7025 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI4</b> |                              |                     |  |  |               |  |
| RISE DI4                                            | 3x07031<br>4x07031<br>I:7030 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 4 event(s)          |  |  |               |  |
| FALL DI4                                            | 3x07032<br>4x07032<br>I:7031 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI4                                          | 3x07033<br>4x07033<br>I:7032 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI4                                  | 3x07034<br>4x07034<br>I:7033 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI4                             | 3x07035<br>4x07035<br>I:7034 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 2 event(s)          |  |  |               |  |

|                                                     |                              |                     |  |  |               |  |
|-----------------------------------------------------|------------------------------|---------------------|--|--|---------------|--|
| LONG KEYPRESS END DI4                               | 3x07036<br>4x07036<br>I:7035 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI5</b> |                              |                     |  |  |               |  |
| RISE DI5                                            | 3x07041<br>4x07041<br>I:7040 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 4 event(s)          |  |  |               |  |
| FALL DI5                                            | 3x07042<br>4x07042<br>I:7041 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI5                                          | 3x07043<br>4x07043<br>I:7042 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI5                                  | 3x07044<br>4x07044<br>I:7043 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI5                             | 3x07045<br>4x07045<br>I:7044 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI5                               | 3x07046<br>4x07046<br>I:7045 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI6</b> |                              |                     |  |  |               |  |
| RISE DI6                                            | 3x07051<br>4x07051<br>I:7050 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 4 event(s)          |  |  |               |  |
| FALL DI6                                            | 3x07052<br>4x07052<br>I:7051 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI6                                          | 3x07053<br>4x07053<br>I:7052 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI6                                  | 3x07054<br>4x07054<br>I:7053 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |

|                                                     |                              |                     |  |  |               |  |
|-----------------------------------------------------|------------------------------|---------------------|--|--|---------------|--|
|                                                     |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI6                             | 3x07055<br>4x07055<br>I:7054 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI6                               | 3x07056<br>4x07056<br>I:7055 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI7</b> |                              |                     |  |  |               |  |
| RISE DI7                                            | 3x07061<br>4x07061<br>I:7060 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 4 event(s)          |  |  |               |  |
| FALL DI7                                            | 3x07062<br>4x07062<br>I:7061 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI7                                          | 3x07063<br>4x07063<br>I:7062 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI7                                  | 3x07064<br>4x07064<br>I:7063 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI7                             | 3x07065<br>4x07065<br>I:7064 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI7                               | 3x07066<br>4x07066<br>I:7065 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI8</b> |                              |                     |  |  |               |  |
| RISE DI8                                            | 3x07071<br>4x07071<br>I:7070 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 4 event(s)          |  |  |               |  |
| FALL DI8                                            | 3x07072<br>4x07072<br>I:7071 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                     |                              | 4 event(s)          |  |  |               |  |

|                                                      |                              |                     |  |  |               |  |
|------------------------------------------------------|------------------------------|---------------------|--|--|---------------|--|
| CHANGE DI8                                           | 3x07073<br>4x07073<br>I:7072 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI8                                   | 3x07074<br>4x07074<br>I:7073 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI8                              | 3x07075<br>4x07075<br>I:7074 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI8                                | 3x07076<br>4x07076<br>I:7075 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI9</b>  |                              |                     |  |  |               |  |
| RISE DI9                                             | 3x07081<br>4x07081<br>I:7080 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| FALL DI9                                             | 3x07082<br>4x07082<br>I:7081 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI9                                           | 3x07083<br>4x07083<br>I:7082 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI9                                   | 3x07084<br>4x07084<br>I:7083 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI9                              | 3x07085<br>4x07085<br>I:7084 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI9                                | 3x07086<br>4x07086<br>I:7085 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI10</b> |                              |                     |  |  |               |  |
| RISE DI10                                            | 3x07091<br>4x07091<br>I:7090 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |

|                                                      |                              |                     |  |  |               |  |
|------------------------------------------------------|------------------------------|---------------------|--|--|---------------|--|
|                                                      |                              | 4 event(s)          |  |  |               |  |
| FALL DI10                                            | 3x07092<br>4x07092<br>I:7091 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI10                                          | 3x07093<br>4x07093<br>I:7092 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI10                                  | 3x07094<br>4x07094<br>I:7093 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI10                             | 3x07095<br>4x07095<br>I:7094 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI10                               | 3x07096<br>4x07096<br>I:7095 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI11</b> |                              |                     |  |  |               |  |
| RISE DI11                                            | 3x07101<br>4x07101<br>I:7100 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| FALL DI11                                            | 3x07102<br>4x07102<br>I:7101 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI11                                          | 3x07103<br>4x07103<br>I:7102 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI11                                  | 3x07104<br>4x07104<br>I:7103 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI11                             | 3x07105<br>4x07105<br>I:7104 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI11                               | 3x07106<br>4x07106<br>I:7105 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |

|                                                      |                              |                     |  |  |               |
|------------------------------------------------------|------------------------------|---------------------|--|--|---------------|
|                                                      |                              | 2 event(s)          |  |  |               |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI12</b> |                              |                     |  |  |               |
| RISE DI12                                            | 3x07111<br>4x07111<br>I:7110 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |
|                                                      |                              | 4 event(s)          |  |  |               |
| FALL DI12                                            | 3x07112<br>4x07112<br>I:7111 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |
|                                                      |                              | 4 event(s)          |  |  |               |
| CHANGE DI12                                          | 3x07113<br>4x07113<br>I:7112 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |
|                                                      |                              | 6 event(s)          |  |  |               |
| SHORT KEYPRESS DI12                                  | 3x07114<br>4x07114<br>I:7113 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |
|                                                      |                              | 2 event(s)          |  |  |               |
| LONG KEYPRESS START DI12                             | 3x07115<br>4x07115<br>I:7114 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |
|                                                      |                              | 2 event(s)          |  |  |               |
| LONG KEYPRESS END DI12                               | 3x07116<br>4x07116<br>I:7115 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |
|                                                      |                              | 2 event(s)          |  |  |               |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI13</b> |                              |                     |  |  |               |
| RISE DI13                                            | 3x07121<br>4x07121<br>I:7120 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |
|                                                      |                              | 4 event(s)          |  |  |               |
| FALL DI13                                            | 3x07122<br>4x07122<br>I:7121 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |
|                                                      |                              | 4 event(s)          |  |  |               |
| CHANGE DI13                                          | 3x07123<br>4x07123<br>I:7122 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |
|                                                      |                              | 6 event(s)          |  |  |               |
| SHORT KEYPRESS DI13                                  | 3x07124<br>4x07124<br>I:7123 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |
|                                                      |                              | 2 event(s)          |  |  |               |

|                                                      |                              |                     |  |  |               |  |
|------------------------------------------------------|------------------------------|---------------------|--|--|---------------|--|
| LONG KEYPRESS START DI13                             | 3x07125<br>4x07125<br>I:7124 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI13                               | 3x07126<br>4x07126<br>I:7125 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI14</b> |                              |                     |  |  |               |  |
| RISE DI14                                            | 3x07131<br>4x07131<br>I:7130 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| FALL DI14                                            | 3x07132<br>4x07132<br>I:7131 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI14                                          | 3x07133<br>4x07133<br>I:7132 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI14                                  | 3x07134<br>4x07134<br>I:7133 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI14                             | 3x07135<br>4x07135<br>I:7134 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI14                               | 3x07136<br>4x07136<br>I:7135 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI15</b> |                              |                     |  |  |               |  |
| RISE DI15                                            | 3x07141<br>4x07141<br>I:7140 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| FALL DI15                                            | 3x07142<br>4x07142<br>I:7141 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI15                                          | 3x07143<br>4x07143<br>I:7142 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |

|                                                      |                              |                     |  |  |               |  |
|------------------------------------------------------|------------------------------|---------------------|--|--|---------------|--|
|                                                      |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI15                                  | 3x07144<br>4x07144<br>I:7143 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI15                             | 3x07145<br>4x07145<br>I:7144 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI15                               | 3x07146<br>4x07146<br>I:7145 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI16</b> |                              |                     |  |  |               |  |
| RISE DI16                                            | 3x07151<br>4x07151<br>I:7150 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| FALL DI16                                            | 3x07152<br>4x07152<br>I:7151 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI16                                          | 3x07153<br>4x07153<br>I:7152 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI16                                  | 3x07154<br>4x07154<br>I:7153 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI16                             | 3x07155<br>4x07155<br>I:7154 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI16                               | 3x07156<br>4x07156<br>I:7155 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI17</b> |                              |                     |  |  |               |  |
| RISE DI17                                            | 3x07161<br>4x07161<br>I:7160 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |

|                                                      |                              |                     |  |  |               |  |
|------------------------------------------------------|------------------------------|---------------------|--|--|---------------|--|
| FALL DI17                                            | 3x07162<br>4x07162<br>I:7161 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI17                                          | 3x07163<br>4x07163<br>I:7162 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI17                                  | 3x07164<br>4x07164<br>I:7163 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI17                             | 3x07165<br>4x07165<br>I:7164 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI17                               | 3x07166<br>4x07166<br>I:7165 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI18</b> |                              |                     |  |  |               |  |
| RISE DI18                                            | 3x07171<br>4x07171<br>I:7170 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| FALL DI18                                            | 3x07172<br>4x07172<br>I:7171 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI18                                          | 3x07173<br>4x07173<br>I:7172 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI18                                  | 3x07174<br>4x07174<br>I:7173 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI18                             | 3x07175<br>4x07175<br>I:7174 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI18                               | 3x07176<br>4x07176<br>I:7175 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |

| DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI19 |                              |                     |  |  |               |  |
|-----------------------------------------------|------------------------------|---------------------|--|--|---------------|--|
| RISE DI19                                     | 3x07181<br>4x07181<br>I:7180 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                               |                              | 4 event(s)          |  |  |               |  |
| FALL DI19                                     | 3x07182<br>4x07182<br>I:7181 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                               |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI19                                   | 3x07183<br>4x07183<br>I:7182 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                               |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI19                           | 3x07184<br>4x07184<br>I:7183 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                               |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI19                      | 3x07185<br>4x07185<br>I:7184 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                               |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI19                        | 3x07186<br>4x07186<br>I:7185 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                               |                              | 2 event(s)          |  |  |               |  |
| DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI20 |                              |                     |  |  |               |  |
| RISE DI20                                     | 3x07191<br>4x07191<br>I:7190 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                               |                              | 4 event(s)          |  |  |               |  |
| FALL DI20                                     | 3x07192<br>4x07192<br>I:7191 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                               |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI20                                   | 3x07193<br>4x07193<br>I:7192 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                               |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI20                           | 3x07194<br>4x07194<br>I:7193 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                               |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI20                      | 3x07195<br>4x07195<br>I:7194 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |

|                                                      |                              |                     |  |  |               |  |
|------------------------------------------------------|------------------------------|---------------------|--|--|---------------|--|
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI20                               | 3x07196<br>4x07196<br>I:7195 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI21</b> |                              |                     |  |  |               |  |
| RISE DI21                                            | 3x07201<br>4x07201<br>I:7200 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| FALL DI21                                            | 3x07202<br>4x07202<br>I:7201 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI21                                          | 3x07203<br>4x07203<br>I:7202 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI21                                  | 3x07204<br>4x07204<br>I:7203 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI21                             | 3x07205<br>4x07205<br>I:7204 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI21                               | 3x07206<br>4x07206<br>I:7205 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI22</b> |                              |                     |  |  |               |  |
| RISE DI22                                            | 3x07211<br>4x07211<br>I:7210 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| FALL DI22                                            | 3x07212<br>4x07212<br>I:7211 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI22                                          | 3x07213<br>4x07213<br>I:7212 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 6 event(s)          |  |  |               |  |

|                                                      |                              |                     |  |  |               |  |
|------------------------------------------------------|------------------------------|---------------------|--|--|---------------|--|
| SHORT KEYPRESS DI22                                  | 3x07214<br>4x07214<br>I:7213 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI22                             | 3x07215<br>4x07215<br>I:7214 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI22                               | 3x07216<br>4x07216<br>I:7215 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI23</b> |                              |                     |  |  |               |  |
| RISE DI23                                            | 3x07221<br>4x07221<br>I:7220 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| FALL DI23                                            | 3x07222<br>4x07222<br>I:7221 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI23                                          | 3x07223<br>4x07223<br>I:7222 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI23                                  | 3x07224<br>4x07224<br>I:7223 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI23                             | 3x07225<br>4x07225<br>I:7224 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI23                               | 3x07226<br>4x07226<br>I:7225 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI24</b> |                              |                     |  |  |               |  |
| RISE DI24                                            | 3x07231<br>4x07231<br>I:7230 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| FALL DI24                                            | 3x07232<br>4x07232<br>I:7231 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |

|                                                      |                              |                     |  |  |               |  |
|------------------------------------------------------|------------------------------|---------------------|--|--|---------------|--|
|                                                      |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI24                                          | 3x07233<br>4x07233<br>I:7232 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI24                                  | 3x07234<br>4x07234<br>I:7233 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI24                             | 3x07235<br>4x07235<br>I:7234 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI24                               | 3x07236<br>4x07236<br>I:7235 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI25</b> |                              |                     |  |  |               |  |
| RISE DI25                                            | 3x07241<br>4x07241<br>I:7240 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| FALL DI25                                            | 3x07242<br>4x07242<br>I:7241 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI25                                          | 3x07243<br>4x07243<br>I:7242 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI25                                  | 3x07244<br>4x07244<br>I:7243 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI25                             | 3x07245<br>4x07245<br>I:7244 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI25                               | 3x07246<br>4x07246<br>I:7245 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI26</b> |                              |                     |  |  |               |  |

|                                                      |                              |                     |  |  |               |  |
|------------------------------------------------------|------------------------------|---------------------|--|--|---------------|--|
| RISE DI26                                            | 3x07251<br>4x07251<br>I:7250 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| FALL DI26                                            | 3x07252<br>4x07252<br>I:7251 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI26                                          | 3x07253<br>4x07253<br>I:7252 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI26                                  | 3x07254<br>4x07254<br>I:7253 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI26                             | 3x07255<br>4x07255<br>I:7254 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI26                               | 3x07256<br>4x07256<br>I:7255 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI27</b> |                              |                     |  |  |               |  |
| RISE DI27                                            | 3x07261<br>4x07261<br>I:7260 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| FALL DI27                                            | 3x07262<br>4x07262<br>I:7261 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI27                                          | 3x07263<br>4x07263<br>I:7262 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI27                                  | 3x07264<br>4x07264<br>I:7263 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI27                             | 3x07265<br>4x07265<br>I:7264 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |

|                                                       |                              |                     |  |  |               |  |
|-------------------------------------------------------|------------------------------|---------------------|--|--|---------------|--|
| LONG KEYPRESS END DI27                                | 3x07266<br>4x07266<br>I:7265 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                       |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI28</b>  |                              |                     |  |  |               |  |
| RISE DI28                                             | 3x07271<br>4x07271<br>I:7270 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                       |                              | 4 event(s)          |  |  |               |  |
| FALL DI28                                             | 3x07272<br>4x07272<br>I:7271 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                       |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI28                                           | 3x07273<br>4x07273<br>I:7272 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                       |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI28                                   | 3x07274<br>4x07274<br>I:7273 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                       |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI28                              | 3x07275<br>4x07275<br>I:7274 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                       |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI28                                | 3x07276<br>4x07276<br>I:7275 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                       |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI129</b> |                              |                     |  |  |               |  |
| RISE DI129                                            | 3x07281<br>4x07281<br>I:7280 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                       |                              | 4 event(s)          |  |  |               |  |
| FALL DI129                                            | 3x07282<br>4x07282<br>I:7281 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                       |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI129                                          | 3x07283<br>4x07283<br>I:7282 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                       |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI129                                  | 3x07284<br>4x07284<br>I:7283 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |

|                                                      |                              |                     |  |  |               |  |
|------------------------------------------------------|------------------------------|---------------------|--|--|---------------|--|
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI129                            | 3x07285<br>4x07285<br>I:7284 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI129                              | 3x07286<br>4x07286<br>I:7285 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI30</b> |                              |                     |  |  |               |  |
| RISE DI30                                            | 3x07291<br>4x07291<br>I:7290 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| FALL DI30                                            | 3x07292<br>4x07292<br>I:7291 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI30                                          | 3x07293<br>4x07293<br>I:7292 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI30                                  | 3x07294<br>4x07294<br>I:7293 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI30                             | 3x07295<br>4x07295<br>I:7294 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI30                               | 3x07296<br>4x07296<br>I:7295 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI31</b> |                              |                     |  |  |               |  |
| RISE DI31                                            | 3x07301<br>4x07301<br>I:7300 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| FALL DI31                                            | 3x07302<br>4x07302<br>I:7301 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |

|                                                      |                              |                     |  |  |               |  |
|------------------------------------------------------|------------------------------|---------------------|--|--|---------------|--|
| CHANGE DI31                                          | 3x07303<br>4x07303<br>I:7302 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI31                                  | 3x07304<br>4x07304<br>I:7303 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI31                             | 3x07305<br>4x07305<br>I:7304 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI31                               | 3x07306<br>4x07306<br>I:7305 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| <b>DIGITAL INPUTS: STATUS FOR DIGITAL INPUT DI32</b> |                              |                     |  |  |               |  |
| RISE DI32                                            | 3x07311<br>4x07311<br>I:7310 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| FALL DI32                                            | 3x07312<br>4x07312<br>I:7311 | 4,0x0004<br>B:00 04 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 4 event(s)          |  |  |               |  |
| CHANGE DI32                                          | 3x07313<br>4x07313<br>I:7312 | 6,0x0006<br>B:00 06 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 6 event(s)          |  |  |               |  |
| SHORT KEYPRESS DI32                                  | 3x07314<br>4x07314<br>I:7313 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS START DI32                             | 3x07315<br>4x07315<br>I:7314 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |
| LONG KEYPRESS END DI32                               | 3x07316<br>4x07316<br>I:7315 | 2,0x0002<br>B:00 02 |  |  | UINT16<br>R/O |  |
|                                                      |                              | 2 event(s)          |  |  |               |  |

| Register NAME<br>Command NAME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | MODBUS<br>Register<br>ASCII<br>Command | Register VALUE<br>ASCII Command           | NEW REAL<br>VALUE | NEW<br>VALUE | DATA TYPE     | DO<br>WRITE |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------|-------------------|--------------|---------------|-------------|
| INITIAL & WATCHDOG STATUS FOR ALL DIGITAL OUTPUTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                        |                                           |                   |              |               |             |
| FRAM INTIAL & WATCHDOG STATUS<br>OF DO1-DO12                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3x59001<br>4x59001<br>l:59000          | 65535,0xFFFF<br>B:FF FF                   |                   | 0x0FFF       | UINT16<br>R/W | YES         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual init & watchdog state of DO1:1=ON  |                   | 1            |               |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual init & watchdog state of DO2:1=ON  |                   | 1            |               |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual init & watchdog state of DO3:1=ON  |                   | 1            |               |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual init & watchdog state of DO4:1=ON  |                   | 1            |               |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual init & watchdog state of DO5:1=ON  |                   | 1            |               |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual init & watchdog state of DO6:1=ON  |                   | 1            |               |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual init & watchdog state of DO7:1=ON  |                   | 1            |               |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual init & watchdog state of DO8:1=ON  |                   | 1            |               |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual init & watchdog state of DO9:1=ON  |                   | 1            |               |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual init & watchdog state of DO10:1=ON |                   | 1            |               |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual init & watchdog state of DO11:1=ON |                   | 1            |               |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual init & watchdog state of DO12:1=ON |                   | 1            |               |             |
| <p>Current FRAM setting of initial and watchdog state of all digital outputs. This state is used after power on and after a communcation watchdog timeout, if a watchdog time is configured</p> <p>Bit 0: =0:DO1 is OFF, =1:DO1 is ON<br/>Bit 1: =0:DO2 is OFF, =1:DO2 is ON<br/>...<br/>Bit 10: =0:DO11 is OFF, =1:DO11 is ON<br/>Bit 11: =0:DO12 is OFF, =1:DO12 is ON</p> <p>Write on this register sets all digital outputs to a new state for module restart and watchdog function. The state is saved in FRAM</p> |                                        |                                           |                   |              |               |             |

| Register NAME<br>Command NAME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | MODBUS<br>Register<br>ASCII<br>Command | Register VALUE<br>ASCII Command                                                                            | NEW REAL<br>VALUE | NEW<br>VALUE | DATA TYPE | DO<br>WRITE |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------------------------------------------------------------------------------------|-------------------|--------------|-----------|-------------|
| ASCII COMMANDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                        |                                                                                                            |                   |              |           |             |
| AIOX CONFIGURATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                        |                                                                                                            |                   |              |           |             |
| SET IO TYPES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ASCII<br>WRITE<br>COMMAND              | #SIOTYPS:<IOTyp1>,<IOTyp2>,<IOTyp3>,<IOTyp4>,<IOTyp5>,<IOTyp6>,<IOTyp7>,<IOTyp8><CR><br>Result:<br>#OK<CR> |                   |              | ASCII     | YES         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | IOTyp1                                 | VO[0-10V]                                                                                                  |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | IOTyp2                                 | VO[0-10V]                                                                                                  |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | IOTyp3                                 | VO[0-10V]                                                                                                  |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | IOTyp4                                 | VO[0-10V]                                                                                                  |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | IOTyp5                                 | VO[0-10V]                                                                                                  |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | IOTyp6                                 | VO[0-10V]                                                                                                  |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | IOTyp7                                 | VO[0-10V]                                                                                                  |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | IOTyp8                                 | VO[0-10V]                                                                                                  |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | TX                                     | #1,SIOTYPS:VO[0-10V],VO[0-10V],VO[0-10V],VO[0-10V],VO[0-10V],VO[0-10V],VO[0-10V],VO[0-10V]<CR>             |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | RX                                     | #1,OK<CR>                                                                                                  |                   |              |           |             |
| <p>This command defines for all 8 universal IOs a new type of IO:</p> <p>IOTypx stands for the new type:</p> <p>UU: Unused – high impedance</p> <p>VI[0-10V]: VOLTAGE INPUT for 0 to 10V Signals</p> <p>VI[2-10V]: VOLTAGE INPUT for 2 to 10V Signals</p> <p>VO[0-10V]: VOLTAGE OUTPUT for 0 to 10V Signals</p> <p>VO[2-10V]: VOLTAGE OUTPUT for 2 to 10V Signals]</p> <p>CI[0-20mA;LP]: CURRENT INPUT for 0 to 20mA Signals – loop powered</p> <p>CI[4-20mA;LP]: CURRENT INPUT for 4 to 20mA Signals – loop powered</p> <p>CI[0-20mA;EP]: CURRENT INPUT for 0 to 20mA Signals – external powered</p> <p>CI[4-20mA;EP]: CURRENT INPUT for 4 to 20mA Signals – external powered</p> <p>CO[0-20mA]: CURRENT OUTPUT for 0 to 20mA Signals</p> <p>CO[4-20mA]: CURRENT OUTPUT for 4 to 20mA Signals</p> <p>RTDI[OHM]: RTD SENSOR INPUT for Ohm measurement between 0 and 1MOhm</p> <p>DI[24V;L]: DIGITAL INPUT for 24Vdc – logic, threshold 12V</p> <p>DI[24V;LP]: DIGITAL INPUT for 24Vdc – loop powered</p> <p>HINT: The last IO type is automatically stored in FRAM and will be used after a system restart.</p> |                                        |                                                                                                            |                   |              |           |             |
| SET IO TYPx                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ASCII<br>WRITE<br>COMMAND              | #SIOTYP<IONR>:<IOTypx><CR><br>Result:<br>#OK<CR>                                                           |                   |              | ASCII     | YES         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | IONR                                   | 1                                                                                                          |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | IOTypx                                 | VO[0-10V]                                                                                                  |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | TX                                     | #1,SIOTYP1:VO[0-10V]<CR>                                                                                   |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | RX                                     | #1,OK<CR>                                                                                                  |                   |              |           |             |

This command defines for the universal IO IONR a new type of IO:  
IOTypx stands for the new type:  
UU: Unused – high impedance  
VI[0-10V]: VOLTAGE INPUT for 0 to 10V Signals  
VI[2-10V]: VOLTAGE INPUT for 2 to 10V Signals  
VO[0-10V]: VOLTAGE OUTPUT for 0 to 10V Signals  
VO[2-10V]: VOLTAGE OUTPUT for 2 to 10V Signals  
CI[0-20mA;LP]: CURRENT INPUT for 0 to 20mA Signals – loop powered  
CI[4-20mA;LP]: CURRENT INPUT for 4 to 20mA Signals – loop powered  
CI[0-20mA;EP]: CURRENT INPUT for 0 to 20mA Signals – external powered  
CI[4-20mA;EP]: CURRENT INPUT for 4 to 20mA Signals – external powered  
CO[0-20mA]: CURRENT OUTPUT for 0 to 20mA Signals  
CO[4-20mA]: CURRENT OUTPUT for 4 to 20mA Signals  
RTDI[OHM]: RTD SENSOR INPUT for Ohm measurement between 0 and 1MOhm  
DI[24V;L]: DIGITAL INPUT for 24Vdc – logic, threshold 12V  
DI[24V;LP]: DIGITAL INPUT for 24Vdc – loop powered

HINT: The last IO type is automatically stored in FRAM and will be used after a system restart.

|              |                          |                                                                                                |       |  |
|--------------|--------------------------|------------------------------------------------------------------------------------------------|-------|--|
| GET IO TYPES | ASCII<br>READ<br>COMMAND | #GIOTYPS<CR><br>Result:<br>#GIOTYPS:<IOTyp1Txt>,<IOTyp2Txt>,...,<IOTyp8Txt> <CR>               | ASCII |  |
|              | TX                       | #1,GIOTYPS<CR>                                                                                 |       |  |
|              | RX                       | #1,GIOTYPS:VO[0-10V],VO[0-10V],VO[0-10V],VO[0-10V],VO[0-10V],VO[0-10V],VO[0-10V],VO[0-10V]<CR> |       |  |
|              |                          | Actual type of IO1:VO[0-10V]                                                                   |       |  |
|              |                          | Actual type of IO2:VO[0-10V]                                                                   |       |  |
|              |                          | Actual type of IO3:VO[0-10V]                                                                   |       |  |
|              |                          | Actual type of IO4:VO[0-10V]                                                                   |       |  |
|              |                          | Actual type of IO5:VO[0-10V]                                                                   |       |  |
|              |                          | Actual type of IO6:VO[0-10V]                                                                   |       |  |
|              |                          | Actual type of IO7:VO[0-10V]                                                                   |       |  |
|              |                          | Actual type of IO8:VO[0-10V]                                                                   |       |  |

This command shows for all 8 universal IOs the current selected type of IO:  
IOTypx stands for the types:  
UU: Unused – high impedance  
VI[0-10V]: VOLTAGE INPUT for 0 to 10V Signals  
VI[2-10V]: VOLTAGE INPUT for 2 to 10V Signals  
VO[0-10V]: VOLTAGE OUTPUT for 0 to 10V Signals  
VO[2-10V]: VOLTAGE OUTPUT for 2 to 10V Signals  
CI[0-20mA;LP]: CURRENT INPUT for 0 to 20mA Signals – loop powered  
CI[4-20mA;LP]: CURRENT INPUT for 4 to 20mA Signals – loop powered  
CI[0-20mA;EP]: CURRENT INPUT for 0 to 20mA Signals – external powered  
CI[4-20mA;EP]: CURRENT INPUT for 4 to 20mA Signals – external powered  
CO[0-20mA]: CURRENT OUTPUT for 0 to 20mA Signals  
CO[4-20mA]: CURRENT OUTPUT for 4 to 20mA Signals  
RTDI[OHM]: RTD SENSOR INPUT for Ohm measurement between 0 and 1MOhm  
DI[24V;L]: DIGITAL INPUT for 24Vdc – logic, threshold 12V  
DI[24V;LP]: DIGITAL INPUT for 24Vdc – loop powered

|             |                          |                                                                 |       |  |
|-------------|--------------------------|-----------------------------------------------------------------|-------|--|
| GET IO TYPx | ASCII<br>READ<br>COMMAND | #GIOTYP<IONR> <CR><br>Result:<br>#GIOTYP<IONR>:<IOTypxTxt> <CR> | ASCII |  |
|             | IONR                     | 1                                                               |       |  |
|             | TX                       | #1,GIOTYP1<CR>                                                  |       |  |
|             | RX                       | #1,GIOTYP1:VO[0-10V] <CR>                                       |       |  |
|             |                          | Actual type of IO1:VO[0-10V]                                    |       |  |

This command shows for the universal IO IONR the current selected type:

IOTypx stands for the types:

UU: Unused – high impedance

VI[0-10V]: VOLTAGE INPUT for 0 to 10V Signals

VI[2-10V]: VOLTAGE INPUT for 2 to 10V Signals

VO[0-10V]: VOLTAGE OUTPUT for 0 to 10V Signals

VO[2-10V]: VOLTAGE OUTPUT for 2 to 10V Signals

CI[0-20mA;LP]: CURRENT INPUT for 0 to 20mA Signals – loop powered

CI[4-20mA;LP]: CURRENT INPUT for 4 to 20mA Signals – loop powered

CI[0-20mA;EP]: CURRENT INPUT for 0 to 20mA Signals – external powered

CI[4-20mA;EP]: CURRENT INPUT for 4 to 20mA Signals – external powered

CO[0-20mA]: CURRENT OUTPUT for 0 to 20mA Signals

CO[4-20mA]: CURRENT OUTPUT for 4 to 20mA Signals

RTDI[OHM]: RTD SENSOR INPUT for Ohm measurement between 0 and 1MOhm

DI[24V;L]: DIGITAL INPUT for 24Vdc – logic, threshold 12V

DI[24V;LP]: DIGITAL INPUT for 24Vdc – loop powered

## VOLTAGE INPUTS

|                               |                          |                                                                                 |       |  |
|-------------------------------|--------------------------|---------------------------------------------------------------------------------|-------|--|
| GET VOLTAGE INPUTS<br>IN VOLT | ASCII<br>READ<br>COMMAND | #GVISV<CR><br>Result:<br>#GVISV:<IOVolt1DbI>,<IOVolt2DbI>,...,<IOVolt8DbI> <CR> | ASCII |  |
|                               | TX                       | #1,GVISV<CR>                                                                    |       |  |
|                               | RX                       | #1,GVISV:999.99,999.99,999.99,999.99,999.99,999.99,999.99,999.99 <CR>           |       |  |
|                               |                          | Actual voltage on IO1:999.99V                                                   |       |  |
|                               |                          | Actual voltage on IO2:999.99V                                                   |       |  |
|                               |                          | Actual voltage on IO3:999.99V                                                   |       |  |
|                               |                          | Actual voltage on IO4:999.99V                                                   |       |  |
|                               |                          | Actual voltage on IO5:999.99V                                                   |       |  |
|                               |                          | Actual voltage on IO6:999.99V                                                   |       |  |
|                               |                          | Actual voltage on IO7:999.99V                                                   |       |  |
|                               |                          | Actual voltage on IO8:999.99V                                                   |       |  |

This command shows for all VOLTAGE INPUT IOs the current measurement in Volt.

The measurement range is 0.0 to 10.00V.

All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.

|                              |                          |                                                              |       |  |
|------------------------------|--------------------------|--------------------------------------------------------------|-------|--|
| GET VOLTAGE INPUT<br>IN VOLT | ASCII<br>READ<br>COMMAND | #GVIV<IONR> <CR><br>Result:<br>#GVIV<IONR>:<IOxVoltDbI> <CR> | ASCII |  |
|                              | IONR                     | 1                                                            |       |  |
|                              | TX                       | #1,GVIV1<CR>                                                 |       |  |
|                              | RX                       | #1,GVIV1:999.99<CR>                                          |       |  |
|                              |                          | Actual voltage on IO1:999.99V                                |       |  |

|                                                                                                                                                                                                                                                      |                          |                                                                                         |       |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------------|-------|--|
| This command shows for the VOLTAGE INPUT IO <IONR> the current measurement in Volt.<br>The measurement range is 0.0 to 10.00V.<br>All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.                   |                          |                                                                                         |       |  |
| GET VOLTAGE INPUTS<br>IN PERCENT                                                                                                                                                                                                                     | ASCII<br>READ<br>COMMAND | #GVISP<CR><br>Result:<br>#GVISP:<IOPercent1Dbl>,<IOPercent2Dbl>,...,<IOPercent8Dbl><CR> | ASCII |  |
|                                                                                                                                                                                                                                                      | TX                       | #1,GVISP<CR>                                                                            |       |  |
|                                                                                                                                                                                                                                                      | RX                       | #1,GVISP:999.99,999.99,999.99,999.99,999.99,999.99,999.99,999.99<CR>                    |       |  |
|                                                                                                                                                                                                                                                      |                          | Actual percentage on IO1:999.99%                                                        |       |  |
|                                                                                                                                                                                                                                                      |                          | Actual percentage on IO2:999.99%                                                        |       |  |
|                                                                                                                                                                                                                                                      |                          | Actual percentage on IO3:999.99%                                                        |       |  |
|                                                                                                                                                                                                                                                      |                          | Actual percentage on IO4:999.99%                                                        |       |  |
|                                                                                                                                                                                                                                                      |                          | Actual percentage on IO5:999.99%                                                        |       |  |
|                                                                                                                                                                                                                                                      |                          | Actual percentage on IO6:999.99%                                                        |       |  |
|                                                                                                                                                                                                                                                      |                          | Actual percentage on IO7:999.99%                                                        |       |  |
|                                                                                                                                                                                                                                                      |                          | Actual percentage on IO8:999.99%                                                        |       |  |
| This command shows for all VOLTAGE INPUT IOs the current measurement in Percent.<br>The measurement range is 0.0V -> 0.0% to 10.00V -> 100.0%.<br>All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.   |                          |                                                                                         |       |  |
| GET VOLTAGE INPUT<br>IN PERCENT                                                                                                                                                                                                                      | ASCII<br>READ<br>COMMAND | #GVIP<IONR> <CR><br>Result:<br>#GVIP<IONR>:<IOxPercentDbl> <CR>                         | ASCII |  |
|                                                                                                                                                                                                                                                      | IONR                     | 1                                                                                       |       |  |
|                                                                                                                                                                                                                                                      | TX                       | #1,GVIP1<CR>                                                                            |       |  |
|                                                                                                                                                                                                                                                      | RX                       | #1,GVIP1:999.99<CR>                                                                     |       |  |
|                                                                                                                                                                                                                                                      |                          | Actual percentage on IO1:999.99%                                                        |       |  |
| This command shows for VOLTAGE INPUT IO <IONR> the current measurement in Percent.<br>The measurement range is 0.0V -> 0.0% to 10.00V -> 100.0%.<br>All IOs with a different usage type will return 999.99 to indicate, that no measurement is done. |                          |                                                                                         |       |  |
| VOLTAGE DIGITAL INPUTS                                                                                                                                                                                                                               |                          |                                                                                         |       |  |
| GET VOLTAGE DIGITAL INPUTS                                                                                                                                                                                                                           | ASCII<br>READ<br>COMMAND | #GVDIS<CR><br>Result:<br>#GVDIS:<IODI1Dec>,<IODI2Dec>,...,<IODI8Dec> <CR>               | ASCII |  |
|                                                                                                                                                                                                                                                      | TX                       | #1,GVDIS<CR>                                                                            |       |  |
|                                                                                                                                                                                                                                                      | RX                       | #1,GVDIS:X,X,X,X,X,X,X,X<CR>                                                            |       |  |
|                                                                                                                                                                                                                                                      |                          | Actual voltage digital input state on IO1:X                                             |       |  |
|                                                                                                                                                                                                                                                      |                          | Actual voltage digital input state on IO2:X                                             |       |  |
|                                                                                                                                                                                                                                                      |                          | Actual voltage digital input state on IO3:X                                             |       |  |
|                                                                                                                                                                                                                                                      |                          | Actual voltage digital input state on IO4:X                                             |       |  |
|                                                                                                                                                                                                                                                      |                          | Actual voltage digital input state on IO5:X                                             |       |  |
|                                                                                                                                                                                                                                                      |                          | Actual voltage digital input state on IO6:X                                             |       |  |
|                                                                                                                                                                                                                                                      |                          | Actual voltage digital input state on IO7:X                                             |       |  |
|                                                                                                                                                                                                                                                      |                          | Actual voltage digital input state on IO8:X                                             |       |  |
| This command shows for all VOLTAGE DIGITAL INPUT IOs the current state.<br>The digital input can have the values 0 and 1.<br>All IOs with a different usage type will return X to indicate, that no measurement is done.                             |                          |                                                                                         |       |  |

|                           |                          |                                                          |       |  |
|---------------------------|--------------------------|----------------------------------------------------------|-------|--|
| GET VOLTAGE DIGITAL INPUT | ASCII<br>READ<br>COMMAND | #GVDI<IONR><CR><br>Result:<br>#GVDI<IONR>:<IOxDIDec><CR> | ASCII |  |
|                           | IONR                     | 1                                                        |       |  |
|                           | TX                       | #1,GVDI1<CR>                                             |       |  |
|                           | RX                       | #1,GVDI3:X<CR>                                           |       |  |
|                           |                          | Actual voltage digital input state on IO1:X              |       |  |

This command shows for VOLTAGE DIGITAL INPUT IO <IONR> the current state.

The digital input can have the values 0 and 1.

All IOs with a different usage type will return X to indicate, that no measurement is done.

|                                       |                          |                                                                            |       |  |
|---------------------------------------|--------------------------|----------------------------------------------------------------------------|-------|--|
| GET VOLTAGE DIGITAL INPUTS<br>CURRENT | ASCII<br>READ<br>COMMAND | #GVDISC<CR><br>Result:<br>#GVDISC:<IOmA1Dbl>,<IOmA2Dbl>,...,<IOmA8Dbl><CR> | ASCII |  |
|                                       | TX                       | #1,GVDISC<CR>                                                              |       |  |
|                                       | RX                       | #1,GVDISC:999.99,999.99,999.99,999.99,999.99,999.99,999.99,999.99<CR>      |       |  |
|                                       |                          | Actual input current on IO1:999.99mA                                       |       |  |
|                                       |                          | Actual input current on IO2:999.99mA                                       |       |  |
|                                       |                          | Actual input current on IO3:999.99mA                                       |       |  |
|                                       |                          | Actual input current on IO4:999.99mA                                       |       |  |
|                                       |                          | Actual input current on IO5:999.99mA                                       |       |  |
|                                       |                          | Actual input current on IO6:999.99mA                                       |       |  |
|                                       |                          | Actual input current on IO7:999.99mA                                       |       |  |
|                                       |                          | Actual input current on IO8:999.99mA                                       |       |  |

This command shows for all VOLTAGE DIGITAL INPUT IOs the actual current in mA.

The measurement range is 0.0mA to 35mA.

All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.

|                                      |                          |                                                            |       |  |
|--------------------------------------|--------------------------|------------------------------------------------------------|-------|--|
| GET VOLTAGE DIGITAL INPUT<br>CURRENT | ASCII<br>READ<br>COMMAND | #GVDIC<IONR><CR><br>Result:<br>#GVDIC<IONR>:<IOxmADbl><CR> | ASCII |  |
|                                      | IONR                     | 1                                                          |       |  |
|                                      | TX                       | #1,GVDIC1<CR>                                              |       |  |
|                                      | RX                       | #1,GVDIC1:999.99<CR>                                       |       |  |
|                                      |                          | Actual input current on IO1:999.99mA                       |       |  |

This command shows for VOLTAGE DIGITAL INPUT IO <IONR> the actual current in mA.

The measurement range is 0.0mA to 35mA.

All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.

## VOLTAGE OUTPUTS

|                                |                           |                                                                                                                                              |       |     |
|--------------------------------|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|
| SET VOLTAGE OUTPUTS<br>IN VOLT | ASCII<br>WRITE<br>COMMAND | #SVOSV:<IO1VoltDbl>,<IO2VoltDbl>,<IO3VoltDbl>,<IO4VoltDbl>,<IO5VoltDbl>,<IO6VoltDbl>,<IO7<br>VoltDbl>,<IO8VoltDbl><CR><br>Result:<br>#OK<CR> | ASCII | YES |
|                                | IO1Volt                   | 10,000                                                                                                                                       |       |     |
|                                | IO2Volt                   | 7,500                                                                                                                                        |       |     |
|                                | IO3Volt                   | 5,500                                                                                                                                        |       |     |
|                                | IO4Volt                   | 2,500                                                                                                                                        |       |     |
|                                | IO5Volt                   | 10,000                                                                                                                                       |       |     |

|                                                                                                                                           |                           |                                                                                                                                                                   |       |    |
|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----|
|                                                                                                                                           | IO6Volt                   | 7,500                                                                                                                                                             |       |    |
|                                                                                                                                           | IO7Volt                   | 5,500                                                                                                                                                             |       |    |
|                                                                                                                                           | IO8Volt                   | 2,500                                                                                                                                                             |       |    |
|                                                                                                                                           | TX                        | #1,SVOSV:10,7.5,5.5,2.5,10,7.5,5.5,2.5<CR>                                                                                                                        |       |    |
|                                                                                                                                           | RX                        | #1,OK<CR>                                                                                                                                                         |       |    |
| This command sets for all VOLTAGE OUTPUT IOs the current output voltage in Volt.<br>The range is 0.0 to 11.00V.                           |                           |                                                                                                                                                                   |       |    |
| SET VOLTAGE OUTPUTx<br>IN VOLT                                                                                                            | ASCII<br>WRITE<br>COMMAND | #SVOV<IONR>:<IOxVoltDbl> <CR><br>Result:<br>#OK<CR>                                                                                                               | ASCII | NO |
|                                                                                                                                           | IONR                      | 1                                                                                                                                                                 |       |    |
|                                                                                                                                           | IOxVolt                   | 2,000                                                                                                                                                             |       |    |
|                                                                                                                                           | TX                        | #1,SVOV1:2<CR>                                                                                                                                                    |       |    |
|                                                                                                                                           | RX                        | N/A                                                                                                                                                               |       |    |
| This command sets for VOLTAGE OUTPUT IO <IONR> the current output voltage in Volt.<br>The range is 0.0 to 11.00V.                         |                           |                                                                                                                                                                   |       |    |
| SET VOLTAGE OUTPUTS<br>IN PERCENT                                                                                                         | ASCII<br>WRITE<br>COMMAND | #SVOSP:<IO1PercentDbl>,<IO2PercentDbl>,<IO3PercentDbl>,<IO4PercentDbl>,<IO5PercentDbl>,<IO6PercentDbl>,<IO7PercentDbl>,<IO8PercentDbl> <CR><br>Result:<br>#OK<CR> | ASCII | NO |
|                                                                                                                                           | IO1Percent                | 110,000                                                                                                                                                           |       |    |
|                                                                                                                                           | IO2Percent                | 100,000                                                                                                                                                           |       |    |
|                                                                                                                                           | IO3Percent                | 75,000                                                                                                                                                            |       |    |
|                                                                                                                                           | IO4Percent                | 50,000                                                                                                                                                            |       |    |
|                                                                                                                                           | IO5Percent                | 110,000                                                                                                                                                           |       |    |
|                                                                                                                                           | IO6Percent                | 100,000                                                                                                                                                           |       |    |
|                                                                                                                                           | IO7Percent                | 75,000                                                                                                                                                            |       |    |
|                                                                                                                                           | IO8Percent                | 50,000                                                                                                                                                            |       |    |
|                                                                                                                                           | TX                        | #1,SVOSP:110,100,75,50,110,100,75,50<CR>                                                                                                                          |       |    |
|                                                                                                                                           | RX                        | N/A                                                                                                                                                               |       |    |
| This command sets for all VOLTAGE OUTPUT IOs the current output voltage in Percent.<br>The range is 0.0V -> 0.00% to 11.00V -> 110.00%.   |                           |                                                                                                                                                                   |       |    |
| SET VOLTAGE OUTPUTx<br>IN PERCENT                                                                                                         | ASCII<br>WRITE<br>COMMAND | #SVOP<IONR>:<IOxPercentDbl> <CR><br>Result:<br>#OK<CR>                                                                                                            | ASCII | NO |
|                                                                                                                                           | IONR                      | 1                                                                                                                                                                 |       |    |
|                                                                                                                                           | IOxPercent                | 2,000                                                                                                                                                             |       |    |
|                                                                                                                                           | TX                        | #1,SVOP1:2<CR>                                                                                                                                                    |       |    |
|                                                                                                                                           | RX                        | N/A                                                                                                                                                               |       |    |
| This command sets for VOLTAGE OUTPUT IO <IONR> the current output voltage in Percent.<br>The range is 0.0V -> 0.00% to 11.00V -> 110.00%. |                           |                                                                                                                                                                   |       |    |
| GET VOLTAGE OUTPUTS<br>IN VOLT                                                                                                            | ASCII<br>READ<br>COMMAND  | #GVOSV<CR><br>Result:<br>#GVOSV:<IO1VoltDbl>,<IO2VoltDbl>,...,<IO8VoltDbl> <CR>                                                                                   | ASCII |    |
|                                                                                                                                           | TX                        | #1,GVOSV<CR>                                                                                                                                                      |       |    |
|                                                                                                                                           | RX                        | #1,GVOSV:0.00,0.00,0.00,0.00,0.00,0.00,0.00,0.00<CR>                                                                                                              |       |    |

|  |  |                                    |  |  |
|--|--|------------------------------------|--|--|
|  |  | Actual voltage output on IO1:0.00V |  |  |
|  |  | Actual voltage output on IO2:0.00V |  |  |
|  |  | Actual voltage output on IO3:0.00V |  |  |
|  |  | Actual voltage output on IO4:0.00V |  |  |
|  |  | Actual voltage output on IO5:0.00V |  |  |
|  |  | Actual voltage output on IO6:0.00V |  |  |
|  |  | Actual voltage output on IO7:0.00V |  |  |
|  |  | Actual voltage output on IO8:0.00V |  |  |

This command shows for all VOLTAGE OUTPUT IOs the current output voltage in Volt.

The range is 0.0V to 11.00V.

All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.

|                               |                          |                                                              |       |  |
|-------------------------------|--------------------------|--------------------------------------------------------------|-------|--|
| GET VOLTAGE OUTPUT<br>IN VOLT | ASCII<br>READ<br>COMMAND | #GVOV<IONR> <CR><br>Result:<br>#GVOV<IONR>:<IOxVoltDbl> <CR> | ASCII |  |
|                               | IONR                     | 1                                                            |       |  |
|                               | TX                       | #1,GVOV1<CR>                                                 |       |  |
|                               | RX                       | #1,GVOV3:5.50<CR>                                            |       |  |
|                               |                          | Actual voltage output on IO1:5.50V                           |       |  |

This command shows for VOLTAGE OUTPUT IO <IONR> the current output voltage in Volt.

The range is 0.0V to 11.00V.

All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.

|                                   |                          |                                                                                          |       |  |
|-----------------------------------|--------------------------|------------------------------------------------------------------------------------------|-------|--|
| GET VOLTAGE OUTPUTS<br>IN PERCENT | ASCII<br>READ<br>COMMAND | #GVOSP<CR><br>Result:<br>#GVOSP:<IO1PercentDbl>,<IO2PercentDbl>,...,<IO8PercentDbl> <CR> | ASCII |  |
|                                   | TX                       | #1,GVOSP<CR>                                                                             |       |  |
|                                   | RX                       | #1,GVOSP:100.00,75.00,55.00,25.00,100.00,75.00,55.00,25.00 <CR>                          |       |  |
|                                   |                          | Actual percentage voltage output on IO1:100.00%                                          |       |  |
|                                   |                          | Actual percentage voltage output on IO2:75.00%                                           |       |  |
|                                   |                          | Actual percentage voltage output on IO3:55.00%                                           |       |  |
|                                   |                          | Actual percentage voltage output on IO4:25.00%                                           |       |  |
|                                   |                          | Actual percentage voltage output on IO5:100.00%                                          |       |  |
|                                   |                          | Actual percentage voltage output on IO6:75.00%                                           |       |  |
|                                   |                          | Actual percentage voltage output on IO7:55.00%                                           |       |  |
|                                   |                          | Actual percentage voltage output on IO8:25.00%                                           |       |  |

This command shows for all VOLTAGE OUTPUT IOs the current output voltage in Percent.

The range is 0.0V -> 0.00% to 11.00V -> 110.00% (10.00V -> 100.00%).

All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.

|                                  |                          |                                                                 |       |  |
|----------------------------------|--------------------------|-----------------------------------------------------------------|-------|--|
| GET VOLTAGE OUTPUT<br>IN PERCENT | ASCII<br>READ<br>COMMAND | #GVOP<IONR> <CR><br>Result:<br>#GVOP<IONR>:<IOxPercentDbl> <CR> | ASCII |  |
|                                  | IONR                     | 1                                                               |       |  |
|                                  | TX                       | #1,GVOP1<CR>                                                    |       |  |
|                                  | RX                       | #1,GVOP3:55.00<CR>                                              |       |  |
|                                  |                          | Actual percentage voltage output on IO1:55.00%                  |       |  |

This command shows for VOLTAGE OUTPUT IO <IONR> the current output voltage in Percent.  
The range is 0.0V -> 0.00% to 11.00V -> 110.00% (10.00V -> 100.00%).  
All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.

|                                |                          |                                                                          |       |  |
|--------------------------------|--------------------------|--------------------------------------------------------------------------|-------|--|
| GET VOLTAGE OUTPUTS<br>CURRENT | ASCII<br>READ<br>COMMAND | #GVOSC<CR><br>Result:<br>#GVOSC:<IOmA1Dbl>,<IOmA2Dbl>,...,<IOmA8Dbl><CR> | ASCII |  |
|                                | TX                       | #1,GVOSC<CR>                                                             |       |  |
|                                | RX                       | #1,GVOSC:0.00,0.00,0.00,-0.00,-0.00,0.00,0.00,0.00<CR>                   |       |  |
|                                |                          | Actual output current on IO1:0.00mA                                      |       |  |
|                                |                          | Actual output current on IO2:0.00mA                                      |       |  |
|                                |                          | Actual output current on IO3:0.00mA                                      |       |  |
|                                |                          | Actual output current on IO4:-0.00mA                                     |       |  |
|                                |                          | Actual output current on IO5:-0.00mA                                     |       |  |
|                                |                          | Actual output current on IO6:0.00mA                                      |       |  |
|                                |                          | Actual output current on IO7:0.00mA                                      |       |  |
|                                |                          | Actual output current on IO8:0.00mA                                      |       |  |

This command shows for all VOLTAGE OUTPUT IOs the actual current in mA.  
The measurement range is 0.0mA to 35mA.  
All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.

|                               |                          |                                                          |       |  |
|-------------------------------|--------------------------|----------------------------------------------------------|-------|--|
| GET VOLTAGE OUTPUT<br>CURRENT | ASCII<br>READ<br>COMMAND | #GVOC<IONR><CR><br>Result:<br>#GVOC<IONR>:<IOxmADbl><CR> | ASCII |  |
|                               | IONR                     | 1                                                        |       |  |
|                               | TX                       | #1,GVOC1<CR>                                             |       |  |
|                               | RX                       | #1,GVOC1:0.00<CR>                                        |       |  |
|                               |                          | Actual output current on IO1:0.00mA                      |       |  |

This command shows for VOLTAGE OUTPUT IO <IONR> the actual current in mA.  
The measurement range is 0.0mA to 35mA.  
All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.

### CURRENT INPUTS

|                             |                          |                                                                            |       |  |
|-----------------------------|--------------------------|----------------------------------------------------------------------------|-------|--|
| GET CURRENT INPUTS<br>IN mA | ASCII<br>READ<br>COMMAND | #GCISMA<CR><br>Result:<br>#GCISMA:<IO1mADbl>,<IO2mADbl>,...,<IO8mADbl><CR> | ASCII |  |
|                             | TX                       | #1,GCISMA<CR>                                                              |       |  |
|                             | RX                       | #1,GCISMA:999.99,999.99,999.99,999.99,999.99,999.99,999.99,999.99<CR>      |       |  |
|                             |                          | Actual current input on IO1:999.99mA                                       |       |  |
|                             |                          | Actual current input on IO2:999.99mA                                       |       |  |
|                             |                          | Actual current input on IO3:999.99mA                                       |       |  |
|                             |                          | Actual current input on IO4:999.99mA                                       |       |  |
|                             |                          | Actual current input on IO5:999.99mA                                       |       |  |
|                             |                          | Actual current input on IO6:999.99mA                                       |       |  |
|                             |                          | Actual current input on IO7:999.99mA                                       |       |  |
|                             |                          | Actual current input on IO8:999.99mA                                       |       |  |

This command shows for all CURRENT INPUT IOs the current measured input current in mA.

The range is 0.00 to 25.00mA

All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.

|                            |                          |                                                            |       |  |
|----------------------------|--------------------------|------------------------------------------------------------|-------|--|
| GET CURRENT INPUT<br>IN mA | ASCII<br>READ<br>COMMAND | #GCIMA<IONR><CR><br>Result:<br>#GCIMA<IONR>:<IOxmADbl><CR> | ASCII |  |
|                            | IONR                     | 1                                                          |       |  |
|                            | TX                       | #1,GCIMA1<CR>                                              |       |  |
|                            | RX                       | #1,GCIMA3:999.99<CR>                                       |       |  |
|                            |                          | Actual current input on IO1:999.99mA                       |       |  |

This command shows for CURRENT INPUT IO <IONR> the current measured input current in mA.

The range is 0.00 to 25.00mA

All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.

|                                  |                          |                                                                                         |       |  |
|----------------------------------|--------------------------|-----------------------------------------------------------------------------------------|-------|--|
| GET CURRENT INPUTS<br>IN PERCENT | ASCII<br>READ<br>COMMAND | #GCISP<CR><br>Result:<br>#GCISP:<IO1PercentDbl>,<IO2PercentDbl>,...,<IO8PercentDbl><CR> | ASCII |  |
|                                  | TX                       | #1,GCISP<CR>                                                                            |       |  |
|                                  | RX                       | #1,GCISP:999.99,999.99,999.99,999.99,999.99,999.99,999.99,999.99<CR>                    |       |  |
|                                  |                          | Actual percentage for current input on IO1:999.99%                                      |       |  |
|                                  |                          | Actual percentage for current input on IO2:999.99%                                      |       |  |
|                                  |                          | Actual percentage for current input on IO3:999.99%                                      |       |  |
|                                  |                          | Actual percentage for current input on IO4:999.99%                                      |       |  |
|                                  |                          | Actual percentage for current input on IO5:999.99%                                      |       |  |
|                                  |                          | Actual percentage for current input on IO6:999.99%                                      |       |  |
|                                  |                          | Actual percentage for current input on IO7:999.99%                                      |       |  |
|                                  |                          | Actual percentage for current input on IO8:999.99%                                      |       |  |

This command shows for all CURRENT INPUT IOs the current measured input current in Percent.

The range is 0.00mA -> 0.00% to 25.00mA -> 125.00% (20mA=100%)

All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.

|                                 |                          |                                                               |       |  |
|---------------------------------|--------------------------|---------------------------------------------------------------|-------|--|
| GET CURRENT INPUT<br>IN PERCENT | ASCII<br>READ<br>COMMAND | #GCIP<IONR><CR><br>Result:<br>#GCIP<IONR>:<IOxPercentDbl><CR> | ASCII |  |
|                                 | IONR                     | 1                                                             |       |  |
|                                 | TX                       | #1,GCIP1<CR>                                                  |       |  |
|                                 | RX                       | #1,GCIP3:999.99<CR>                                           |       |  |
|                                 |                          | Actual percentage for current input on IO1:999.99%            |       |  |

This command shows for CURRENT INPUT IO <IONR> the current measured input current in Percent.

The range is 0.00mA -> 0.00% to 25.00mA -> 125.00% (20mA=100%)

All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.

|                              |                           |                                                                                                                           |       |    |
|------------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------|-------|----|
| <b>CURRENT OUTPUTS</b>       |                           |                                                                                                                           |       |    |
| SET CURRENT OUTPUTS<br>IN mA | ASCII<br>WRITE<br>COMMAND | #SCOSMA:<IO1mADbl>,<IO2mADbl>,<IO3mADbl>,<IO4mADbl>,<IO5mADbl>,<IO6mADbl>,<IO7mADbl>,<IO8mADbl><CR><br>Result:<br>#OK<CR> | ASCII | NO |
|                              | IO1mA                     | 2,000                                                                                                                     |       |    |

|                                                                                                                                                           |                           |                                                                                                                                                                   |       |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----|
|                                                                                                                                                           | IO2mA                     | 4,000                                                                                                                                                             |       |    |
|                                                                                                                                                           | IO3mA                     | 6,000                                                                                                                                                             |       |    |
|                                                                                                                                                           | IO4mA                     | 25,000                                                                                                                                                            |       |    |
|                                                                                                                                                           | IO5mA                     | ,000                                                                                                                                                              |       |    |
|                                                                                                                                                           | IO6mA                     | ,000                                                                                                                                                              |       |    |
|                                                                                                                                                           | IO7mA                     | ,000                                                                                                                                                              |       |    |
|                                                                                                                                                           | IO8mA                     | ,000                                                                                                                                                              |       |    |
|                                                                                                                                                           | TX                        | #1,SCOSMA:2,4,6,25,0,0,0,0<CR>                                                                                                                                    |       |    |
|                                                                                                                                                           | RX                        | N/A                                                                                                                                                               |       |    |
| This command sets for all CURRENT OUTPUT IOs the actual output current in mA.<br>The range is 0.00mA to 25.00mA                                           |                           |                                                                                                                                                                   |       |    |
| SET CURRENT OUTPUTx<br>IN mA                                                                                                                              | ASCII<br>WRITE<br>COMMAND | #SCOMA<IONR>:<IOxMADbl> <CR><br>Result:<br>#OK<CR>                                                                                                                | ASCII | NO |
|                                                                                                                                                           | IONR                      | 1                                                                                                                                                                 |       |    |
|                                                                                                                                                           | IOxVolt                   | 2,000                                                                                                                                                             |       |    |
|                                                                                                                                                           | TX                        | #1,SCOMA1:<IOxMADbl> <CR>                                                                                                                                         |       |    |
|                                                                                                                                                           | RX                        | N/A                                                                                                                                                               |       |    |
| This command sets for CURRENT OUTPUT <IONR> IOs the actual output current in mA.<br>The range is 0.00mA to 25.00mA                                        |                           |                                                                                                                                                                   |       |    |
| SET CURRENT OUTPUTS<br>IN PERCENT                                                                                                                         | ASCII<br>WRITE<br>COMMAND | #SCOSP:<IO1PercentDbl>,<IO2PercentDbl>,<IO3PercentDbl>,<IO4PercentDbl>,<IO5PercentDbl>,<IO6PercentDbl>,<IO7PercentDbl>,<IO8PercentDbl> <CR><br>Result:<br>#OK<CR> | ASCII | NO |
|                                                                                                                                                           | IO1Percent                | 125,000                                                                                                                                                           |       |    |
|                                                                                                                                                           | IO2Percent                | 100,000                                                                                                                                                           |       |    |
|                                                                                                                                                           | IO3Percent                | 75,000                                                                                                                                                            |       |    |
|                                                                                                                                                           | IO4Percent                | 50,000                                                                                                                                                            |       |    |
|                                                                                                                                                           | IO5Percent                | ,000                                                                                                                                                              |       |    |
|                                                                                                                                                           | IO6Percent                | ,000                                                                                                                                                              |       |    |
|                                                                                                                                                           | IO7Percent                | ,000                                                                                                                                                              |       |    |
|                                                                                                                                                           | IO8Percent                | ,000                                                                                                                                                              |       |    |
|                                                                                                                                                           | TX                        | #1,SCOSP:125,100,75,50,0,0,0,0<CR>                                                                                                                                |       |    |
|                                                                                                                                                           | RX                        | N/A                                                                                                                                                               |       |    |
| This command sets for all CURRENT OUTPUT IOs the new output current in Percent.<br>The range is 0.00mA -> 0.00% to 25.00mA -> 125.00% (20mA -> 100.00%)   |                           |                                                                                                                                                                   |       |    |
| SET CURRENT OUTPUTx<br>IN PERCENT                                                                                                                         | ASCII<br>WRITE<br>COMMAND | #SCOP<IONR>:<IOxPercentDbl> <CR><br>Result:<br>#OK<CR>                                                                                                            | ASCII | NO |
|                                                                                                                                                           | IONR                      | 1                                                                                                                                                                 |       |    |
|                                                                                                                                                           | IOxPercent                | ,000                                                                                                                                                              |       |    |
|                                                                                                                                                           | TX                        | #1,SCOP1:0<CR>                                                                                                                                                    |       |    |
|                                                                                                                                                           | RX                        | N/A                                                                                                                                                               |       |    |
| This command sets for CURRENT OUTPUT IO <IONR> the new output current in Percent.<br>The range is 0.00mA -> 0.00% to 25.00mA -> 125.00% (20mA -> 100.00%) |                           |                                                                                                                                                                   |       |    |

|                              |                          |                                                                            |       |  |
|------------------------------|--------------------------|----------------------------------------------------------------------------|-------|--|
| GET CURRENT OUTPUTS<br>IN mA | ASCII<br>READ<br>COMMAND | #GCOSMA<CR><br>Result:<br>#GCOSMA:<IO1mADbl>,<IO2mADbl>,...,<IO8mADbl><CR> | ASCII |  |
|                              | TX                       | #1,GCOSMA<CR>                                                              |       |  |
|                              | RX                       | #1,GCOSMA:999.99,999.99,999.99,999.99,999.99,999.99,999.99,999.99<CR>      |       |  |
|                              |                          | Actual value of current output on IO1:999.99mA                             |       |  |
|                              |                          | Actual value of current output on IO2:999.99mA                             |       |  |
|                              |                          | Actual value of current output on IO3:999.99mA                             |       |  |
|                              |                          | Actual value of current output on IO4:999.99mA                             |       |  |
|                              |                          | Actual value of current output on IO5:999.99mA                             |       |  |
|                              |                          | Actual value of current output on IO6:999.99mA                             |       |  |
|                              |                          | Actual value of current output on IO7:999.99mA                             |       |  |
|                              |                          | Actual value of current output on IO8:999.99mA                             |       |  |

This command shows for all CURRENT OUTPUT IOs the actual output current in mA.

The range is 0.00mA to 25.00mA

All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.

|                             |                          |                                                            |       |  |
|-----------------------------|--------------------------|------------------------------------------------------------|-------|--|
| GET CURRENT OUTPUT<br>IN mA | ASCII<br>READ<br>COMMAND | #GCOMA<IONR><CR><br>Result:<br>#GCOMA<IONR>:<IOxmADbl><CR> | ASCII |  |
|                             | IONR                     | 1                                                          |       |  |
|                             | TX                       | #1,GCOMA1<CR>                                              |       |  |
|                             | RX                       | #1,GCOMA3:999.99<CR>                                       |       |  |
|                             |                          | Actual value of current output on IO1:999.99mA             |       |  |

This command shows for CURRENT OUTPUT IO <IONR> the actual output current in mA.

The range is 0.00mA to 25.00mA

All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.

|                                   |                          |                                                                                         |       |  |
|-----------------------------------|--------------------------|-----------------------------------------------------------------------------------------|-------|--|
| GET CURRENT OUTPUTS<br>IN PERCENT | ASCII<br>READ<br>COMMAND | #GCOSP<CR><br>Result:<br>#GCOSP:<IO1PercentDbl>,<IO2PercentDbl>,...,<IO8PercentDbl><CR> | ASCII |  |
|                                   | TX                       | #1,GCOSP<CR>                                                                            |       |  |
|                                   | RX                       | #1,GCOSP:999.99,999.99,999.99,999.99,999.99,999.99,999.99,999.99<CR>                    |       |  |
|                                   |                          | Actual percentage of current output on IO1:999.99%                                      |       |  |
|                                   |                          | Actual percentage of current output on IO2:999.99%                                      |       |  |
|                                   |                          | Actual percentage of current output on IO3:999.99%                                      |       |  |
|                                   |                          | Actual percentage of current output on IO4:999.99%                                      |       |  |
|                                   |                          | Actual percentage of current output on IO5:999.99%                                      |       |  |
|                                   |                          | Actual percentage of current output on IO6:999.99%                                      |       |  |
|                                   |                          | Actual percentage of current output on IO7:999.99%                                      |       |  |
|                                   |                          | Actual percentage of current output on IO8:999.99%                                      |       |  |

This command shows for all CURRENT OUTPUT IOs the actual output current in Percent.

The range is 0.00mA -> 0.00% to 25.00mA -> 125.00% (20mA -> 100.00%)

All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.

|                                                                                                                                                                                                                                                                   |                          |                                                                                                             |       |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------|-------|--|
| GET CURRENT OUTPUT<br>IN PERCENT                                                                                                                                                                                                                                  | ASCII<br>READ<br>COMMAND | #GCOP<IONR><CR><br>Result:<br>#GCOP<IONR>:<IOxPercentDbl><CR>                                               | ASCII |  |
|                                                                                                                                                                                                                                                                   | IONR                     | 1                                                                                                           |       |  |
|                                                                                                                                                                                                                                                                   | TX                       | #1,GCOP1<CR>                                                                                                |       |  |
|                                                                                                                                                                                                                                                                   | RX                       | #1,GCOP3:999.99<CR>                                                                                         |       |  |
|                                                                                                                                                                                                                                                                   |                          | Actual percentage of current output on IO1:999.99%                                                          |       |  |
| This command shows for CURRENT OUTPUT IO <IONR> the actual output current in Percent.<br>The range is 0.00mA -> 0.00% to 25.00mA -> 125.00% (20mA -> 100.00%)<br>All IOs with a different usage type will return 999.99 to indicate, that no measurement is done. |                          |                                                                                                             |       |  |
| GET CURRENT OUTPUTS<br>VOLTAGE                                                                                                                                                                                                                                    | ASCII<br>READ<br>COMMAND | #GCOSV<CR><br>Result:<br>#GCOSV:<IO1VoltsDbl>,<IO2VoltsDbl>,...,<IO8VoltsDbl><CR>                           | ASCII |  |
|                                                                                                                                                                                                                                                                   | TX                       | #1,GCOSV<CR>                                                                                                |       |  |
|                                                                                                                                                                                                                                                                   | RX                       | #1,GCOSV:999.99,999.99,999.99,999.99,999.99,999.99,999.99,999.99<CR>                                        |       |  |
|                                                                                                                                                                                                                                                                   |                          | Measured voltage of current output on IO1:999.99V                                                           |       |  |
|                                                                                                                                                                                                                                                                   |                          | Measured voltage of current output on IO2:999.99V                                                           |       |  |
|                                                                                                                                                                                                                                                                   |                          | Measured voltage of current output on IO3:999.99V                                                           |       |  |
|                                                                                                                                                                                                                                                                   |                          | Measured voltage of current output on IO4:999.99V                                                           |       |  |
|                                                                                                                                                                                                                                                                   |                          | Measured voltage of current output on IO5:999.99V                                                           |       |  |
|                                                                                                                                                                                                                                                                   |                          | Measured voltage of current output on IO6:999.99V                                                           |       |  |
|                                                                                                                                                                                                                                                                   |                          | Measured voltage of current output on IO7:999.99V                                                           |       |  |
|                                                                                                                                                                                                                                                                   |                          | Measured voltage of current output on IO8:999.99V                                                           |       |  |
| This command shows for all CURRENT OUTPUT IOs the actual output voltage in Volt.<br>The range is 0-10V<br>All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.                                                        |                          |                                                                                                             |       |  |
| GET CURRENT OUTPUT<br>VOLTAGE                                                                                                                                                                                                                                     | ASCII<br>READ<br>COMMAND | #GCOV<IONR><CR><br>Result:<br>#GCOV<IONR>:<IOxVoltDbl><CR>                                                  | ASCII |  |
|                                                                                                                                                                                                                                                                   | IONR                     | 1                                                                                                           |       |  |
|                                                                                                                                                                                                                                                                   | TX                       | #1,GCOV1<CR>                                                                                                |       |  |
|                                                                                                                                                                                                                                                                   | RX                       | #1,GCOV3:999.99<CR>                                                                                         |       |  |
|                                                                                                                                                                                                                                                                   |                          | Measured voltage of current output on IO1:999.99V                                                           |       |  |
| This command shows for CURRENT OUTPUT IO <IONR> the actual output voltage in Volt.<br>The range is 0-10V<br>All IOs with a different usage type will return 999.99 to indicate, that no measurement is done.                                                      |                          |                                                                                                             |       |  |
| <b>RTD INPUTS OHM</b>                                                                                                                                                                                                                                             |                          |                                                                                                             |       |  |
| GET RTD INPUTS<br>IN OHM                                                                                                                                                                                                                                          | ASCII<br>READ<br>COMMAND | #GRTDISOHM<CR><br>Result:<br>#GRTDISOHM:<IO1OhmDbl>,<IO2OhmDbl>,...,<IO8OhmDbl><CR>                         | ASCII |  |
|                                                                                                                                                                                                                                                                   | TX                       | #1,GRTDISOHM<CR>                                                                                            |       |  |
|                                                                                                                                                                                                                                                                   | RX                       | #1,GRTDISOHM:99999999.999,99999999.999,99999999.999,99999999.999,99999999.999,99999999.999,99999999.999<CR> |       |  |
|                                                                                                                                                                                                                                                                   |                          | Actual measured RTD input on IO1:99999999.999Ohm                                                            |       |  |

|                                                                                                                                                                                                                                      |                          |                                                                                                                |       |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------|-------|--|
|                                                                                                                                                                                                                                      |                          | Actual measured RTD input on IO2:99999999.999Ohm                                                               |       |  |
|                                                                                                                                                                                                                                      |                          | Actual measured RTD input on IO3:99999999.999Ohm                                                               |       |  |
|                                                                                                                                                                                                                                      |                          | Actual measured RTD input on IO4:99999999.999Ohm                                                               |       |  |
|                                                                                                                                                                                                                                      |                          | Actual measured RTD input on IO5:99999999.999Ohm                                                               |       |  |
|                                                                                                                                                                                                                                      |                          | Actual measured RTD input on IO6:99999999.999Ohm                                                               |       |  |
|                                                                                                                                                                                                                                      |                          | Actual measured RTD input on IO7:99999999.999Ohm                                                               |       |  |
|                                                                                                                                                                                                                                      |                          | Actual measured RTD input on IO8:99999999.999Ohm                                                               |       |  |
| This command shows for RTD INPUT IOs the actual measured RTD value in Ohm.<br>The range is 0.000Ohm to 1000000.00Ohm<br>All IOs with a different usage type will return 99999999.999 to indicate, that no measurement is done.       |                          |                                                                                                                |       |  |
| GET RTD INPUT<br>IN OHM                                                                                                                                                                                                              | ASCII<br>READ<br>COMMAND | #GRTDIOHM<IONR> <CR><br>Result:<br>#GRTDIOHM<IONR>:<IOxOhmDbl> <CR>                                            | ASCII |  |
|                                                                                                                                                                                                                                      | IONR                     | 1                                                                                                              |       |  |
|                                                                                                                                                                                                                                      | TX                       | #1,GRTDIOHM1<CR>                                                                                               |       |  |
|                                                                                                                                                                                                                                      | RX                       | #1,GRTDIOHM3:99999999.999<CR>                                                                                  |       |  |
|                                                                                                                                                                                                                                      |                          | Actual measured RTD input on IO1:99999999.999Ohm                                                               |       |  |
| This command shows for RTD INPUT IO <IONR> the actual measured RTD value in Ohm.<br>The range is 0.000Ohm to 1000000.00Ohm<br>All IOs with a different usage type will return 99999999.999 to indicate, that no measurement is done. |                          |                                                                                                                |       |  |
| GET AVERAGE RTD INPUTS<br>IN OHM                                                                                                                                                                                                     | ASCII<br>READ<br>COMMAND | #GAVGRTDISOHM<CR><br>Result:<br>#GAVGRTDISOHM:<IO1OhmDbl>,<IO2OhmDbl>,...,<IO8OhmDbl> <CR>                     | ASCII |  |
|                                                                                                                                                                                                                                      | TX                       | #1,GAVGRTDISOHM<CR>                                                                                            |       |  |
|                                                                                                                                                                                                                                      | RX                       | #1,GAVGRTDISOHM:99999999.999,99999999.999,99999999.999,99999999.999,99999999.999,99999999.999,99999999.999<CR> |       |  |
|                                                                                                                                                                                                                                      |                          | Average measured RTD input on IO1:99999999.999Ohm                                                              |       |  |
|                                                                                                                                                                                                                                      |                          | Average measured RTD input on IO2:99999999.999Ohm                                                              |       |  |
|                                                                                                                                                                                                                                      |                          | Average measured RTD input on IO3:99999999.999Ohm                                                              |       |  |
|                                                                                                                                                                                                                                      |                          | Average measured RTD input on IO4:99999999.999Ohm                                                              |       |  |
|                                                                                                                                                                                                                                      |                          | Average measured RTD input on IO5:99999999.999Ohm                                                              |       |  |
|                                                                                                                                                                                                                                      |                          | Average measured RTD input on IO6:99999999.999Ohm                                                              |       |  |
|                                                                                                                                                                                                                                      |                          | Average measured RTD input on IO7:99999999.999Ohm                                                              |       |  |
|                                                                                                                                                                                                                                      |                          | Average measured RTD input on IO8:99999999.999Ohm                                                              |       |  |
| This command shows for RTD INPUT IOs the average measured RTD value in Ohm.<br>The range is 0.000Ohm to 1000000.00Ohm<br>All IOs with a different usage type will return 99999999.999 to indicate, that no measurement is done.      |                          |                                                                                                                |       |  |
| GET AVG RTD INPUT<br>IN OHM                                                                                                                                                                                                          | ASCII<br>READ<br>COMMAND | #GAVGRTDIOHM<IONR> <CR><br>Result:<br>#GAVGRTDIOHM<IONR>:<IOxOhmDbl> <CR>                                      | ASCII |  |
|                                                                                                                                                                                                                                      | IONR                     | 1                                                                                                              |       |  |
|                                                                                                                                                                                                                                      | TX                       | #1,GAVGRTDIOHM1<CR>                                                                                            |       |  |
|                                                                                                                                                                                                                                      | RX                       | #1,GAVGRTDIOHM3:99999999.999<CR>                                                                               |       |  |
|                                                                                                                                                                                                                                      |                          | Average measured RTD input on IO1:99999999.999Ohm                                                              |       |  |

This command shows for RTD INPUT IO <IONR> the average measured RTD value in Ohm.  
 The range is 0.000Ohm to 1000000.00Ohm  
 All IOs with a different usage type will return 99999999.999 to indicate, that no measurement is done.

**RTD INPUTS PT100 CELSIUS**

|                                    |                          |                                                                                              |       |  |
|------------------------------------|--------------------------|----------------------------------------------------------------------------------------------|-------|--|
| GET RTD INPUTS<br>AS PT100 CELSIUS | ASCII<br>READ<br>COMMAND | #GRTDISPT100C <CR><br>Result:<br>#GRTDISPT100C:<RTD1Dbl>,<RTD2Dbl>,...,<RTD8Dbl> <CR>        | ASCII |  |
|                                    | TX                       | #1,GRTDISPT100C <CR>                                                                         |       |  |
|                                    | RX                       | #1,GRTDISPT100C:9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990 <CR> |       |  |
|                                    |                          | Actual measured RTD input as PT100 on IO1:9999.990°C                                         |       |  |
|                                    |                          | Actual measured RTD input as PT100 on IO2:9999.990°C                                         |       |  |
|                                    |                          | Actual measured RTD input as PT100 on IO3:9999.990°C                                         |       |  |
|                                    |                          | Actual measured RTD input as PT100 on IO4:9999.990°C                                         |       |  |
|                                    |                          | Actual measured RTD input as PT100 on IO5:9999.990°C                                         |       |  |
|                                    |                          | Actual measured RTD input as PT100 on IO6:9999.990°C                                         |       |  |
|                                    |                          | Actual measured RTD input as PT100 on IO7:9999.990°C                                         |       |  |
|                                    |                          | Actual measured RTD input as PT100 on IO8:9999.990°C                                         |       |  |

This command shows for RTD INPUT IOs the actual measured RTD value linearized as PT100 sensor in °Celsius.

-999.990: Temperature is lower than 50°C

+999.990: Temperature is higher than 130°C

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

|                                   |                          |                                                                          |       |  |
|-----------------------------------|--------------------------|--------------------------------------------------------------------------|-------|--|
| GET RTD INPUT<br>AS PT100 CELSIUS | ASCII<br>READ<br>COMMAND | #GRTDIPT100C <IONR> <CR><br>Result:<br>#GRTDIPT100C <IONR>:<IOxDbl> <CR> | ASCII |  |
|                                   | IONR                     | 1                                                                        |       |  |
|                                   | TX                       | #1,GRTDIPT100C1 <CR>                                                     |       |  |
|                                   | RX                       | #1,GRTDIPT100C3:9999.990 <CR>                                            |       |  |
|                                   |                          | Actual measured RTD input as PT100 on IO1:9999.990°C                     |       |  |

This command shows for RTD INPUT IO <IONR> the actual measured RTD value linearized as PT100 sensor in °Celsius

-999.990: Temperature is lower than 50°C

+999.990: Temperature is higher than 130°C

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

|                                            |                          |                                                                                                 |       |  |
|--------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------|-------|--|
| GET AVERAGE RTD INPUTS<br>AS PT100 CELSIUS | ASCII<br>READ<br>COMMAND | #GAVGRTDISPT100C <CR><br>Result:<br>#GAVGRTDISPT100C:<RTD1Dbl>,<RTD2Dbl>,...,<RTD8Dbl> <CR>     | ASCII |  |
|                                            | TX                       | #1,GAVGRTDISPT100C <CR>                                                                         |       |  |
|                                            | RX                       | #1,GAVGRTDISPT100C:9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990 <CR> |       |  |
|                                            |                          | Average measured RTD input as PT100 on IO1:9999.990°C                                           |       |  |
|                                            |                          | Average measured RTD input as PT100 on IO2:9999.990°C                                           |       |  |
|                                            |                          | Average measured RTD input as PT100 on IO3:9999.990°C                                           |       |  |
|                                            |                          | Average measured RTD input as PT100 on IO4:9999.990°C                                           |       |  |
|                                            |                          | Average measured RTD input as PT100 on IO5:9999.990°C                                           |       |  |
|                                            |                          | Average measured RTD input as PT100 on IO6:9999.990°C                                           |       |  |
|                                            |                          | Average measured RTD input as PT100 on IO7:9999.990°C                                           |       |  |

|                                                                                                                                                                                                                                                                                                                  |                          |                                                                                              |       |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------------------------------------|-------|--|
|                                                                                                                                                                                                                                                                                                                  |                          | Average measured RTD input as PT100 on IO8:9999.990°C                                        |       |  |
| This command shows for RTD INPUT IOs the average measured RTD value linearized as PT100 sensor in °Celsius.<br>-999.990: Temperature is lower than 50°C<br>+999.990: Temperature is higher than 130°C<br>All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.      |                          |                                                                                              |       |  |
| GET AVG RTD INPUT<br>AS PT100 CELSIUS                                                                                                                                                                                                                                                                            | ASCII<br>READ<br>COMMAND | #GAVGRTDIPT100C<IONR><CR><br>Result:<br>#GAVGRTDIPT100C<IONR>:<IOxDbl><CR>                   | ASCII |  |
|                                                                                                                                                                                                                                                                                                                  | IONR                     | 1                                                                                            |       |  |
|                                                                                                                                                                                                                                                                                                                  | TX                       | #1,GAVGRTDIPT100C1<CR>                                                                       |       |  |
|                                                                                                                                                                                                                                                                                                                  | RX                       | #1,GAVGRTDIPT100C1:9999.990<CR>                                                              |       |  |
|                                                                                                                                                                                                                                                                                                                  |                          | Average measured RTD input as PT100 on IO1:9999.990°C                                        |       |  |
| This command shows for RTD INPUT IO <IONR> the average measured RTD value linearized as PT100 sensor in °Celsius<br>-999.990: Temperature is lower than 50°C<br>+999.990: Temperature is higher than 130°C<br>All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done. |                          |                                                                                              |       |  |
| <b>RTD INPUTS PT1000 CELSIUS</b>                                                                                                                                                                                                                                                                                 |                          |                                                                                              |       |  |
| GET RTD INPUTS<br>AS PT1000 CELSIUS                                                                                                                                                                                                                                                                              | ASCII<br>READ<br>COMMAND | #GRTDISPT1000C<CR><br>Result:<br>#GRTDISPT1000C:<RTD1Dbl>,<RTD2Dbl>,...,<RTD8Dbl><CR>        | ASCII |  |
|                                                                                                                                                                                                                                                                                                                  | TX                       | #1,GRTDISPT1000C<CR>                                                                         |       |  |
|                                                                                                                                                                                                                                                                                                                  | RX                       | #1,GRTDISPT1000C:9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990<CR> |       |  |
|                                                                                                                                                                                                                                                                                                                  |                          | Actual measured RTD input as PT1000 on IO1:9999.990°C                                        |       |  |
|                                                                                                                                                                                                                                                                                                                  |                          | Actual measured RTD input as PT1000 on IO2:9999.990°C                                        |       |  |
|                                                                                                                                                                                                                                                                                                                  |                          | Actual measured RTD input as PT1000 on IO3:9999.990°C                                        |       |  |
|                                                                                                                                                                                                                                                                                                                  |                          | Actual measured RTD input as PT1000 on IO4:9999.990°C                                        |       |  |
|                                                                                                                                                                                                                                                                                                                  |                          | Actual measured RTD input as PT1000 on IO5:9999.990°C                                        |       |  |
|                                                                                                                                                                                                                                                                                                                  |                          | Actual measured RTD input as PT1000 on IO6:9999.990°C                                        |       |  |
|                                                                                                                                                                                                                                                                                                                  |                          | Actual measured RTD input as PT1000 on IO7:9999.990°C                                        |       |  |
|                                                                                                                                                                                                                                                                                                                  |                          | Actual measured RTD input as PT1000 on IO8:9999.990°C                                        |       |  |
| This command shows for RTD INPUT IOs the actual measured RTD value linearized as PT1000 sensor in °Celsius.<br>-999.990: Temperature is lower than 50°C<br>+999.990: Temperature is higher than 130°C<br>All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.      |                          |                                                                                              |       |  |
| GET RTD INPUT<br>AS PT1000 CELSIUS                                                                                                                                                                                                                                                                               | ASCII<br>READ<br>COMMAND | #GRTDIPT1000C<IONR><CR><br>Result:<br>#GRTDIPT1000C<IONR>:<IOxDbl><CR>                       | ASCII |  |
|                                                                                                                                                                                                                                                                                                                  | IONR                     | 1                                                                                            |       |  |
|                                                                                                                                                                                                                                                                                                                  | TX                       | #1,GRTDIPT1000C1<CR>                                                                         |       |  |
|                                                                                                                                                                                                                                                                                                                  | RX                       | #1,GRTDIPT1000C3:9999.990<CR>                                                                |       |  |
|                                                                                                                                                                                                                                                                                                                  |                          | Actual measured RTD input as PT1000 on IO1:9999.990°C                                        |       |  |
| This command shows for RTD INPUT IO <IONR> the actual measured RTD value linearized as PT1000 sensor in °Celsius<br>-999.990: Temperature is lower than 50°C<br>+999.990: Temperature is higher than 130°C<br>All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done. |                          |                                                                                              |       |  |

|                                             |                          |                                                                                                 |       |  |
|---------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------|-------|--|
| GET AVERAGE RTD INPUTS<br>AS PT1000 CELSIUS | ASCII<br>READ<br>COMMAND | #GAVGRTDISPT1000C<CR><br>Result:<br>#GAVGRTDISPT1000C:<RTD1Dbl>,<RTD2Dbl>,...,<RTD8Dbl><CR>     | ASCII |  |
|                                             | TX                       | #1,GAVGRTDISPT1000C<CR>                                                                         |       |  |
|                                             | RX                       | #1,GAVGRTDISPT1000C:9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990<CR> |       |  |
|                                             |                          | Average measured RTD input as PT1000 on IO1:9999.990°C                                          |       |  |
|                                             |                          | Average measured RTD input as PT1000 on IO2:9999.990°C                                          |       |  |
|                                             |                          | Average measured RTD input as PT1000 on IO3:9999.990°C                                          |       |  |
|                                             |                          | Average measured RTD input as PT1000 on IO4:9999.990°C                                          |       |  |
|                                             |                          | Average measured RTD input as PT1000 on IO5:9999.990°C                                          |       |  |
|                                             |                          | Average measured RTD input as PT1000 on IO6:9999.990°C                                          |       |  |
|                                             |                          | Average measured RTD input as PT1000 on IO7:9999.990°C                                          |       |  |
|                                             |                          | Average measured RTD input as PT1000 on IO8:9999.990°C                                          |       |  |

This command shows for RTD INPUT IOs the average measured RTD value linearized as PT1000 sensor in °Celsius.

-999.990: Temperature is lower than 50°C

+999.990: Temperature is higher than 130°C

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

|                                        |                          |                                                                              |       |  |
|----------------------------------------|--------------------------|------------------------------------------------------------------------------|-------|--|
| GET AVG RTD INPUT<br>AS PT1000 CELSIUS | ASCII<br>READ<br>COMMAND | #GAVGRTDIPT1000C<IONR><CR><br>Result:<br>#GAVGRTDIPT1000C<IONR>:<IOxDbl><CR> | ASCII |  |
|                                        | IONR                     | 1                                                                            |       |  |
|                                        | TX                       | #1,GAVGRTDIPT1000C1<CR>                                                      |       |  |
|                                        | RX                       | #1,GAVGRTDIPT1000C1:9999.990<CR>                                             |       |  |
|                                        |                          | Average measured RTD input as PT1000 on IO1:9999.990°C                       |       |  |

This command shows for RTD INPUT IO <IONR> the average measured RTD value linearized as PT1000 sensor in °Celsius

-999.990: Temperature is lower than 50°C

+999.990: Temperature is higher than 130°C

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

#### RTD INPUTS NI1000-DIN43760 CELSIUS

|                                              |                          |                                                                                                       |       |  |
|----------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------|-------|--|
| GET RTD INPUTS<br>AS NI1000 DIN43760 CELSIUS | ASCII<br>READ<br>COMMAND | #GRTDISNI1000DIN43760C<CR><br>Result:<br>#GRTDISNI1000DIN43760C:<RTD1Dbl>,<RTD2Dbl>,...,<RTD8Dbl><CR> | ASCII |  |
|                                              | TX                       | #1,GRTDISNI1000DIN43760C<CR>                                                                          |       |  |
|                                              | RX                       | #1,GRTDISNI1000DIN43760C:9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990<CR>  |       |  |
|                                              |                          | Actual measured RTD input as NI1000-DIN43760 on IO1:9999.990°C                                        |       |  |
|                                              |                          | Actual measured RTD input as NI1000-DIN43760 on IO2:9999.990°C                                        |       |  |
|                                              |                          | Actual measured RTD input as NI1000-DIN43760 on IO3:9999.990°C                                        |       |  |
|                                              |                          | Actual measured RTD input as NI1000-DIN43760 on IO4:9999.990°C                                        |       |  |
|                                              |                          | Actual measured RTD input as NI1000-DIN43760 on IO5:9999.990°C                                        |       |  |
|                                              |                          | Actual measured RTD input as NI1000-DIN43760 on IO6:9999.990°C                                        |       |  |
|                                              |                          | Actual measured RTD input as NI1000-DIN43760 on IO7:9999.990°C                                        |       |  |
|                                              |                          | Actual measured RTD input as NI1000-DIN43760 on IO8:9999.990°C                                        |       |  |

This command shows for RTD INPUT IOs the actual measured RTD value linearized as NI1000 DIN43760 sensor in °Celsius.

-999.990: Temperature is lower than 50°C

+999.990: Temperature is higher than 130°C

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

|                                             |                          |                                                                                          |       |  |
|---------------------------------------------|--------------------------|------------------------------------------------------------------------------------------|-------|--|
| GET RTD INPUT<br>AS NI1000 DIN43760 CELSIUS | ASCII<br>READ<br>COMMAND | #GRTDINI1000DIN43760C<IONR> <CR><br>Result:<br>#GRTDINI1000DIN43760C<IONR>:<IOxDbl> <CR> | ASCII |  |
|                                             | IONR                     | 1                                                                                        |       |  |
|                                             | TX                       | #1,GRTDINI1000DIN43760C1<CR>                                                             |       |  |
|                                             | RX                       | #1,GRTDINI1000DIN43760C3:9999.990<CR>                                                    |       |  |
|                                             |                          | Actual measured RTD input as NI1000-DIN43760 on IO1:9999.990°C                           |       |  |

This command shows for RTD INPUT IO <IONR> the actual measured RTD value linearized as NI1000 DIN43760 sensor in °Celsius

-999.990: Temperature is lower than 50°C

+999.990: Temperature is higher than 130°C

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

|                                                      |                          |                                                                                                                  |       |  |
|------------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------|-------|--|
| GET AVERAGE RTD INPUTS<br>AS NI1000 DIN43760 CELSIUS | ASCII<br>READ<br>COMMAND | #GAVGRTDISNI1000DIN43760C<CR><br>Result:<br>#GAVGRTDISNI1000DIN43760C:<RTD1Dbl>,<RTD2Dbl>,...,<RTD8Dbl> <CR>     | ASCII |  |
|                                                      | TX                       | #1,GAVGRTDISNI1000DIN43760C<CR>                                                                                  |       |  |
|                                                      | RX                       | #1,GAVGRTDISNI1000DIN43760C:9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990<CR> |       |  |
|                                                      |                          | Average measured RTD input as NI1000-DIN43760 on IO1:9999.990°C                                                  |       |  |
|                                                      |                          | Average measured RTD input as NI1000-DIN43760 on IO2:9999.990°C                                                  |       |  |
|                                                      |                          | Average measured RTD input as NI1000-DIN43760 on IO3:9999.990°C                                                  |       |  |
|                                                      |                          | Average measured RTD input as NI1000-DIN43760 on IO4:9999.990°C                                                  |       |  |
|                                                      |                          | Average measured RTD input as NI1000-DIN43760 on IO5:9999.990°C                                                  |       |  |
|                                                      |                          | Average measured RTD input as NI1000-DIN43760 on IO6:9999.990°C                                                  |       |  |
|                                                      |                          | Average measured RTD input as NI1000-DIN43760 on IO7:9999.990°C                                                  |       |  |
|                                                      |                          | Average measured RTD input as NI1000-DIN43760 on IO8:9999.990°C                                                  |       |  |

This command shows for RTD INPUT IOs the average measured RTD value linearized as NI1000 DIN43760 sensor in °Celsius.

-999.990: Temperature is lower than 50°C

+999.990: Temperature is higher than 130°C

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

|                                                 |                          |                                                                                                |       |  |
|-------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------|-------|--|
| GET AVG RTD INPUT<br>AS NI1000 DIN43760 CELSIUS | ASCII<br>READ<br>COMMAND | #GAVGRTDINI1000DIN43760C<IONR> <CR><br>Result:<br>#GAVGRTDINI1000DIN43760C<IONR>:<IOxDbl> <CR> | ASCII |  |
|                                                 | IONR                     | 1                                                                                              |       |  |
|                                                 | TX                       | #1,GAVGRTDINI1000DIN43760C1<CR>                                                                |       |  |
|                                                 | RX                       | #1,GAVGRTDINI1000DIN43760C1:9999.990<CR>                                                       |       |  |
|                                                 |                          | Average measured RTD input as NI1000-DIN43760 on IO1:9999.990°C                                |       |  |

This command shows for RTD INPUT IO <IONR> the average measured RTD value linearized as NI1000 DIN43760 sensor in °Celsius

-999.990: Temperature is lower than 50°C

+999.990: Temperature is higher than 130°C

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

## RTD INPUTS PT100 KELVIN

|                                                                                                                                                                                                                                                                                                                       |                          |                                                                                                |       |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------|-------|--|
| GET RTD INPUTS<br>AS PT100 KELVIN                                                                                                                                                                                                                                                                                     | ASCII<br>READ<br>COMMAND | #GRTDISPT100K<CR><br>Result:<br>#GRTDISPT100K:<RTD1Dbl>,<RTD2Dbl>,...,<RTD8Dbl><CR>            | ASCII |  |
|                                                                                                                                                                                                                                                                                                                       | TX                       | #1,GRTDISPT100K<CR>                                                                            |       |  |
|                                                                                                                                                                                                                                                                                                                       | RX                       | #1,GRTDISPT100K:9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990<CR>    |       |  |
|                                                                                                                                                                                                                                                                                                                       |                          | Actual measured RTD input as PT100 on IO1:9999.990°K                                           |       |  |
|                                                                                                                                                                                                                                                                                                                       |                          | Actual measured RTD input as PT100 on IO2:9999.990°K                                           |       |  |
|                                                                                                                                                                                                                                                                                                                       |                          | Actual measured RTD input as PT100 on IO3:9999.990°K                                           |       |  |
|                                                                                                                                                                                                                                                                                                                       |                          | Actual measured RTD input as PT100 on IO4:9999.990°K                                           |       |  |
|                                                                                                                                                                                                                                                                                                                       |                          | Actual measured RTD input as PT100 on IO5:9999.990°K                                           |       |  |
|                                                                                                                                                                                                                                                                                                                       |                          | Actual measured RTD input as PT100 on IO6:9999.990°K                                           |       |  |
|                                                                                                                                                                                                                                                                                                                       |                          | Actual measured RTD input as PT100 on IO7:9999.990°K                                           |       |  |
|                                                                                                                                                                                                                                                                                                                       |                          | Actual measured RTD input as PT100 on IO8:9999.990°K                                           |       |  |
| This command shows for RTD INPUT IOs the actual measured RTD value linearized as PT100 sensor in °Kelvin<br>-999.990: Temperature is lower than 223.15°K<br>+999.990: Temperature is higher than 403.15°K<br>All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.       |                          |                                                                                                |       |  |
| GET RTD INPUT<br>AS PT100 KELVIN                                                                                                                                                                                                                                                                                      | ASCII<br>READ<br>COMMAND | #GRTDIPT100K<IONR><CR><br>Result:<br>#GRTDIPT100K<IONR>:<IOxDbl><CR>                           | ASCII |  |
|                                                                                                                                                                                                                                                                                                                       | IONR                     | 1                                                                                              |       |  |
|                                                                                                                                                                                                                                                                                                                       | TX                       | #1,GRTDIPT100K1<CR>                                                                            |       |  |
|                                                                                                                                                                                                                                                                                                                       | RX                       | #1,GRTDIPT100K3:9999.990<CR>                                                                   |       |  |
|                                                                                                                                                                                                                                                                                                                       |                          | Actual measured RTD input as PT100 on IO1:9999.990°K                                           |       |  |
| This command shows for RTD INPUT IO <IONR> the actual measured RTD value linearized as PT100 sensor in °Kelvin<br>-999.990: Temperature is lower than 223.15°K<br>+999.990: Temperature is higher than 403.15°K<br>All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done. |                          |                                                                                                |       |  |
| GET AVERAGE RTD INPUTS<br>AS PT100 KELVIN                                                                                                                                                                                                                                                                             | ASCII<br>READ<br>COMMAND | #GAVGRTDISPT100K<CR><br>Result:<br>#GAVGRTDISPT100K:<RTD1Dbl>,<RTD2Dbl>,...,<RTD8Dbl><CR>      | ASCII |  |
|                                                                                                                                                                                                                                                                                                                       | TX                       | #1,GAVGRTDISPT100K<CR>                                                                         |       |  |
|                                                                                                                                                                                                                                                                                                                       | RX                       | #1,GAVGRTDISPT100K:9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990<CR> |       |  |
|                                                                                                                                                                                                                                                                                                                       |                          | Average measured RTD input as PT100 on IO1:9999.990°K                                          |       |  |
|                                                                                                                                                                                                                                                                                                                       |                          | Average measured RTD input as PT100 on IO2:9999.990°K                                          |       |  |
|                                                                                                                                                                                                                                                                                                                       |                          | Average measured RTD input as PT100 on IO3:9999.990°K                                          |       |  |
|                                                                                                                                                                                                                                                                                                                       |                          | Average measured RTD input as PT100 on IO4:9999.990°K                                          |       |  |
|                                                                                                                                                                                                                                                                                                                       |                          | Average measured RTD input as PT100 on IO5:9999.990°K                                          |       |  |
|                                                                                                                                                                                                                                                                                                                       |                          | Average measured RTD input as PT100 on IO6:9999.990°K                                          |       |  |
|                                                                                                                                                                                                                                                                                                                       |                          | Average measured RTD input as PT100 on IO7:9999.990°K                                          |       |  |
|                                                                                                                                                                                                                                                                                                                       |                          | Average measured RTD input as PT100 on IO8:9999.990°K                                          |       |  |

This command shows for RTD INPUT IOs the average measured RTD value linearized as PT100 sensor in °Kelvin

-999.990: Temperature is lower than 223.15°K

+999.990: Temperature is higher than 403.15°K

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

|                                      |                          |                                                                              |       |  |
|--------------------------------------|--------------------------|------------------------------------------------------------------------------|-------|--|
| GET AVG RTD INPUT<br>AS PT100 KELVIN | ASCII<br>READ<br>COMMAND | #GAVGRTDIPT100K<IONR> <CR><br>Result:<br>#GAVGRTDIPT100K<IONR>:<IOxDbl> <CR> | ASCII |  |
|                                      | IONR                     | 1                                                                            |       |  |
|                                      | TX                       | #1,GAVGRTDIPT100K1<CR>                                                       |       |  |
|                                      | RX                       | #1,GAVGRTDIPT100K1:9999.990<CR>                                              |       |  |
|                                      |                          | Average measured RTD input as PT100 on IO1:9999.990°K                        |       |  |

This command shows for RTD INPUT IO <IONR> the average measured RTD value linearized as PT100 sensor in °Kelvin

-999.990: Temperature is lower than 223.15°K

+999.990: Temperature is higher than 403.15°K

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

#### RTD INPUTS PT1000 KELVIN

|                                    |                          |                                                                                              |       |  |
|------------------------------------|--------------------------|----------------------------------------------------------------------------------------------|-------|--|
| GET RTD INPUTS<br>AS PT1000 KELVIN | ASCII<br>READ<br>COMMAND | #GRTDISPT1000K<CR><br>Result:<br>#GRTDISPT1000K:<RTD1Dbl>,<RTD2Dbl>,...,<RTD8Dbl> <CR>       | ASCII |  |
|                                    | TX                       | #1,GRTDISPT1000K<CR>                                                                         |       |  |
|                                    | RX                       | #1,GRTDISPT1000K:9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990<CR> |       |  |
|                                    |                          | Actual measured RTD input as PT1000 on IO1:9999.990°K                                        |       |  |
|                                    |                          | Actual measured RTD input as PT1000 on IO2:9999.990°K                                        |       |  |
|                                    |                          | Actual measured RTD input as PT1000 on IO3:9999.990°K                                        |       |  |
|                                    |                          | Actual measured RTD input as PT1000 on IO4:9999.990°K                                        |       |  |
|                                    |                          | Actual measured RTD input as PT1000 on IO5:9999.990°K                                        |       |  |
|                                    |                          | Actual measured RTD input as PT1000 on IO6:9999.990°K                                        |       |  |
|                                    |                          | Actual measured RTD input as PT1000 on IO7:9999.990°K                                        |       |  |
|                                    |                          | Actual measured RTD input as PT1000 on IO8:9999.990°K                                        |       |  |

This command shows for RTD INPUT IOs the actual measured RTD value linearized as PT1000 sensor in °Kelvin

-999.990: Temperature is lower than 223.15°K

+999.990: Temperature is higher than 403.15°K

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

|                                   |                          |                                                                          |       |  |
|-----------------------------------|--------------------------|--------------------------------------------------------------------------|-------|--|
| GET RTD INPUT<br>AS PT1000 KELVIN | ASCII<br>READ<br>COMMAND | #GRTDIPT1000K<IONR> <CR><br>Result:<br>#GRTDIPT1000K<IONR>:<IOxDbl> <CR> | ASCII |  |
|                                   | IONR                     | 1                                                                        |       |  |
|                                   | TX                       | #1,GRTDIPT1000K1<CR>                                                     |       |  |
|                                   | RX                       | #1,GRTDIPT1000K3:9999.990<CR>                                            |       |  |
|                                   |                          | Actual measured RTD input as PT1000 on IO1:9999.990°K                    |       |  |

This command shows for RTD INPUT IO <IONR> the actual measured RTD value linearized as PT1000 sensor in °Kelvin

-999.990: Temperature is lower than 223.15°K

+999.990: Temperature is higher than 403.15°K

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

|                                            |                          |                                                                                                 |       |  |
|--------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------|-------|--|
| GET AVERAGE RTD INPUTS<br>AS PT1000 KELVIN | ASCII<br>READ<br>COMMAND | #GAVGRTDISPT1000K<CR><br>Result:<br>#GAVGRTDISPT1000K:<RTD1DbI>,<RTD2DbI>,...,<RTD8DbI><CR>     | ASCII |  |
|                                            | TX                       | #1,GAVGRTDISPT1000K<CR>                                                                         |       |  |
|                                            | RX                       | #1,GAVGRTDISPT1000K:9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990<CR> |       |  |
|                                            |                          | Average measured RTD input as PT1000 on IO1:9999.990°K                                          |       |  |
|                                            |                          | Average measured RTD input as PT1000 on IO2:9999.990°K                                          |       |  |
|                                            |                          | Average measured RTD input as PT1000 on IO3:9999.990°K                                          |       |  |
|                                            |                          | Average measured RTD input as PT1000 on IO4:9999.990°K                                          |       |  |
|                                            |                          | Average measured RTD input as PT1000 on IO5:9999.990°K                                          |       |  |
|                                            |                          | Average measured RTD input as PT1000 on IO6:9999.990°K                                          |       |  |
|                                            |                          | Average measured RTD input as PT1000 on IO7:9999.990°K                                          |       |  |
|                                            |                          | Average measured RTD input as PT1000 on IO8:9999.990°K                                          |       |  |

This command shows for RTD INPUT IOs the average measured RTD value linearized as PT1000 sensor in °Kelvin

-999.990: Temperature is lower than 223.15°K

+999.990: Temperature is higher than 403.15°K

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

|                                       |                          |                                                                              |       |  |
|---------------------------------------|--------------------------|------------------------------------------------------------------------------|-------|--|
| GET AVG RTD INPUT<br>AS PT1000 KELVIN | ASCII<br>READ<br>COMMAND | #GAVGRTDIPT1000K<IONR><CR><br>Result:<br>#GAVGRTDIPT1000K<IONR>:<IOxDbl><CR> | ASCII |  |
|                                       | IONR                     | 1                                                                            |       |  |
|                                       | TX                       | #1,GAVGRTDIPT1000K1<CR>                                                      |       |  |
|                                       | RX                       | #1,GAVGRTDIPT1000K1:9999.990<CR>                                             |       |  |
|                                       |                          | Average measured RTD input as PT1000 on IO1:9999.990°K                       |       |  |

This command shows for RTD INPUT IO <IONR> the average measured RTD value linearized as PT1000 sensor in °Kelvin

-999.990: Temperature is lower than 223.15°K

+999.990: Temperature is higher than 403.15°K

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

#### RTD INPUTS NI1000-DIN43760 KELVIN

|                                             |                          |                                                                                                       |       |  |
|---------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------|-------|--|
| GET RTD INPUTS<br>AS NI1000 DIN43760 KELVIN | ASCII<br>READ<br>COMMAND | #GRTDISNI1000DIN43760K<CR><br>Result:<br>#GRTDISNI1000DIN43760K:<RTD1DbI>,<RTD2DbI>,...,<RTD8DbI><CR> | ASCII |  |
|                                             | TX                       | #1,GRTDISNI1000DIN43760K<CR>                                                                          |       |  |
|                                             | RX                       | #1,GRTDISNI1000DIN43760K:9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990<CR>  |       |  |
|                                             |                          | Actual measured RTD input as NI1000-DIN43760 on IO1:9999.990°K                                        |       |  |
|                                             |                          | Actual measured RTD input as NI1000-DIN43760 on IO2:9999.990°K                                        |       |  |
|                                             |                          | Actual measured RTD input as NI1000-DIN43760 on IO3:9999.990°K                                        |       |  |
|                                             |                          | Actual measured RTD input as NI1000-DIN43760 on IO4:9999.990°K                                        |       |  |
|                                             |                          | Actual measured RTD input as NI1000-DIN43760 on IO5:9999.990°K                                        |       |  |
|                                             |                          | Actual measured RTD input as NI1000-DIN43760 on IO6:9999.990°K                                        |       |  |
|                                             |                          | Actual measured RTD input as NI1000-DIN43760 on IO7:9999.990°K                                        |       |  |
|                                             |                          | Actual measured RTD input as NI1000-DIN43760 on IO8:9999.990°K                                        |       |  |

|                                                                                                                                                                                                                                                                                                                                  |                          |                                                                                                                  |       |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------|-------|--|
| This command shows for RTD INPUT IOs the actual measured RTD value linearized as NI1000 DIN43760 sensor in °Kelvin<br>-999.990: Temperature is lower than 223.15°K<br>+999.990: Temperature is higher than 403.15°K<br>All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.        |                          |                                                                                                                  |       |  |
| GET RTD INPUT<br>AS NI1000 DIN43760 KELVIN                                                                                                                                                                                                                                                                                       | ASCII<br>READ<br>COMMAND | #GRTDINI1000DIN43760K<IONR><CR><br>Result:<br>#GRTDINI1000DIN43760K<IONR>:<IOxDbl><CR>                           | ASCII |  |
|                                                                                                                                                                                                                                                                                                                                  | IONR                     | 1                                                                                                                |       |  |
|                                                                                                                                                                                                                                                                                                                                  | TX                       | #1,GRTDINI1000DIN43760K1<CR>                                                                                     |       |  |
|                                                                                                                                                                                                                                                                                                                                  | RX                       | #1,GRTDINI1000DIN43760K3:9999.990<CR>                                                                            |       |  |
|                                                                                                                                                                                                                                                                                                                                  |                          | Actual measured RTD input as NI1000-DIN43760 on IO1:9999.990°K                                                   |       |  |
| This command shows for RTD INPUT IO <IONR> the actual measured RTD value linearized as NI1000 DIN43760 sensor in °Kelvin<br>-999.990: Temperature is lower than 223.15°K<br>+999.990: Temperature is higher than 403.15°K<br>All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.  |                          |                                                                                                                  |       |  |
| GET AVERAGE RTD INPUTS<br>AS NI1000 DIN43760 KELVIN                                                                                                                                                                                                                                                                              | ASCII<br>READ<br>COMMAND | #GAVGRTDISNI1000DIN43760K<CR><br>Result:<br>#GAVGRTDISNI1000DIN43760K:<RTD1Dbl>,<RTD2Dbl>,...,<RTD8Dbl><CR>      | ASCII |  |
|                                                                                                                                                                                                                                                                                                                                  | TX                       | #1,GAVGRTDISNI1000DIN43760K<CR>                                                                                  |       |  |
|                                                                                                                                                                                                                                                                                                                                  | RX                       | #1,GAVGRTDISNI1000DIN43760K:9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990<CR> |       |  |
|                                                                                                                                                                                                                                                                                                                                  |                          | Average measured RTD input as NI1000-DIN43760 on IO1:9999.990°K                                                  |       |  |
|                                                                                                                                                                                                                                                                                                                                  |                          | Average measured RTD input as NI1000-DIN43760 on IO2:9999.990°K                                                  |       |  |
|                                                                                                                                                                                                                                                                                                                                  |                          | Average measured RTD input as NI1000-DIN43760 on IO3:9999.990°K                                                  |       |  |
|                                                                                                                                                                                                                                                                                                                                  |                          | Average measured RTD input as NI1000-DIN43760 on IO4:9999.990°K                                                  |       |  |
|                                                                                                                                                                                                                                                                                                                                  |                          | Average measured RTD input as NI1000-DIN43760 on IO5:9999.990°K                                                  |       |  |
|                                                                                                                                                                                                                                                                                                                                  |                          | Average measured RTD input as NI1000-DIN43760 on IO6:9999.990°K                                                  |       |  |
|                                                                                                                                                                                                                                                                                                                                  |                          | Average measured RTD input as NI1000-DIN43760 on IO7:9999.990°K                                                  |       |  |
|                                                                                                                                                                                                                                                                                                                                  |                          | Average measured RTD input as NI1000-DIN43760 on IO8:9999.990°K                                                  |       |  |
| This command shows for RTD INPUT IOs the average measured RTD value linearized as NI1000 DIN43760 sensor in °Kelvin<br>-999.990: Temperature is lower than 223.15°K<br>+999.990: Temperature is higher than 403.15°K<br>All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.       |                          |                                                                                                                  |       |  |
| GET AVG RTD INPUT<br>AS NI1000 DIN43760 KELVIN                                                                                                                                                                                                                                                                                   | ASCII<br>READ<br>COMMAND | #GAVGRTDINI1000DIN43760K<IONR><CR><br>Result:<br>#GAVGRTDINI1000DIN43760K<IONR>:<IOxDbl><CR>                     | ASCII |  |
|                                                                                                                                                                                                                                                                                                                                  | IONR                     | 1                                                                                                                |       |  |
|                                                                                                                                                                                                                                                                                                                                  | TX                       | #1,GAVGRTDINI1000DIN43760K1<CR>                                                                                  |       |  |
|                                                                                                                                                                                                                                                                                                                                  | RX                       | #1,GAVGRTDINI1000DIN43760K1:9999.990<CR>                                                                         |       |  |
|                                                                                                                                                                                                                                                                                                                                  |                          | Average measured RTD input as NI1000-DIN43760 on IO1:9999.990°K                                                  |       |  |
| This command shows for RTD INPUT IO <IONR> the average measured RTD value linearized as NI1000 DIN43760 sensor in °Kelvin<br>-999.990: Temperature is lower than 223.15°K<br>+999.990: Temperature is higher than 403.15°K<br>All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done. |                          |                                                                                                                  |       |  |
| RTD INPUTS PT100 FAHRENHEIT                                                                                                                                                                                                                                                                                                      |                          |                                                                                                                  |       |  |

|                                                                                                                                                                                                                                                                                                                     |                          |                                                                                                |       |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------|-------|--|
| GET RTD INPUTS<br>AS PT100 FAHRENHEIT                                                                                                                                                                                                                                                                               | ASCII<br>READ<br>COMMAND | #GRTDISPT100F<CR><br>Result:<br>#GRTDISPT100F:<RTD1DbI>,<RTD2DbI>,...,<RTD8DbI> <CR>           | ASCII |  |
|                                                                                                                                                                                                                                                                                                                     | TX                       | #1,GRTDISPT100F<CR>                                                                            |       |  |
|                                                                                                                                                                                                                                                                                                                     | RX                       | #1,GRTDISPT100F:9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990<CR>    |       |  |
|                                                                                                                                                                                                                                                                                                                     |                          | Actual measured RTD input as PT100 on IO1:9999.990°F                                           |       |  |
|                                                                                                                                                                                                                                                                                                                     |                          | Actual measured RTD input as PT100 on IO2:9999.990°F                                           |       |  |
|                                                                                                                                                                                                                                                                                                                     |                          | Actual measured RTD input as PT100 on IO3:9999.990°F                                           |       |  |
|                                                                                                                                                                                                                                                                                                                     |                          | Actual measured RTD input as PT100 on IO4:9999.990°F                                           |       |  |
|                                                                                                                                                                                                                                                                                                                     |                          | Actual measured RTD input as PT100 on IO5:9999.990°F                                           |       |  |
|                                                                                                                                                                                                                                                                                                                     |                          | Actual measured RTD input as PT100 on IO6:9999.990°F                                           |       |  |
|                                                                                                                                                                                                                                                                                                                     |                          | Actual measured RTD input as PT100 on IO7:9999.990°F                                           |       |  |
|                                                                                                                                                                                                                                                                                                                     |                          | Actual measured RTD input as PT100 on IO8:9999.990°F                                           |       |  |
| This command shows for RTD INPUT IOs the actual measured RTD value linearized as PT100 sensor in °Fahrenheit<br>-999.990: Temperature is lower than -58°F<br>+999.990: Temperature is higher than 266°F<br>All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.       |                          |                                                                                                |       |  |
| GET RTD INPUT<br>AS PT100 FAHRENHEIT                                                                                                                                                                                                                                                                                | ASCII<br>READ<br>COMMAND | #GRTDIPT100F<IONR> <CR><br>Result:<br>#GRTDIPT100F<IONR>:<IOxDbI> <CR>                         | ASCII |  |
|                                                                                                                                                                                                                                                                                                                     | IONR                     | 1                                                                                              |       |  |
|                                                                                                                                                                                                                                                                                                                     | TX                       | #1,GRTDIPT100F1<CR>                                                                            |       |  |
|                                                                                                                                                                                                                                                                                                                     | RX                       | #1,GRTDIPT100F3:9999.990<CR>                                                                   |       |  |
|                                                                                                                                                                                                                                                                                                                     |                          | Actual measured RTD input as PT100 on IO1:9999.990°F                                           |       |  |
| This command shows for RTD INPUT IO <IONR> the actual measured RTD value linearized as PT100 sensor in °Fahrenheit<br>-999.990: Temperature is lower than -58°F<br>+999.990: Temperature is higher than 266°F<br>All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done. |                          |                                                                                                |       |  |
| GET AVERAGE RTD INPUTS<br>AS PT100 FAHRENHEIT                                                                                                                                                                                                                                                                       | ASCII<br>READ<br>COMMAND | #GAVGRTDISPT100F<CR><br>Result:<br>#GAVGRTDISPT100F:<RTD1DbI>,<RTD2DbI>,...,<RTD8DbI> <CR>     | ASCII |  |
|                                                                                                                                                                                                                                                                                                                     | TX                       | #1,GAVGRTDISPT100F<CR>                                                                         |       |  |
|                                                                                                                                                                                                                                                                                                                     | RX                       | #1,GAVGRTDISPT100F:9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990<CR> |       |  |
|                                                                                                                                                                                                                                                                                                                     |                          | Average measured RTD input as PT100 on IO1:9999.990°F                                          |       |  |
|                                                                                                                                                                                                                                                                                                                     |                          | Average measured RTD input as PT100 on IO2:9999.990°F                                          |       |  |
|                                                                                                                                                                                                                                                                                                                     |                          | Average measured RTD input as PT100 on IO3:9999.990°F                                          |       |  |
|                                                                                                                                                                                                                                                                                                                     |                          | Average measured RTD input as PT100 on IO4:9999.990°F                                          |       |  |
|                                                                                                                                                                                                                                                                                                                     |                          | Average measured RTD input as PT100 on IO5:9999.990°F                                          |       |  |
|                                                                                                                                                                                                                                                                                                                     |                          | Average measured RTD input as PT100 on IO6:9999.990°F                                          |       |  |
|                                                                                                                                                                                                                                                                                                                     |                          | Average measured RTD input as PT100 on IO7:9999.990°F                                          |       |  |
|                                                                                                                                                                                                                                                                                                                     |                          | Average measured RTD input as PT100 on IO8:9999.990°F                                          |       |  |

This command shows for RTD INPUT IOs the average measured RTD value linearized as PT100 sensor in °Fahrenheit

-999.990: Temperature is lower than -58°F

+999.990: Temperature is higher than 266°F

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

|                                          |                          |                                                                            |       |  |
|------------------------------------------|--------------------------|----------------------------------------------------------------------------|-------|--|
| GET AVG RTD INPUT<br>AS PT100 FAHRENHEIT | ASCII<br>READ<br>COMMAND | #GAVGRTDIPT100F<IONR><CR><br>Result:<br>#GAVGRTDIPT100F<IONR>:<IOxDbl><CR> | ASCII |  |
|                                          | IONR                     | 1                                                                          |       |  |
|                                          | TX                       | #1,GAVGRTDIPT100F1<CR>                                                     |       |  |
|                                          | RX                       | #1,GAVGRTDIPT100F1:9999.990<CR>                                            |       |  |
|                                          |                          | Average measured RTD input as PT100 on IO1:9999.990°F                      |       |  |

This command shows for RTD INPUT IO <IONR> the average measured RTD value linearized as PT100 sensor in °Fahrenheit

-999.990: Temperature is lower than -58°F

+999.990: Temperature is higher than 266°F

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

#### RTD INPUTS PT1000 FAHRENHEIT

|                                        |                          |                                                                                              |       |  |
|----------------------------------------|--------------------------|----------------------------------------------------------------------------------------------|-------|--|
| GET RTD INPUTS<br>AS PT1000 FAHRENHEIT | ASCII<br>READ<br>COMMAND | #GRTDISPT1000F<CR><br>Result:<br>#GRTDISPT1000F:<RTD1Dbl>,<RTD2Dbl>,...,<RTD8Dbl><CR>        | ASCII |  |
|                                        | TX                       | #1,GRTDISPT1000F<CR>                                                                         |       |  |
|                                        | RX                       | #1,GRTDISPT1000F:9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990<CR> |       |  |
|                                        |                          | Actual measured RTD input as PT1000 on IO1:9999.990°F                                        |       |  |
|                                        |                          | Actual measured RTD input as PT1000 on IO2:9999.990°F                                        |       |  |
|                                        |                          | Actual measured RTD input as PT1000 on IO3:9999.990°F                                        |       |  |
|                                        |                          | Actual measured RTD input as PT1000 on IO4:9999.990°F                                        |       |  |
|                                        |                          | Actual measured RTD input as PT1000 on IO5:9999.990°F                                        |       |  |
|                                        |                          | Actual measured RTD input as PT1000 on IO6:9999.990°F                                        |       |  |
|                                        |                          | Actual measured RTD input as PT1000 on IO7:9999.990°F                                        |       |  |
|                                        |                          | Actual measured RTD input as PT1000 on IO8:9999.990°F                                        |       |  |

This command shows for RTD INPUT IOs the actual measured RTD value linearized as PT1000 sensor in °Fahrenheit

-999.990: Temperature is lower than -58°F

+999.990: Temperature is higher than 266°F

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

|                                       |                          |                                                                        |       |  |
|---------------------------------------|--------------------------|------------------------------------------------------------------------|-------|--|
| GET RTD INPUT<br>AS PT1000 FAHRENHEIT | ASCII<br>READ<br>COMMAND | #GRTDIPT1000F<IONR><CR><br>Result:<br>#GRTDIPT1000F<IONR>:<IOxDbl><CR> | ASCII |  |
|                                       | IONR                     | 1                                                                      |       |  |
|                                       | TX                       | #1,GRTDIPT1000F1<CR>                                                   |       |  |
|                                       | RX                       | #1,GRTDIPT1000F3:9999.990<CR>                                          |       |  |
|                                       |                          | Actual measured RTD input as PT1000 on IO1:9999.990°F                  |       |  |

This command shows for RTD INPUT IO <IONR> the actual measured RTD value linearized as PT1000 sensor in °Fahrenheit

-999.990: Temperature is lower than -58°F

+999.990: Temperature is higher than 266°F

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

|                                                |                          |                                                                                                 |       |  |
|------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------|-------|--|
| GET AVERAGE RTD INPUTS<br>AS PT1000 FAHRENHEIT | ASCII<br>READ<br>COMMAND | #GAVGRTDISPT1000F<CR><br>Result:<br>#GAVGRTDISPT1000F:<RTD1DbI>,<RTD2DbI>,...,<RTD8DbI><CR>     | ASCII |  |
|                                                | TX                       | #1,GAVGRTDISPT1000F<CR>                                                                         |       |  |
|                                                | RX                       | #1,GAVGRTDISPT1000F:9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990<CR> |       |  |
|                                                |                          | Average measured RTD input as PT1000 on IO1:9999.990°F                                          |       |  |
|                                                |                          | Average measured RTD input as PT1000 on IO2:9999.990°F                                          |       |  |
|                                                |                          | Average measured RTD input as PT1000 on IO3:9999.990°F                                          |       |  |
|                                                |                          | Average measured RTD input as PT1000 on IO4:9999.990°F                                          |       |  |
|                                                |                          | Average measured RTD input as PT1000 on IO5:9999.990°F                                          |       |  |
|                                                |                          | Average measured RTD input as PT1000 on IO6:9999.990°F                                          |       |  |
|                                                |                          | Average measured RTD input as PT1000 on IO7:9999.990°F                                          |       |  |
|                                                |                          | Average measured RTD input as PT1000 on IO8:9999.990°F                                          |       |  |

This command shows for RTD INPUT IOs the average measured RTD value linearized as PT1000 sensor in °Fahrenheit

-999.990: Temperature is lower than -58°F

+999.990: Temperature is higher than 266°F

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

|                                           |                          |                                                                              |       |  |
|-------------------------------------------|--------------------------|------------------------------------------------------------------------------|-------|--|
| GET AVG RTD INPUT<br>AS PT1000 FAHRENHEIT | ASCII<br>READ<br>COMMAND | #GAVGRTDIPT1000F<IONR><CR><br>Result:<br>#GAVGRTDIPT1000F<IONR>:<IOxDbI><CR> | ASCII |  |
|                                           | IONR                     | 1                                                                            |       |  |
|                                           | TX                       | #1,GAVGRTDIPT1000F1<CR>                                                      |       |  |
|                                           | RX                       | #1,GAVGRTDIPT1000F1:9999.990<CR>                                             |       |  |
|                                           |                          | Average measured RTD input as PT1000 on IO1:9999.990°F                       |       |  |

This command shows for RTD INPUT IO <IONR> the average measured RTD value linearized as PT1000 sensor in °Fahrenheit

-999.990: Temperature is lower than -58°F

+999.990: Temperature is higher than 266°F

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

#### RTD INPUTS NI1000-DIN43760 FAHRENHEIT

|                                                 |                          |                                                                                                       |       |  |
|-------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------|-------|--|
| GET RTD INPUTS<br>AS NI1000 DIN43760 FAHRENHEIT | ASCII<br>READ<br>COMMAND | #GRTDISNI1000DIN43760F<CR><br>Result:<br>#GRTDISNI1000DIN43760F:<RTD1DbI>,<RTD2DbI>,...,<RTD8DbI><CR> | ASCII |  |
|                                                 | TX                       | #1,GRTDISNI1000DIN43760F<CR>                                                                          |       |  |
|                                                 | RX                       | #1,GRTDISNI1000DIN43760F:9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990<CR>  |       |  |
|                                                 |                          | Actual measured RTD input as NI1000-DIN43760 on IO1:9999.990°F                                        |       |  |
|                                                 |                          | Actual measured RTD input as NI1000-DIN43760 on IO2:9999.990°F                                        |       |  |
|                                                 |                          | Actual measured RTD input as NI1000-DIN43760 on IO3:9999.990°F                                        |       |  |
|                                                 |                          | Actual measured RTD input as NI1000-DIN43760 on IO4:9999.990°F                                        |       |  |
|                                                 |                          | Actual measured RTD input as NI1000-DIN43760 on IO5:9999.990°F                                        |       |  |
|                                                 |                          | Actual measured RTD input as NI1000-DIN43760 on IO6:9999.990°F                                        |       |  |
|                                                 |                          | Actual measured RTD input as NI1000-DIN43760 on IO7:9999.990°F                                        |       |  |
|                                                 |                          | Actual measured RTD input as NI1000-DIN43760 on IO8:9999.990°F                                        |       |  |

This command shows for RTD INPUT IOs the actual measured RTD value linearized as NI1000 DIN43760 sensor in °Fahrenheit

-999.990: Temperature is lower than -58°F

+999.990: Temperature is higher than 266°F

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

|                                                |                          |                                                                                        |       |  |
|------------------------------------------------|--------------------------|----------------------------------------------------------------------------------------|-------|--|
| GET RTD INPUT<br>AS NI1000 DIN43760 FARENEHEIT | ASCII<br>READ<br>COMMAND | #GRTDINI1000DIN43760F<IONR><CR><br>Result:<br>#GRTDINI1000DIN43760F<IONR>:<IOxDbl><CR> | ASCII |  |
|                                                | IONR                     | 1                                                                                      |       |  |
|                                                | TX                       | #1,GRTDINI1000DIN43760F1<CR>                                                           |       |  |
|                                                | RX                       | #1,GRTDINI1000DIN43760F3:9999.990<CR>                                                  |       |  |
|                                                |                          | Actual measured RTD input as NI1000-DIN43760 on IO1:9999.990°F                         |       |  |

This command shows for RTD INPUT IO <IONR> the actual measured RTD value linearized as NI1000 DIN43760 sensor in °Fahrenheit

-999.990: Temperature is lower than -58°F

+999.990: Temperature is higher than 266°F

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

|                                                         |                          |                                                                                                                  |       |  |
|---------------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------|-------|--|
| GET AVERAGE RTD INPUTS<br>AS NI1000 DIN43760 FARENEHEIT | ASCII<br>READ<br>COMMAND | #GAVGRTDISNI1000DIN43760F<CR><br>Result:<br>#GAVGRTDISNI1000DIN43760F:<RTD1Dbl>,<RTD2Dbl>,...,<RTD8Dbl><CR>      | ASCII |  |
|                                                         | TX                       | #1,GAVGRTDISNI1000DIN43760F<CR>                                                                                  |       |  |
|                                                         | RX                       | #1,GAVGRTDISNI1000DIN43760F:9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990,9999.990<CR> |       |  |
|                                                         |                          | Average measured RTD input as NI1000-DIN43760 on IO1:9999.990°F                                                  |       |  |
|                                                         |                          | Average measured RTD input as NI1000-DIN43760 on IO2:9999.990°F                                                  |       |  |
|                                                         |                          | Average measured RTD input as NI1000-DIN43760 on IO3:9999.990°F                                                  |       |  |
|                                                         |                          | Average measured RTD input as NI1000-DIN43760 on IO4:9999.990°F                                                  |       |  |
|                                                         |                          | Average measured RTD input as NI1000-DIN43760 on IO5:9999.990°F                                                  |       |  |
|                                                         |                          | Average measured RTD input as NI1000-DIN43760 on IO6:9999.990°F                                                  |       |  |
|                                                         |                          | Average measured RTD input as NI1000-DIN43760 on IO7:9999.990°F                                                  |       |  |
|                                                         |                          | Average measured RTD input as NI1000-DIN43760 on IO8:9999.990°F                                                  |       |  |

This command shows for RTD INPUT IOs the average measured RTD value linearized as NI1000 DIN43760 sensor in °Fahrenheit

-999.990: Temperature is lower than -58°F

+999.990: Temperature is higher than 266°F

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

|                                                    |                          |                                                                                              |       |  |
|----------------------------------------------------|--------------------------|----------------------------------------------------------------------------------------------|-------|--|
| GET AVG RTD INPUT<br>AS NI1000 DIN43760 FARENEHEIT | ASCII<br>READ<br>COMMAND | #GAVGRTDINI1000DIN43760F<IONR><CR><br>Result:<br>#GAVGRTDINI1000DIN43760F<IONR>:<IOxDbl><CR> | ASCII |  |
|                                                    | IONR                     | 1                                                                                            |       |  |
|                                                    | TX                       | #1,GAVGRTDINI1000DIN43760F1<CR>                                                              |       |  |
|                                                    | RX                       | #1,GAVGRTDINI1000DIN43760F1:9999.990<CR>                                                     |       |  |
|                                                    |                          | Average measured RTD input as NI1000-DIN43760 on IO1:9999.990°F                              |       |  |

This command shows for RTD INPUT IO <IONR> the average measured RTD value linearized as NI1000 DIN43760 sensor in °Fahrenheit

-999.990: Temperature is lower than -58°F

+999.990: Temperature is higher than 266°F

All IOs with a different usage type will return 9999.990 to indicate, that no measurement is done.

| Register NAME<br>Command NAME                                                                                                                                                                                                                                   | MODBUS<br>Register<br>ASCII<br>Command | Register VALUE<br>ASCII Command                                                                 | NEW REAL<br>VALUE | NEW<br>VALUE | DATA TYPE | DO<br>WRITE |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------------------------|-------------------|--------------|-----------|-------------|
| <b>ASCII COMMANDS</b>                                                                                                                                                                                                                                           |                                        |                                                                                                 |                   |              |           |             |
| <b>INTER PROCESSOR COMMUNICATION</b>                                                                                                                                                                                                                            |                                        |                                                                                                 |                   |              |           |             |
| AIOX IS ONLINE                                                                                                                                                                                                                                                  | ASCII<br>READ<br>COMMAND               | #G16AIOXISONLINE<CR><br>Result:<br>#G16AIOXISONLINE:<YesNo><CR>                                 |                   |              | ASCII     |             |
|                                                                                                                                                                                                                                                                 | TX                                     | #1,G16AIOXISONLINE<CR>                                                                          |                   |              |           |             |
|                                                                                                                                                                                                                                                                 | RX                                     | #1,G16AIOXISONLINE:YES<CR>                                                                      |                   |              |           |             |
|                                                                                                                                                                                                                                                                 |                                        | Actual communication state co-processor to AIOX processor:YES                                   |                   |              |           |             |
| This command returns the actual state of the serial communication between the ARM co-processor and the additional processor for the AIOX.<br>YES: Currently the communication is fine<br>NO: There is a mayor problem/hardware fault between the two processors |                                        |                                                                                                 |                   |              |           |             |
| <b>CHIP COMMUNICATION</b>                                                                                                                                                                                                                                       |                                        |                                                                                                 |                   |              |           |             |
| ARE CHIPS ONLINE                                                                                                                                                                                                                                                | ASCII<br>READ<br>COMMAND               | #ARECHIPSONLINE<CR><br>Result:<br>#ARECHIPSONLINE:<Chip1IsOnline>,<Chip2IsOnline><CR>           |                   |              | ASCII     |             |
|                                                                                                                                                                                                                                                                 | TX                                     | #1,ARECHIPSONLINE<CR>                                                                           |                   |              |           |             |
|                                                                                                                                                                                                                                                                 | RX                                     | #1,ARECHIPSONLINE:1,1<CR>                                                                       |                   |              |           |             |
|                                                                                                                                                                                                                                                                 |                                        | Actual state of CHIP1:1                                                                         |                   |              |           |             |
|                                                                                                                                                                                                                                                                 |                                        | Actual state of CHIP2:1                                                                         |                   |              |           |             |
| This command shows the current SPI communication status with each chip.<br>ChipxIsOnline:<br>=0: Currently there is a SPI error in the communication and the chip is offline<br>=1: The SPI communication with the chip is ok                                   |                                        |                                                                                                 |                   |              |           |             |
| IS CHIPx ONLINE                                                                                                                                                                                                                                                 | ASCII<br>READ<br>COMMAND               | #ISCHIPONLINE<CHIPNR><CR><br>Result:<br>#ISCHIPONLINE<CHIPNR>:<ChipxIsOnline><CR>               |                   |              | ASCII     |             |
|                                                                                                                                                                                                                                                                 | CHIPNR                                 | 1                                                                                               |                   |              |           |             |
|                                                                                                                                                                                                                                                                 | TX                                     | #1,ISCHIPONLINE1<CR>                                                                            |                   |              |           |             |
|                                                                                                                                                                                                                                                                 | RX                                     | #1,ISCHIPONLINE1:1<CR>                                                                          |                   |              |           |             |
|                                                                                                                                                                                                                                                                 |                                        | Actual state of CHIP1:1                                                                         |                   |              |           |             |
| This command shows the current SPI communication status with chip <CHIPNR>.<br>=0: Currently there is a SPI error in the communication and the chip is offline<br>=1: The SPI communication with the chip is ok                                                 |                                        |                                                                                                 |                   |              |           |             |
| GET ALL SPI ERRORS                                                                                                                                                                                                                                              | ASCII<br>READ<br>COMMAND               | #GASPIERRS<CR><br>Result:<br>#GASPIERRS:<SPI1ErrDec>,<SPI2ErrDec>,<SPI1ErrHex>,<SPI2ErrHex><CR> |                   |              | ASCII     |             |
|                                                                                                                                                                                                                                                                 | TX                                     | #1,GASPIERRS<CR>                                                                                |                   |              |           |             |
|                                                                                                                                                                                                                                                                 | RX                                     | #1,GASPIERRS:0,0,0x0,0x0<CR>                                                                    |                   |              |           |             |
|                                                                                                                                                                                                                                                                 |                                        | Actual SPI errors of CHIP1:0                                                                    |                   |              |           |             |

|                                                                                                                        |                           |                                                                                                                                 |       |     |
|------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------|-----|
|                                                                                                                        |                           | Actual SPI errors of CHIP2:0                                                                                                    |       |     |
| This command shows the acutal SPI errors since power up for every chip                                                 |                           |                                                                                                                                 |       |     |
| GET SPI ERROR                                                                                                          | ASCII<br>READ<br>COMMAND  | #GSPERR<CHIPNR> <CR><br>Result:<br>#GSPERR<CHIPNR>:<SPiErrDec>,<SPiErrHex> <CR>                                                 | ASCII |     |
|                                                                                                                        | CHIPNR                    | 1                                                                                                                               |       |     |
|                                                                                                                        | TX                        | #1,GSPERR1<CR>                                                                                                                  |       |     |
|                                                                                                                        | RX                        | #1,GSPERR1:0,0x0<CR>                                                                                                            |       |     |
|                                                                                                                        |                           | Actual SPI errors of CHIP1:0                                                                                                    |       |     |
| This command shows the acutal SPI errors since power up for chip <CHIPNR>                                              |                           |                                                                                                                                 |       |     |
| GET CHIP STATEMACHINES                                                                                                 | ASCII<br>READ<br>COMMAND  | #GCHIPSMS<CR><br>Result:<br>#GCHIPSMS:<Chip1StateMachine>,<Chip2StateMachine> <CR>                                              | ASCII |     |
|                                                                                                                        | TX                        | #1,GCHIPSMS<CR>                                                                                                                 |       |     |
|                                                                                                                        | RX                        | #1,GCHIPSMS:12090,12090<CR>                                                                                                     |       |     |
|                                                                                                                        |                           | Actual state of CHIP1:12090                                                                                                     |       |     |
|                                                                                                                        |                           | Actual state of CHIP2:12090                                                                                                     |       |     |
| This command shows the acutal state of the internal communication state machine for all chips                          |                           |                                                                                                                                 |       |     |
| GET CHIP STATEMACHINE                                                                                                  | ASCII<br>READ<br>COMMAND  | #GCHIPSM<CHIPNR> <CR><br>Result:<br>#GCHIPSM<CHIPNR>:<ChipxStateMachine> <CR>                                                   | ASCII |     |
|                                                                                                                        | CHIPNR                    | 1                                                                                                                               |       |     |
|                                                                                                                        | TX                        | #1,GCHIPSM1<CR>                                                                                                                 |       |     |
|                                                                                                                        | RX                        | #1,GCHIPSM1:12010<CR>                                                                                                           |       |     |
|                                                                                                                        |                           | Actual state of CHIP1:12010                                                                                                     |       |     |
| This command shows the acutal state of the internal communication state machine for chip <CHIPNR>                      |                           |                                                                                                                                 |       |     |
| RESET CHIP STATEMACHINE                                                                                                | ASCII<br>WRITE<br>COMMAND | #RCHIPSM<CHIPNR> <CR><br>Result:<br>#OK<CR>                                                                                     | ASCII | YES |
|                                                                                                                        | CHIPNR                    | 1                                                                                                                               |       |     |
|                                                                                                                        | TX                        | #1,RCHIPSM1<CR>                                                                                                                 |       |     |
|                                                                                                                        | RX                        | N/A                                                                                                                             |       |     |
| This command restarts the state machine for chip <CHIPNR>. The affected chip will be resetted & initialized completely |                           |                                                                                                                                 |       |     |
| <b>CHIP STATUS</b>                                                                                                     |                           |                                                                                                                                 |       |     |
| GET ALL LIVE STATES                                                                                                    | ASCII<br>READ<br>COMMAND  | #GALSTATES<CR><br>Result:<br>#GALSTATE:<Chip1LiveStateDec>,<Chip2LiveStateDec>,<br><Chip1LiveStateHex>,<Chip2LiveStateHex> <CR> | ASCII |     |
|                                                                                                                        | TX                        | #1,GALSTATES<CR>                                                                                                                |       |     |
|                                                                                                                        | RX                        | #1,GALSTATES:27648,30720,0x6C00,0x7800<CR>                                                                                      |       |     |
|                                                                                                                        |                           | Actual live state of CHIP1:27648,0x6C00                                                                                         |       |     |
|                                                                                                                        |                           | Actual live state of CHIP2:30720,0x7800                                                                                         |       |     |

Returns the actual chip status of all chips.  
Each result bit stands for a different state:  
Bit 0: VI\_ERR\_CURR\_A: Status of channel A:Voltage or current error detected on Channel A. This bit is interpreted differently depending on which of the following IO function selected:  
Voltage output: short-circuit error. The error condition is debounced for 2 ms before the status bit is set.  
Current output: open circuit error. The error condition is debounced for 2 ms before the status bit is set.  
Current input, loop powered: short-circuit error. A short to ground is detected  
Current input, externally powered: short-circuit error. A current source >25 mA is detected  
Bit 1: VI\_ERR\_CURR\_B: Status of voltage input B. Same like VI\_ERR\_CURR\_A  
Bit 2: VI\_ERR\_CURR\_C: Status of voltage input C. Same like VI\_ERR\_CURR\_A  
Bit 3: VI\_ERR\_CURR\_D: Status of voltage input D. Same like VI\_ERR\_CURR\_A  
Bit 4: HI\_TEMP\_STATUS: If the die temperature is typically at or above 115°C, the HI\_TEMP\_STATUS bit is asserted  
Bit 5: CHARGE\_PUMP\_STATUS: Charge pump error detected.  
Bit 6: ALDO5V\_STATUS: ALDO5V Power Supply Monitor Error. This bit is asserted when the ALDO5V pin falls below 4.05 V. Usually ~5V.  
Bit 7: AVDD\_STATUS: AVDD Power Supply Monitor Error. This bit is asserted when the AVDD pin falls below 9.26 V. Usually ~17V.  
Bit 8: DVCC\_STATUS: DVCC Power Supply Monitor Error. This bit is asserted when the DVCC pin falls below 1.93 V. Usually ~3.3V.  
Bit 9: ALDO1V8\_STATUS: ALDO1V8 Power Supply Monitor Error. This bit is asserted when the ALDO1V8 pin falls below 1.35 V. Usually ~1.8V.  
Bit 10-12: ADC\_CH\_CURR: Current converted channel of the ADC (0:A, 1:B, 2:C, 3:D, 4:Diagnostic 0, 5:Diagnostic 1, 6:Diagnostic 2, 7:Diagnostic 3)  
Bit 13: ADC\_BUSY: ADC busy status bit.  
Bit 14: ADC\_DATA\_RDY:ADC data ready. The ADC\_DATA\_RDY bit asserts when a conversion cycle has completed. The bit stays asserted until a user writes 1 to clear the bit. In single conversion mode, the ADC\_RDY pin follows the ADC\_DATA\_RDY bit and only deasserts when the ADC\_DATA\_RDY bit is cleared. In continuous conversion mode, the ADC\_RDY pin returns high after 24 µs.  
Bit 15: RESERVED: Reserved

|                |                          |                                                                                                 |       |  |
|----------------|--------------------------|-------------------------------------------------------------------------------------------------|-------|--|
| GET LIVE STATE | ASCII<br>READ<br>COMMAND | #GLSTATE<CHIPNR> <CR><br>Result:<br>#GLSTATE<CHIPNR>:<ChipxLiveDataDec>,<ChipxLiveDataHex> <CR> | ASCII |  |
|                | CHIPNR                   | 1                                                                                               |       |  |
|                | TX                       | #1,GLSTATE1<CR>                                                                                 |       |  |
|                | RX                       | #1,GLSTATE4:29696,0x7400 <CR>                                                                   |       |  |
|                |                          | Actual live state of CHIP1:29696,0x7400                                                         |       |  |
|                |                          | Live state bit 0: VI_ERR_CURR_A:0                                                               |       |  |
|                |                          | Live state bit 1: VI_ERR_CURR_B:0                                                               |       |  |
|                |                          | Live state bit 2: VI_ERR_CURR_C:0                                                               |       |  |
|                |                          | Live state bit 3: VI_ERR_CURR_D:0                                                               |       |  |
|                |                          | Live state bit 4: HI_TEMP_STATUS:0                                                              |       |  |
|                |                          | Live state bit 5: CHARGE_PUMP_STATUS:0                                                          |       |  |
|                |                          | Live state bit 6: ALDO5V_STATUS:0                                                               |       |  |
|                |                          | Live state bit 7: AVDD_STATUS:0                                                                 |       |  |
|                |                          | Live state bit 8: DVCC_STATUS:0                                                                 |       |  |
|                |                          | Live state bit 9: ALDO1V8_STATUS:0                                                              |       |  |
|                |                          | Live state bit 10-12: ADC_CH_CURR:5                                                             |       |  |
|                |                          | Live state bit 13: ADC_BUSY:1                                                                   |       |  |
|                |                          | Live state bit 14: ADC_DATA_RDY:0                                                               |       |  |
|                |                          | Live state bit 15: RESERVED:0                                                                   |       |  |

Returns the actual chip status of chip <CHIPNR>  
Each result bit stands for a different state:  
Bit 0: VI\_ERR\_CURR\_A: Status of channel A:Voltage or current error detected on Channel A. This bit is interpreted differently depending on which of the following IO function selected:  
Voltage output: short-circuit error. The error condition is debounced for 2 ms before the status bit is set.  
Current output: open circuit error. The error condition is debounced for 2 ms before the status bit is set.  
Current input, loop powered: short-circuit error. A short to ground is detected  
Current input, externally powered: short-circuit error. A current source >25 mA is detected  
Bit 1: VI\_ERR\_CURR\_B: Status of voltage input B. Same like VI\_ERR\_CURR\_A  
Bit 2: VI\_ERR\_CURR\_C: Status of voltage input C. Same like VI\_ERR\_CURR\_A  
Bit 3: VI\_ERR\_CURR\_D: Status of voltage input D. Same like VI\_ERR\_CURR\_A  
Bit 4: HI\_TEMP\_STATUS: If the die temperature is typically at or above 115°C, the HI\_TEMP\_STATUS bit is asserted  
Bit 5: CHARGE\_PUMP\_STATUS: Charge pump error detected.  
Bit 6: ALDO5V\_STATUS: ALDO5V Power Supply Monitor Error. This bit is asserted when the ALDO5V pin falls below 4.05 V. Usually ~5V.  
Bit 7: AVDD\_STATUS: AVDD Power Supply Monitor Error. This bit is asserted when the AVDD pin falls below 9.26 V. Usually ~17V.  
Bit 8: DVCC\_STATUS: DVCC Power Supply Monitor Error. This bit is asserted when the DVCC pin falls below 1.93 V. Usually ~3.3V.  
Bit 9: ALDO1V8\_STATUS: ALDO1V8 Power Supply Monitor Error. This bit is asserted when the ALDO1V8 pin falls below 1.35 V. Usually ~1.8V.  
Bit 10-12: ADC\_CH\_CURR: Current converted channel of the ADC (0:A, 1:B, 2:C, 3:D, 4:Diagnostic 0, 5:Diagnostic 1, 6:Diagnostic 2, 7:Diagnostic 3)  
Bit 13: ADC\_BUSY: ADC busy status bit.  
Bit 14: ADC\_DATA\_RDY:ADC data ready. The ADC\_DATA\_RDY bit asserts when a conversion cycle has completed. The bit stays asserted until a user writes 1 to clear the bit. In single conversion mode, the ADC\_RDY pin follows the ADC\_DATA\_RDY bit and only deasserts when the ADC\_DATA\_RDY bit is cleared. In continuous conversion mode, the ADC\_RDY pin returns high after 24 µs.  
Bit 15: RESERVED: Reserved

|                      |                          |                                                                                                                                     |       |  |
|----------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------|--|
| GET ALL ALERT STATES | ASCII<br>READ<br>COMMAND | #GAASTATES<CR><br>Result:<br>#GAASTATES:<Chip1AlertStateDec>,<Chip2AlertStateDec>,<br><Chip1AlertStateHex>,<Chip2AlertStateHex><CR> | ASCII |  |
|                      | TX                       | #1,GAASTATES<CR>                                                                                                                    |       |  |
|                      | RX                       | #1,GAASTATES:33792,33792,0x8400,0x8400<CR>                                                                                          |       |  |
|                      |                          | Actual alert state of CHIP1:33792,0x8400                                                                                            |       |  |
|                      |                          | Actual alert state of CHIP2:33792,0x8400                                                                                            |       |  |

Returns the actual alert states for all chips.  
Each result bit stands for a different state:  
Bit 0: VI\_ERR\_CURR\_A: Status of channel A:Voltage or current error detected on Channel A. This bit is interpreted differently depending on which of the following IO function selected:  
Voltage output: short-circuit error. The error condition is debounced for 2 ms before the status bit is set.  
Current output: open circuit error. The error condition is debounced for 2 ms before the status bit is set.  
Current input, loop powered: short-circuit error. A short to ground is detected  
Current input, externally powered: short-circuit error. A current source >25 mA is detected  
Bit 1: VI\_ERR\_CURR\_B: Status of voltage input B. Same like VI\_ERR\_CURR\_A  
Bit 2: VI\_ERR\_CURR\_C: Status of voltage input C. Same like VI\_ERR\_CURR\_A  
Bit 3: VI\_ERR\_CURR\_D: Status of voltage input D. Same like VI\_ERR\_CURR\_A  
Bit 4: HI\_TEMP\_STATUS: If the die temperature is typically at or above 115°C, the HI\_TEMP\_STATUS bit is asserted  
Bit 5: CHARGE\_PUMP\_STATUS: Charge pump error detected.  
Bit 6: ALDO5V\_STATUS: ALDO5V Power Supply Monitor Error. This bit is asserted when the ALDO5V pin falls below 4.05 V. Usually ~5V.  
Bit 7: AVDD\_STATUS: AVDD Power Supply Monitor Error. This bit is asserted when the AVDD pin falls below 9.26 V. Usually ~17V.  
Bit 8: DVCC\_STATUS: DVCC Power Supply Monitor Error. This bit is asserted when the DVCC pin falls below 1.93 V. Usually ~3.3V.  
Bit 9: ALDO1V8\_STATUS: ALDO1V8 Power Supply Monitor Error. This bit is asserted when the ALDO1V8 pin falls below 1.35 V. Usually ~1.8V.  
Bit 10: ADC\_CONV\_ERR: ADC Conversion Error. ADC results may be outside the selected measurement range.  
Bit 11: ADC\_SAT\_ERR: ADC Saturation Error. ADC may be outside the user selected measurement range.  
Bit 12: SPI\_SCLK\_CNT\_ERR: SPI SCLK count error detected. This bit is asserted if an SPI command is applied but 32 SCLKs are not provided.  
Bit 13: SPI\_CRC\_ERR: SPI CRC error detected. This bit is asserted if an invalid CRC is received.  
Bit 14: CAL\_MEM\_ERR: Calibration Memory Error. This flag asserts under the following two conditions: When a calibration memory CRC error or an uncorrectable error correcting code (ECC) error is detected on the calibration memory upload. It is not possible to clear this bit if there is a CRC error or uncorrectable ECC error. It is recommended to reset the device and check the supplies in this situation. When there is an attempted SPI access to a register before the calibration memory refresh is complete. Do not address the device until the calibration memory is refreshed. Writing 1 to this bit clears the flag, if the flag is asserted due to this condition.  
Bit 15: RESET\_OCCURRED: Reset occurred. This bit is asserted after a reset event, which asserts the ALERT pin after the reset. Write a 1 to this bit to clear the flag. Note that a mask bit is not provided for this bit.

|                 |                          |                                                                           |       |  |
|-----------------|--------------------------|---------------------------------------------------------------------------|-------|--|
| GET ALERT STATE | ASCII<br>READ<br>COMMAND | #GASTATE<CHIPNR><CR><br>Result:<br>#GASTATE<CHIPNR>:<ChipxAlertState><CR> | ASCII |  |
|                 | CHIPNR                   | 1                                                                         |       |  |
|                 | TX                       | #1,GASTATE1<CR>                                                           |       |  |
|                 | RX                       | #1,GASTATE4:33792,0x8400<CR>                                              |       |  |
|                 |                          | Actual alert state of CHIP1:33792,0x8400                                  |       |  |
|                 |                          | Alert state bit 0: VI_ERR_A:0                                             |       |  |
|                 |                          | Alert state bit 1: VI_ERR_B:0                                             |       |  |
|                 |                          | Alert state bit 2: VI_ERR_C:0                                             |       |  |
|                 |                          | Alert state bit 3: VI_ERR_D:0                                             |       |  |
|                 |                          | Alert state bit 4: HI_TEMP_ERR:0                                          |       |  |
|                 |                          | Alert state bit 5: CHARGE_PUMP_ERR:0                                      |       |  |
|                 |                          | Alert state bit 6: ALDO5V_ERR:0                                           |       |  |
|                 |                          | Alert state bit 7: AVDD_ERR:0                                             |       |  |
|                 |                          | Alert state bit 8: DVCC_ERR:0                                             |       |  |
|                 |                          | Alert state bit 9: ALDO1V8_ERR:0                                          |       |  |
|                 |                          | Alert state bit 10: ADC_CONV_ERR:1                                        |       |  |
|                 |                          | Alert state bit 11: ADC_SAT_ERR:0                                         |       |  |
|                 |                          | Alert state bit 12: SPI_SCLK_CNT_ERR:0                                    |       |  |
|                 |                          | Alert state bit 13: SPI_CRC_ERR:0                                         |       |  |
|                 |                          | Alert state bit 14: CAL_MEM_ERR:0                                         |       |  |
|                 |                          | Alert state bit 15: RESET OCCURED:0                                       |       |  |

Returns the actual alert states for chip <CHIPNR>.

Each result bit stands for a different state:

Bit 0: VI\_ERR\_CURR\_A: Status of channel A:Voltage or current error detected on Channel A. This bit is interpreted differently depending on which of the following IO function selected:  
Voltage output: short-circuit error. The error condition is debounced for 2 ms before the status bit is set.  
Current output: open circuit error. The error condition is debounced for 2 ms before the status bit is set.  
Current input, loop powered: short-circuit error. A short to ground is detected  
Current input, externally powered: short-circuit error. A current source >25 mA is detected

Bit 1: VI\_ERR\_CURR\_B: Status of voltage input B. Same like VI\_ERR\_CURR\_A

Bit 2: VI\_ERR\_CURR\_C: Status of voltage input C. Same like VI\_ERR\_CURR\_A

Bit 3: VI\_ERR\_CURR\_D: Status of voltage input D. Same like VI\_ERR\_CURR\_A

Bit 4: HI\_TEMP\_STATUS: If the die temperature is typically at or above 115°C, the HI\_TEMP\_STATUS bit is asserted

Bit 5: CHARGE\_PUMP\_STATUS: Charge pump error detected.

Bit 6: ALDO5V\_STATUS: ALDO5V Power Supply Monitor Error. This bit is asserted when the ALDO5V pin falls below 4.05 V. Usually ~5V.

Bit 7: AVDD\_STATUS: AVDD Power Supply Monitor Error. This bit is asserted when the AVDD pin falls below 9.26 V. Usually ~17V.

Bit 8: DVCC\_STATUS: DVCC Power Supply Monitor Error. This bit is asserted when the DVCC pin falls below 1.93 V. Usually ~3.3V.

Bit 9: ALDO1V8\_STATUS: ALDO1V8 Power Supply Monitor Error. This bit is asserted when the ALDO1V8 pin falls below 1.35 V. Usually ~1.8V.

Bit 10: ADC\_CONV\_ERR: ADC Conversion Error. ADC results may be outside the selected measurement range.

Bit 11: ADC\_SAT\_ERR: ADC Saturation Error. ADC may be outside the user selected measurement range.

Bit 12: SPI\_SCLK\_CNT\_ERR: SPI SCLK count error detected. This bit is asserted if an SPI command is applied but 32 SCLKs are not provided.

Bit 13: SPI\_CRC\_ERR: SPI CRC error detected. This bit is asserted if an invalid CRC is received.

Bit 14: CAL\_MEM\_ERR: Calibration Memory Error. This flag asserts under the following two conditions: When a calibration memory CRC error or an uncorrectable error correcting code (ECC) error is detected on the calibration memory upload. It is not possible to clear this bit if there is a CRC error or uncorrectable ECC error. It is recommended to reset the device and check the supplies in this situation. When there is an attempted SPI access to a register before the calibration memory refresh is complete. Do not address the device until the calibration memory is refreshed. Writing 1 to this bit clears the flag, if the flag is asserted due to this condition.

Bit 15: RESET\_OCCURRED: Reset occurred. This bit is asserted after a reset event, which asserts the ALERT pin after the reset. Write a 1 to this bit to clear the flag. Note that a mask bit is not provided for this bit.

|                   |                           |                                                          |       |     |
|-------------------|---------------------------|----------------------------------------------------------|-------|-----|
| CLEAR ALERT STATE | ASCII<br>WRITE<br>COMMAND | #CALERTS<CHIPNR>:<AlertState> <CR><br>Result:<br>#OK<CR> | ASCII | YES |
|                   | CHIPNR                    | 1                                                        |       |     |
|                   | Bit 0                     | 1:RESET FLAG0:VI_ERR_A                                   |       |     |
|                   | Bit 1                     | 1:RESET FLAG1:VI_ERR_B                                   |       |     |
|                   | Bit 2                     | 1:RESET FLAG2:VI_ERR_C                                   |       |     |
|                   | Bit 3                     | 1:RESET FLAG3:VI_ERR_D                                   |       |     |
|                   | Bit 4                     | 1:RESET FLAG4:HI_TEMP_ERR                                |       |     |
|                   | Bit 5                     | 1:RESET FLAG5:CHARGE_PUMP_ERR                            |       |     |
|                   | Bit 6                     | 1:RESET FLAG6:ALDO5V_ERR                                 |       |     |
|                   | Bit 7                     | 1:RESET FLAG7:AVDD_ERR                                   |       |     |
|                   | Bit 8                     | 1:RESET FLAG8:DVCC_ERR                                   |       |     |
|                   | Bit 9                     | 1:RESET FLAG9:ALDO1V8_ERR                                |       |     |
|                   | Bit 10                    | 1:RESET FLAG10:ADC_CONV_ERR                              |       |     |
|                   | Bit 11                    | 1:RESET FLAG11:ADC_SAT_ERR                               |       |     |
|                   | Bit 12                    | 1:RESET FLAG12:SPI_SCLK_ERR                              |       |     |
|                   | Bit 13                    | 1:RESET FLAG13:SPI_CRC_ERR                               |       |     |
|                   | Bit 14                    | 1:RESET FLAG14:CAL_MEM_ERR                               |       |     |
|                   | Bit 15                    | 1:RESET FLAG15:RESET_OCCURED                             |       |     |
|                   | TX                        | #1,CALERTS1:65535<CR>                                    |       |     |
|                   | RX                        | N/A                                                      |       |     |

With this command you can reset individual alert bits in the alert status register

| CHIP TEMPERATURES                                                              |                          |                                                                                         |       |  |
|--------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------------|-------|--|
| GET CHIP TEMPERATURES                                                          | ASCII<br>READ<br>COMMAND | #GCHIPTemps<CR><br>Result:<br>#GCHIPTemps:<Chip1TempDbl>,<Chip2TempDbl><CR>             | ASCII |  |
|                                                                                | TX                       | #1,GCHIPTemps<CR>                                                                       |       |  |
|                                                                                | RX                       | #1,GCHIPTemps:46.37,47.49<CR>                                                           |       |  |
|                                                                                |                          | Actual temperature of CHIP1:46.37°C                                                     |       |  |
|                                                                                |                          | Actual temperature of CHIP2:47.49°C                                                     |       |  |
| This command returns for every AIOX chip the actual chip temperature in °C     |                          |                                                                                         |       |  |
| GET CHIP TEMPERATURE                                                           | ASCII<br>READ<br>COMMAND | #GCHIPTemp<CHIPNR><CR><br>Result:<br>#GCHIPTemp<CHIPNR>:<ChipxTempDbl><CR>              | ASCII |  |
|                                                                                | CHIPNR                   | 1                                                                                       |       |  |
|                                                                                | TX                       | #1,GCHIPTemp1<CR>                                                                       |       |  |
|                                                                                | RX                       | #1,GCHIPTemp1:46.37<CR>                                                                 |       |  |
|                                                                                |                          | Actual temperature of CHIP1:46.37°C                                                     |       |  |
| This command returns for AIOX chip <CHIPNR> the actual chip temperature in °C  |                          |                                                                                         |       |  |
| AVERAGE CHIP TEMPERATURES                                                      |                          |                                                                                         |       |  |
| GET AVERAGE CHIP TEMPERATURES                                                  | ASCII<br>READ<br>COMMAND | #GAVGCHIPTemps<CR><br>Result:<br>#GAVGCHIPTemps:<Chip1AvgTempDbl>,<Chip2AvgTempDbl><CR> | ASCII |  |
|                                                                                | TX                       | #1,GAVGCHIPTemps<CR>                                                                    |       |  |
|                                                                                | RX                       | #1,GAVGCHIPTemps:46.36,47.47<CR>                                                        |       |  |
|                                                                                |                          | Average temperature of CHIP1:46.36°C                                                    |       |  |
|                                                                                |                          | Average temperature of CHIP2:47.47°C                                                    |       |  |
| This command returns for every AIOX chip the average chip temperature in °C    |                          |                                                                                         |       |  |
| GET AVERAGE CHIP TEMPERATURE                                                   | ASCII<br>READ<br>COMMAND | #GAVGCHIPTemp<CHIPNR><CR><br>Result:<br>#GAVGCHIPTemp<CHIPNR>:<ChipxAvgTempDbl><CR>     | ASCII |  |
|                                                                                | CHIPNR                   | 1                                                                                       |       |  |
|                                                                                | TX                       | #1,GAVGCHIPTemp1<CR>                                                                    |       |  |
|                                                                                | RX                       | #1,GAVGCHIPTemp1:46.36<CR>                                                              |       |  |
|                                                                                |                          | Average temperature of CHIP1:46.36°C                                                    |       |  |
| This command returns for AIOX chip <CHIPNR> the average chip temperature in °C |                          |                                                                                         |       |  |
| CHIP SUPPLY VOLTAGES                                                           |                          |                                                                                         |       |  |
| GET SUPPLY VOLTAGES                                                            | ASCII<br>READ<br>COMMAND | #GVAVDDS<CR><br>Result:<br>#GVAVDDS:<Chip1VAVDDDBl>,<Chip2VAVDDDBl><CR>                 | ASCII |  |
|                                                                                | TX                       | #1,GVAVDDS<CR>                                                                          |       |  |
|                                                                                | RX                       | #1,GVAVDDS:14.61,14.62<CR>                                                              |       |  |
|                                                                                |                          | Actual supply voltage of CHIP1:14.61V                                                   |       |  |
|                                                                                |                          | Actual supply voltage of CHIP2:14.62V                                                   |       |  |

This command returns for every AIOX chip the actual supply voltage in Volts.  
This must be >14.5V, if not, there is a severe wiring or other hardware issue!

|                    |                          |                                                                      |       |  |
|--------------------|--------------------------|----------------------------------------------------------------------|-------|--|
| GET SUPPLY VOLTAGE | ASCII<br>READ<br>COMMAND | #GVAVDD<CHIPNR> <CR><br>Result:<br>#GVAVDD<CHIPNR>:<ChipxVAVDD> <CR> | ASCII |  |
|                    | CHIPNR                   | 1                                                                    |       |  |
|                    | TX                       | #1,GVAVDD1<CR>                                                       |       |  |
|                    | RX                       | #1,GVAVDD1:14.61<CR>                                                 |       |  |
|                    |                          | Actual supply voltage of CHIP1:14.61V                                |       |  |

This command returns for AIOX chip <CHIPNR> the actual supply voltage in Volts.  
This must be >14.5V, if not, there is a severe wiring or other hardware issue!

**AVERAGE CHIP SUPPLY VOLTAGES**

|                                |                          |                                                                                      |       |  |
|--------------------------------|--------------------------|--------------------------------------------------------------------------------------|-------|--|
| GET AVERAGE<br>SUPPLY VOLTAGES | ASCII<br>READ<br>COMMAND | #GAVGVAVDDS<CR><br>Result:<br>#GAVGVAVDDS:<Chip1AvgVAVDDDBl>,<Chip2AvgVAVDDDBl> <CR> | ASCII |  |
|                                | TX                       | #1,GAVGVAVDDS<CR>                                                                    |       |  |
|                                | RX                       | #1,GAVGVAVDDS:14.61,14.60<CR>                                                        |       |  |
|                                |                          | Average supply voltage of CHIP1:14.61V                                               |       |  |
|                                |                          | Average supply voltage of CHIP2:14.60V                                               |       |  |

This command returns for every AIOX chip the average supply voltage in Volts.  
This must be >14.5V, if not, there is a severe wiring or other hardware issue!

|                               |                          |                                                                               |       |  |
|-------------------------------|--------------------------|-------------------------------------------------------------------------------|-------|--|
| GET AVERAGE<br>SUPPLY VOLTAGE | ASCII<br>READ<br>COMMAND | #GAVGVAVDD<CHIPNR> <CR><br>Result:<br>#GAVGVAVDD<CHIPNR>:<ChipxAvgVAVDD> <CR> | ASCII |  |
|                               | CHIPNR                   | 1                                                                             |       |  |
|                               | TX                       | #1,GAVGVAVDD1<CR>                                                             |       |  |
|                               | RX                       | #1,GAVGVAVDD1:14.61<CR>                                                       |       |  |
|                               |                          | Average supply voltage of CHIP1:14.61V                                        |       |  |

This command returns for AIOX chip <CHIPNR> the average supply voltage in Volts.  
This must be >14.5V, if not, there is a severe wiring or other hardware issue!

**CHIP GROUND VOLTAGES**

|                     |                          |                                                                          |       |  |
|---------------------|--------------------------|--------------------------------------------------------------------------|-------|--|
| GET GROUND VOLTAGES | ASCII<br>READ<br>COMMAND | #GVAGNDS<CR><br>Result:<br>#GVAGNDS:<Chip1VAGNDDbl>,<Chip2VAGNDDbl> <CR> | ASCII |  |
|                     | TX                       | #1,GVAGNDS<CR>                                                           |       |  |
|                     | RX                       | #1,GVAGNDS:0.00,0.00<CR>                                                 |       |  |
|                     |                          | Actual ground voltage of CHIP1:0.00V                                     |       |  |
|                     |                          | Actual ground voltage of CHIP2:0.00V                                     |       |  |

This command returns for every AIOX chip the actual ground voltage in Volts.  
This must be 0, if not, there is a severe wiring or other hardware issue!

|                    |                          |                                                                         |       |  |
|--------------------|--------------------------|-------------------------------------------------------------------------|-------|--|
| GET GROUND VOLTAGE | ASCII<br>READ<br>COMMAND | #GVAGND<CHIPNR> <CR><br>Result:<br>#GVAGND<CHIPNR>:<ChipxVAGNDDbl> <CR> | ASCII |  |
|                    | CHIPNR                   | 1                                                                       |       |  |

|                                                                                                                                                               |                          |                                                                                     |       |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------|-------|--|
|                                                                                                                                                               | TX                       | #1,GVAGND1<CR>                                                                      |       |  |
|                                                                                                                                                               | RX                       | #1,GVAGND1:0.00<CR>                                                                 |       |  |
|                                                                                                                                                               |                          | Actual ground voltage of CHIP1:0.00V                                                |       |  |
| This command returns for AIOX chip <CHIPNR> the actual ground voltage in Volts.<br>This must be 0, if not, there is a severe wiring or other hardware issue!  |                          |                                                                                     |       |  |
| <b>AVERAGE CHIP GROUND VOLTAGES</b>                                                                                                                           |                          |                                                                                     |       |  |
| GET AVERAGE<br>GROUND VOLTAGES                                                                                                                                | ASCII<br>READ<br>COMMAND | #GAVGVAGNDS<CR><br>Result:<br>#GAVGVAGNDS:<Chip1AvgVAGNDDbl>,<Chip2AvgVAGNDDbl><CR> | ASCII |  |
|                                                                                                                                                               | TX                       | #1,GAVGVAGNDS<CR>                                                                   |       |  |
|                                                                                                                                                               | RX                       | #1,GAVGVAGNDS:0.00,0.00<CR>                                                         |       |  |
|                                                                                                                                                               |                          | Average ground voltage of CHIP1:0.00V                                               |       |  |
|                                                                                                                                                               |                          | Average ground voltage of CHIP2:0.00V                                               |       |  |
| This command returns for every AIOX chip the average ground voltage in Volts.<br>This must be 0, if not, there is a severe wiring or other hardware issue!    |                          |                                                                                     |       |  |
| GET AVERAGE<br>GROUND VOLTAGE                                                                                                                                 | ASCII<br>READ<br>COMMAND | #GAVGVAGND<CHIPNR><CR><br>Result:<br>#GAVGVAGND<CHIPNR>:<ChipxAvgVAVGNDDbl><CR>     | ASCII |  |
|                                                                                                                                                               | CHIPNR                   | 1                                                                                   |       |  |
|                                                                                                                                                               | TX                       | #1,GAVGVAGND1<CR>                                                                   |       |  |
|                                                                                                                                                               | RX                       | #1,GAVGVAGND1:0.00<CR>                                                              |       |  |
|                                                                                                                                                               |                          | Average ground voltage of CHIP1:0.00V                                               |       |  |
| This command returns for AIOX chip <CHIPNR> the average ground voltage in Volts.<br>This must be 0, if not, there is a severe wiring or other hardware issue! |                          |                                                                                     |       |  |

| Register NAME<br>Command NAME                                                                                                                                                                                                                                                                                     | MODBUS<br>Register<br>ASCII<br>Command | Register VALUE<br>ASCII Command                                                                                                                            | NEW REAL<br>VALUE | NEW<br>VALUE | DATA TYPE | DO<br>WRITE |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------|-----------|-------------|
| <b>ASCII COMMANDS</b>                                                                                                                                                                                                                                                                                             |                                        |                                                                                                                                                            |                   |              |           |             |
| SET CONFIG OUTPUT VALUES                                                                                                                                                                                                                                                                                          | ASCII<br>WRITE<br>COMMAND              | #SCFGOVs:<IO1CfgValDbI>,<IO2CfgValDbI>,<IO3CfgValDbI>,<IO4CfgValDbI>,<IO5CfgValDbI>,<IO6CfgValDbI>,<IO7CfgValDbI>,<IO8CfgValDbI><CR><br>Result:<br>#OK<CR> |                   |              | ASCII     | YES         |
|                                                                                                                                                                                                                                                                                                                   | IO1Value                               | ,000                                                                                                                                                       |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   | IO2Value                               | ,000                                                                                                                                                       |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   | IO3Value                               | ,000                                                                                                                                                       |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   | IO4Value                               | ,000                                                                                                                                                       |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   | IO5Value                               | ,000                                                                                                                                                       |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   | IO6Value                               | ,000                                                                                                                                                       |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   | IO7Value                               | ,000                                                                                                                                                       |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   | IO8Value                               | ,000                                                                                                                                                       |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   | TX                                     | #1,SCFGOVs:0,0,0,0,0,0,0,0<CR>                                                                                                                             |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   | RX                                     | N/A                                                                                                                                                        |                   |              |           |             |
| This command sets for all outputs the standard value in Volt or in mA, which are used when the controller is restartet or performing a watchdog reset and the channel is used as voltage output or current output.<br>For voltage outputs the range is 0 to 11,0V.<br>For current outputs the range is 0 to 25mA. |                                        |                                                                                                                                                            |                   |              |           |             |
| SET CONFIG OUTPUT VALUEx                                                                                                                                                                                                                                                                                          | ASCII<br>WRITE<br>COMMAND              | #SCFGOV<IONR>:<IOxCfgValueDbI><CR><br>Result:<br>#OK<CR>                                                                                                   |                   |              | ASCII     | YES         |
|                                                                                                                                                                                                                                                                                                                   | IONR                                   | 1                                                                                                                                                          |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   | IOxCfgValue                            | ,000                                                                                                                                                       |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   | TX                                     | #1,SCFGOV1:0<CR>                                                                                                                                           |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   | RX                                     | N/A                                                                                                                                                        |                   |              |           |             |
| This command sets for one outputs the standard value in Volt or in mA, which is used when the controller is restartet and the channel is used as voltage output or current output.<br>For voltage outputs the range is 0 to 11,0V.<br>For current outputs the range is 0 to 25mA.                                 |                                        |                                                                                                                                                            |                   |              |           |             |
| GET CONFIG OUTPUT VALUES                                                                                                                                                                                                                                                                                          | ASCII<br>READ<br>COMMAND               | #GCFGOVs<CR><br>Result:<br>#GCFGOVs:<IOVolt1DbI>,<IOVolt2DbI>,...,<IOVolt8DbI><CR>                                                                         |                   |              | ASCII     |             |
|                                                                                                                                                                                                                                                                                                                   | TX                                     | #1,GCFGOVs<CR>                                                                                                                                             |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   | RX                                     | #1,GCFGOVs:999.99,999.99,999.99,999.99,999.99,999.99,999.99,999.99<CR>                                                                                     |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   |                                        | Actual config value on IO1:999.99V or mA                                                                                                                   |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   |                                        | Actual config value on IO2:999.99V or mA                                                                                                                   |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   |                                        | Actual config value on IO3:999.99V or mA                                                                                                                   |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   |                                        | Actual config value on IO4:999.99V or mA                                                                                                                   |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   |                                        | Actual config value on IO5:999.99V or mA                                                                                                                   |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   |                                        | Actual config value on IO6:999.99V or mA                                                                                                                   |                   |              |           |             |
|                                                                                                                                                                                                                                                                                                                   |                                        | Actual config value on IO7:999.99V or mA                                                                                                                   |                   |              |           |             |

|                                                                                                                                                                                                                                                                                           |                           |                                                                 |       |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------------------------------------------------------|-------|----|
|                                                                                                                                                                                                                                                                                           |                           | Actual config value on IO8:999.99V or mA                        |       |    |
| <div>This command shows for all channels the current saved startup values for use as voltage or current outputs<br/>For voltage outputs the range is 0 to 11,0V.<br/>For current outputs the range is 0 to 25mA.</div> <div>All IOs with a different usage type will return 999.99.</div> |                           |                                                                 |       |    |
| GET CONFIG OUTPUT VALUE                                                                                                                                                                                                                                                                   | ASCII<br>READ<br>COMMAND  | #GCFGOV<IONR><CR><br>Result:<br>#GCFGOV<IONR>:<IOxValueDbl><CR> | ASCII |    |
|                                                                                                                                                                                                                                                                                           | IONR                      | 1                                                               |       |    |
|                                                                                                                                                                                                                                                                                           | TX                        | #1,GCFGOV1<CR>                                                  |       |    |
|                                                                                                                                                                                                                                                                                           | RX                        | #1,GCFGOV1:999.99<CR>                                           |       |    |
|                                                                                                                                                                                                                                                                                           |                           | Actual config value on IO1:999.99V or mA                        |       |    |
| <div>This command shows for one channel the current saved startup value for use as voltage or current output.<br/>For voltage outputs the range is 0 to 11,0V.<br/>For current outputs the range is 0 to 25mA.</div> <div>All IOs with a different usage type will return 999.99.</div>   |                           |                                                                 |       |    |
| RESET 16AIOXCPU                                                                                                                                                                                                                                                                           | ASCII<br>WRITE<br>COMMAND | #R16AIOXCPU<CR><br>Result:<br>#OK<CR>                           | ASCII | NO |
|                                                                                                                                                                                                                                                                                           | TX                        | #1,R16AIOXCPU<CR>                                               |       |    |
|                                                                                                                                                                                                                                                                                           | RX                        | N/A                                                             |       |    |
| This command restarts the internal CPU of the 16AIOX addon print. All channels will be resetted & initialized completely                                                                                                                                                                  |                           |                                                                 |       |    |

| Register NAME<br>Command NAME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MODBUS<br>Register<br>ASCII<br>Command | Register VALUE<br>ASCII Command | NEW REAL<br>VALUE | NEW<br>VALUE                 | DATA TYPE     | DO<br>WRITE |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------------------------|-------------------|------------------------------|---------------|-------------|
| AIOX IO TYPES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                        |                                 |                   |                              |               |             |
| IO TYPE1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3x40001<br>4x40001<br>I:40000          | 0,0x0000<br>B:00 00             |                   | 13:RTDI[OHM]                 | UINT16<br>R/W | YES         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        | Actual IO type of AIOx:0:UU     |                   | CHOOSE NEW IO TYPE FROM LIST |               |             |
| Current configured IO type for AIOXx<br>=0: UNUSED<br>=1: VOLTAGE INPUT[0-10V]<br>=2: VOLTAGE INPUT[2-10V]<br>=3: VOLTAGE OUTPUT[0-10V]<br>=4: VOLTAGE OUTPUT[2-10V]<br>=5: CURRENT INPUT LOOP POWERED[0-20mA]<br>=6: CURRENT INPUT LOOP POWERED[4-20mA]<br>=7: CURRENT INPUT EXTERNAL POWERED[0-20mA]<br>=8: CURRENT INPUT EXTERNAL POWERED[4-20mA]<br>=9: CURRENT OUTPUT[0-20mA]<br>=10: CURRENT OUTPUT[4-20mA]<br>=11: DIGITAL INPUT LOGIC 24V=<br>=12: DIGITAL INPUT LOOP POWERED<br>=13: RESISTANCE MEASUREMENT |                                        |                                 |                   |                              |               |             |
| HINT: The last IO type is automatically stored in FRAM and will be used after a system restart.                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                 |                   |                              |               |             |
| IO TYPE2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3x40002<br>4x40002<br>I:40001          | 0,0x0000<br>B:00 00             |                   | 12:DI[24V;LP]                | UINT16<br>R/W | YES         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        | Actual IO type of AIOx:0:UU     |                   | CHOOSE NEW IO TYPE FROM LIST |               |             |
| IO TYPE3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3x40003<br>4x40003<br>I:40002          | 0,0x0000<br>B:00 00             |                   | 1:VI[0-10V]                  | UINT16<br>R/W | NO          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        | Actual IO type of AIOx:0:UU     |                   | CHOOSE NEW IO TYPE FROM LIST |               |             |
| IO TYPE4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3x40004<br>4x40004<br>I:40003          | 0,0x0000<br>B:00 00             |                   | 1:VI[0-10V]                  | UINT16<br>R/W | NO          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        | Actual IO type of AIOx:0:UU     |                   | CHOOSE NEW IO TYPE FROM LIST |               |             |
| IO TYPE5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3x40005<br>4x40005<br>I:40004          | 0,0x0000<br>B:00 00             |                   | 3:VO[0-10V]                  | UINT16<br>R/W | NO          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        | Actual IO type of AIOx:0:UU     |                   | CHOOSE NEW IO TYPE FROM LIST |               |             |
| IO TYPE6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3x40006<br>4x40006<br>I:40005          | 0,0x0000<br>B:00 00             |                   | 3:VO[0-10V]                  | UINT16<br>R/W | NO          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        | Actual IO type of AIOx:0:UU     |                   | CHOOSE NEW IO TYPE FROM LIST |               |             |

|                                                                                                                        |                               |                               |  |                              |               |    |
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| IO TYPE7                                                                                                               | 3x40007<br>4x40007<br>I:40006 | 0,0x0000<br>B:00 00           |  | 3:VO[0-10V]                  | UINT16<br>R/W | NO |
|                                                                                                                        |                               | Actual IO type of AIOx:0:UU   |  | CHOOSE NEW IO TYPE FROM LIST |               |    |
| IO TYPE8                                                                                                               | 3x40008<br>4x40008<br>I:40007 | 0,0x0000<br>B:00 00           |  | 3:VO[0-10V]                  | UINT16<br>R/W | NO |
|                                                                                                                        |                               | Actual IO type of AIOx:0:UU   |  | CHOOSE NEW IO TYPE FROM LIST |               |    |
| AIOX:VOLTAGE INPUTS                                                                                                    |                               |                               |  |                              |               |    |
| VOLTAGE INPUT1<br>IN VOLTS                                                                                             | 3x40009<br>4x40009<br>I:40008 | 65535,0xFFFF<br>B:FF FF       |  |                              | UINT16<br>R/O |    |
|                                                                                                                        |                               | Actual value of Vlx:65535=N/V |  |                              |               |    |
| Current value of voltage input in x*100V, range 0-10V<br>=65535,0xFFFF: The channel is not configured as voltage input |                               |                               |  |                              |               |    |
| VOLTAGE INPUT2<br>IN VOLTS                                                                                             | 3x40010<br>4x40010<br>I:40009 | 65535,0xFFFF<br>B:FF FF       |  |                              | UINT16<br>R/O |    |
|                                                                                                                        |                               | Actual value of Vlx:65535=N/V |  |                              |               |    |
| VOLTAGE INPUT3<br>IN VOLTS                                                                                             | 3x40011<br>4x40011<br>I:40010 | 65535,0xFFFF<br>B:FF FF       |  |                              | UINT16<br>R/O |    |
|                                                                                                                        |                               | Actual value of Vlx:65535=N/V |  |                              |               |    |
| VOLTAGE INPUT4<br>IN VOLTS                                                                                             | 3x40012<br>4x40012<br>I:40011 | 65535,0xFFFF<br>B:FF FF       |  |                              | UINT16<br>R/O |    |
|                                                                                                                        |                               | Actual value of Vlx:65535=N/V |  |                              |               |    |
| VOLTAGE INPUT5<br>IN VOLTS                                                                                             | 3x40013<br>4x40013<br>I:40012 | 65535,0xFFFF<br>B:FF FF       |  |                              | UINT16<br>R/O |    |
|                                                                                                                        |                               | Actual value of Vlx:65535=N/V |  |                              |               |    |
| VOLTAGE INPUT6<br>IN VOLTS                                                                                             | 3x40014<br>4x40014<br>I:40013 | 65535,0xFFFF<br>B:FF FF       |  |                              | UINT16<br>R/O |    |
|                                                                                                                        |                               | Actual value of Vlx:65535=N/V |  |                              |               |    |
| VOLTAGE INPUT7<br>IN VOLTS                                                                                             | 3x40015<br>4x40015<br>I:40014 | 65535,0xFFFF<br>B:FF FF       |  |                              | UINT16<br>R/O |    |
|                                                                                                                        |                               | Actual value of Vlx:65535=N/V |  |                              |               |    |
| VOLTAGE INPUT8<br>IN VOLTS                                                                                             | 3x40016<br>4x40016<br>I:40015 | 65535,0xFFFF<br>B:FF FF       |  |                              | UINT16<br>R/O |    |
|                                                                                                                        |                               | Actual value of Vlx:65535=N/V |  |                              |               |    |
| AIOX:VOLTAGE INPUTS                                                                                                    |                               |                               |  |                              |               |    |

|                                                                                                                          |                               |                               |      |    |                         |    |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------|------|----|-------------------------|----|
| VOLTAGE INPUT1<br>IN PERCENT                                                                                             | 3x40017<br>4x40017<br>I:40016 | 65535,0xFFFF<br>B:FF FF       |      |    | UINT16<br>R/O           |    |
|                                                                                                                          |                               | Actual value of Vlx:65535=N/V |      |    |                         |    |
| Current value of voltage input in x*100%, range 0-100%<br>=65535,0xFFFF: The channel is not configured as voltage input  |                               |                               |      |    |                         |    |
| VOLTAGE INPUT3<br>IN PERCENT                                                                                             | 3x40018<br>4x40018<br>I:40017 | 65535,0xFFFF<br>B:FF FF       |      |    | UINT16<br>R/O           |    |
|                                                                                                                          |                               | Actual value of Vlx:65535=N/V |      |    |                         |    |
| VOLTAGE INPUT3<br>IN PERCENT                                                                                             | 3x40019<br>4x40019<br>I:40018 | 65535,0xFFFF<br>B:FF FF       |      |    | UINT16<br>R/O           |    |
|                                                                                                                          |                               | Actual value of Vlx:65535=N/V |      |    |                         |    |
| VOLTAGE INPUT4<br>IN PERCENT                                                                                             | 3x40020<br>4x40020<br>I:40019 | 65535,0xFFFF<br>B:FF FF       |      |    | UINT16<br>R/O           |    |
|                                                                                                                          |                               | Actual value of Vlx:65535=N/V |      |    |                         |    |
| VOLTAGE INPUT5<br>IN PERCENT                                                                                             | 3x40021<br>4x40021<br>I:40020 | 65535,0xFFFF<br>B:FF FF       |      |    | UINT16<br>R/O           |    |
|                                                                                                                          |                               | Actual value of Vlx:65535=N/V |      |    |                         |    |
| VOLTAGE INPUT6<br>IN PERCENT                                                                                             | 3x40022<br>4x40022<br>I:40021 | 65535,0xFFFF<br>B:FF FF       |      |    | UINT16<br>R/O           |    |
|                                                                                                                          |                               | Actual value of Vlx:65535=N/V |      |    |                         |    |
| VOLTAGE INPUT7<br>IN PERCENT                                                                                             | 3x40023<br>4x40023<br>I:40022 | 65535,0xFFFF<br>B:FF FF       |      |    | UINT16<br>R/O           |    |
|                                                                                                                          |                               | Actual value of Vlx:65535=N/V |      |    |                         |    |
| VOLTAGE INPUT8<br>IN PERCENT                                                                                             | 3x40024<br>4x40024<br>I:40023 | 65535,0xFFFF<br>B:FF FF       |      |    | UINT16<br>R/O           |    |
|                                                                                                                          |                               | Actual value of Vlx:65535=N/V |      |    |                         |    |
| AIOX:VOLTAGE OUTPUTS                                                                                                     |                               |                               |      |    |                         |    |
| VOLTAGE OUTPUT1<br>IN VOLTS                                                                                              | 3x40025<br>4x40025<br>I:40024 | 65535,0xFFFF<br>B:FF FF       | 1100 | 11 | UINT16<br>R/W           | NO |
|                                                                                                                          |                               | Actual value of VOx:65535=N/V |      |    | ENTER NEW VALUE FOR VOx |    |
| Current value of voltage output in x*100V, range 0-11V<br>=65535,0xFFFF: The channel is not configured as voltage output |                               |                               |      |    |                         |    |
| Writing a new value onto this register sets voltage output x to a new output value in Volt                               |                               |                               |      |    |                         |    |

|                                                                                                                                      |                               |                               |       |                         |               |    |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------|-------|-------------------------|---------------|----|
| VOLTAGE OUTPUT2<br>IN VOLTS                                                                                                          | 3x40026<br>4x40026<br>I:40025 | 65535,0xFFFF<br>B:FF FF       | 1100  | 11                      | UINT16<br>R/W | NO |
|                                                                                                                                      |                               | Actual value of VOx:65535=N/V |       | ENTER NEW VALUE FOR VOx |               |    |
| VOLTAGE OUTPUT3<br>IN VOLTS                                                                                                          | 3x40027<br>4x40027<br>I:40026 | 65535,0xFFFF<br>B:FF FF       | 1100  | 11                      | UINT16<br>R/W | NO |
|                                                                                                                                      |                               | Actual value of VOx:65535=N/V |       | ENTER NEW VALUE FOR VOx |               |    |
| VOLTAGE OUTPUT4<br>IN VOLTS                                                                                                          | 3x40028<br>4x40028<br>I:40027 | 65535,0xFFFF<br>B:FF FF       | 1100  | 11                      | UINT16<br>R/W | NO |
|                                                                                                                                      |                               | Actual value of VOx:65535=N/V |       | ENTER NEW VALUE FOR VOx |               |    |
| VOLTAGE OUTPUT5<br>IN VOLTS                                                                                                          | 3x40029<br>4x40029<br>I:40028 | 65535,0xFFFF<br>B:FF FF       | 1100  | 11                      | UINT16<br>R/W | NO |
|                                                                                                                                      |                               | Actual value of VOx:65535=N/V |       | ENTER NEW VALUE FOR VOx |               |    |
| VOLTAGE OUTPUT6<br>IN VOLTS                                                                                                          | 3x40030<br>4x40030<br>I:40029 | 65535,0xFFFF<br>B:FF FF       | 1100  | 11                      | UINT16<br>R/W | NO |
|                                                                                                                                      |                               | Actual value of VOx:65535=N/V |       | ENTER NEW VALUE FOR VOx |               |    |
| VOLTAGE OUTPUT7<br>IN VOLTS                                                                                                          | 3x40031<br>4x40031<br>I:40030 | 65535,0xFFFF<br>B:FF FF       | 1100  | 11                      | UINT16<br>R/W | NO |
|                                                                                                                                      |                               | Actual value of VOx:65535=N/V |       | ENTER NEW VALUE FOR VOx |               |    |
| VOLTAGE OUTPUT8<br>IN VOLTS                                                                                                          | 3x40032<br>4x40032<br>I:40031 | 65535,0xFFFF<br>B:FF FF       | 1100  | 11                      | UINT16<br>R/W | NO |
|                                                                                                                                      |                               | Actual value of VOx:65535=N/V |       | ENTER NEW VALUE FOR VOx |               |    |
| AIOX:VOLTAGE OUTPUTS                                                                                                                 |                               |                               |       |                         |               |    |
| VOLTAGE OUTPUT1<br>IN PERCENT                                                                                                        | 3x40033<br>4x40033<br>I:40032 | 65535,0xFFFF<br>B:FF FF       | 11000 | 110                     | UINT16<br>R/W | NO |
|                                                                                                                                      |                               | Actual value of VOx:65535=N/V |       | ENTER NEW VALUE FOR VOx |               |    |
| Current value of voltage output in x*100%, range 0-110% (100%=10V)<br>=65535,0xFFFF: The channel is not configured as voltage output |                               |                               |       |                         |               |    |
| Writing a new value onto this register sets voltage output x to a new output value in percent                                        |                               |                               |       |                         |               |    |
| VOLTAGE OUTPUT2<br>IN PERCENT                                                                                                        | 3x40034<br>4x40034<br>I:40033 | 65535,0xFFFF<br>B:FF FF       | 5000  | 50                      | UINT16<br>R/W | NO |
|                                                                                                                                      |                               | Actual value of VOx:65535=N/V |       | ENTER NEW VALUE FOR VOx |               |    |
| VOLTAGE OUTPUT3<br>IN PERCENT                                                                                                        | 3x40035<br>4x40035<br>I:40034 | 65535,0xFFFF<br>B:FF FF       | 3000  | 30                      | UINT16<br>R/W | NO |
|                                                                                                                                      |                               | Actual value of VOx:65535=N/V |       | ENTER NEW VALUE FOR VOx |               |    |

|                                                                                                                                                             |                               |                                                  |      |                         |               |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------|------|-------------------------|---------------|----|
| VOLTAGE OUTPUT4<br>IN PERCENT                                                                                                                               | 3x40036<br>4x40036<br>I:40035 | 65535,0xFFFF<br>B:FF FF                          | 7500 | 75                      | UINT16<br>R/W | NO |
|                                                                                                                                                             |                               | Actual value of VOx:65535=N/V                    |      | ENTER NEW VALUE FOR VOx |               |    |
| VOLTAGE OUTPUT5<br>IN PERCENT                                                                                                                               | 3x40037<br>4x40037<br>I:40036 | 65535,0xFFFF<br>B:FF FF                          | 0    | 0                       | UINT16<br>R/W | NO |
|                                                                                                                                                             |                               | Actual value of VOx:65535=N/V                    |      | ENTER NEW VALUE FOR VOx |               |    |
| VOLTAGE OUTPUT6<br>IN PERCENT                                                                                                                               | 3x40038<br>4x40038<br>I:40037 | 65535,0xFFFF<br>B:FF FF                          | 0    | 0                       | UINT16<br>R/W | NO |
|                                                                                                                                                             |                               | Actual value of VOx:65535=N/V                    |      | ENTER NEW VALUE FOR VOx |               |    |
| VOLTAGE OUTPUT7<br>IN PERCENT                                                                                                                               | 3x40039<br>4x40039<br>I:40038 | 65535,0xFFFF<br>B:FF FF                          | 0    | 0                       | UINT16<br>R/W | NO |
|                                                                                                                                                             |                               | Actual value of VOx:65535=N/V                    |      | ENTER NEW VALUE FOR VOx |               |    |
| VOLTAGE OUTPUT8<br>IN PERCENT                                                                                                                               | 3x40040<br>4x40040<br>I:40039 | 65535,0xFFFF<br>B:FF FF                          | 0    | 0                       | UINT16<br>R/W | NO |
|                                                                                                                                                             |                               | Actual value of VOx:65535=N/V                    |      | ENTER NEW VALUE FOR VOx |               |    |
| AIOX:VOLTAGE OUTPUTS                                                                                                                                        |                               |                                                  |      |                         |               |    |
| VOLTAGE OUTPUT1<br>MEASURED CURRENT                                                                                                                         | 3x40041<br>4x40041<br>I:40040 | -32768,0x8000<br>B:80 00                         |      |                         | SINT16<br>R/O |    |
|                                                                                                                                                             |                               | Actual measured output current of VOx:-32768=N/V |      |                         |               |    |
| Returns the measured output current in x*100mA on voltage output VOx, Range -25mA..+25mA<br>=-32768,0x8000: The channel is not configured as voltage output |                               |                                                  |      |                         |               |    |
| VOLTAGE OUTPUT2<br>MEASURED CURRENT                                                                                                                         | 3x40042<br>4x40042<br>I:40041 | -32768,0x8000<br>B:80 00                         |      |                         | SINT16<br>R/O |    |
|                                                                                                                                                             |                               | Actual measured output current of VOx:-32768=N/V |      |                         |               |    |
| VOLTAGE OUTPUT3<br>MEASURED CURRENT                                                                                                                         | 3x40043<br>4x40043<br>I:40042 | -32768,0x8000<br>B:80 00                         |      |                         | SINT16<br>R/O |    |
|                                                                                                                                                             |                               | Actual measured output current of VOx:-32768=N/V |      |                         |               |    |
| VOLTAGE OUTPUT4<br>MEASURED CURRENT                                                                                                                         | 3x40044<br>4x40044<br>I:40043 | -32768,0x8000<br>B:80 00                         |      |                         | SINT16<br>R/O |    |
|                                                                                                                                                             |                               | Actual measured output current of VOx:-32768=N/V |      |                         |               |    |
| VOLTAGE OUTPUT5<br>MEASURED CURRENT                                                                                                                         | 3x40045<br>4x40045<br>I:40044 | -32768,0x8000<br>B:80 00                         |      |                         | SINT16<br>R/O |    |
|                                                                                                                                                             |                               | Actual measured output current of VOx:-32768=N/V |      |                         |               |    |

|                                                                                                                          |                               |                                                  |  |  |               |  |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------|--|--|---------------|--|
| VOLTAGE OUTPUT6<br>MEASURED CURRENT                                                                                      | 3x40046<br>4x40046<br>I:40045 | -32768,0x8000<br>B:80 00                         |  |  | SINT16<br>R/O |  |
|                                                                                                                          |                               | Actual measured output current of VOx:-32768=N/V |  |  |               |  |
| VOLTAGE OUTPUT7<br>MEASURED CURRENT                                                                                      | 3x40047<br>4x40047<br>I:40046 | -32768,0x8000<br>B:80 00                         |  |  | SINT16<br>R/O |  |
|                                                                                                                          |                               | Actual measured output current of VOx:-32768=N/V |  |  |               |  |
| VOLTAGE OUTPUT8<br>MEASURED CURRENT                                                                                      | 3x40048<br>4x40048<br>I:40047 | -32768,0x8000<br>B:80 00                         |  |  | SINT16<br>R/O |  |
|                                                                                                                          |                               | Actual measured output current of VOx:-32768=N/V |  |  |               |  |
| AIOX:CURRENT INPUTS                                                                                                      |                               |                                                  |  |  |               |  |
| CURRENT INPUT1<br>IN MILLIAMPERE                                                                                         | 3x40049<br>4x40049<br>I:40048 | 65535,0xFFFF<br>B:FF FF                          |  |  | UINT16<br>R/O |  |
|                                                                                                                          |                               | Actual value of CIx:65535=N/V                    |  |  |               |  |
| Current value of current input in x*100mA, range 0-25mA<br>=65535,0xFFFF: The channel is not configured as current input |                               |                                                  |  |  |               |  |
| CURRENT INPUT2<br>IN MILLIAMPERE                                                                                         | 3x40050<br>4x40050<br>I:40049 | 65535,0xFFFF<br>B:FF FF                          |  |  | UINT16<br>R/O |  |
|                                                                                                                          |                               | Actual value of VIx:65535=N/V                    |  |  |               |  |
| CURRENT INPUT3<br>IN MILLIAMPERE                                                                                         | 3x40051<br>4x40051<br>I:40050 | 65535,0xFFFF<br>B:FF FF                          |  |  | UINT16<br>R/O |  |
|                                                                                                                          |                               | Actual value of VIx:65535=N/V                    |  |  |               |  |
| CURRENT INPUT4<br>IN MILLIAMPERE                                                                                         | 3x40052<br>4x40052<br>I:40051 | 65535,0xFFFF<br>B:FF FF                          |  |  | UINT16<br>R/O |  |
|                                                                                                                          |                               | Actual value of VIx:65535=N/V                    |  |  |               |  |
| CURRENT INPUT5<br>IN MILLIAMPERE                                                                                         | 3x40053<br>4x40053<br>I:40052 | 65535,0xFFFF<br>B:FF FF                          |  |  | UINT16<br>R/O |  |
|                                                                                                                          |                               | Actual value of VIx:65535=N/V                    |  |  |               |  |
| CURRENT INPUT6<br>IN MILLIAMPERE                                                                                         | 3x40054<br>4x40054<br>I:40053 | 65535,0xFFFF<br>B:FF FF                          |  |  | UINT16<br>R/O |  |
|                                                                                                                          |                               | Actual value of VIx:65535=N/V                    |  |  |               |  |
| CURRENT INPUT7<br>IN MILLIAMPERE                                                                                         | 3x40055<br>4x40055<br>I:40054 | 65535,0xFFFF<br>B:FF FF                          |  |  | UINT16<br>R/O |  |
|                                                                                                                          |                               | Actual value of VIx:65535=N/V                    |  |  |               |  |

|                                                                                                                                     |                               |                               |     |   |                         |    |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------|-----|---|-------------------------|----|
| CURRENT INPUT8<br>IN MILLIAMPERE                                                                                                    | 3x40056<br>4x40056<br>I:40055 | 65535,0xFFFF<br>B:FF FF       |     |   | UINT16<br>R/O           |    |
|                                                                                                                                     |                               | Actual value of Vlx:65535=N/V |     |   |                         |    |
| AIOX:CURRENT INPUTS                                                                                                                 |                               |                               |     |   |                         |    |
| CURRENT INPUT1<br>IN PERCENT                                                                                                        | 3x40057<br>4x40057<br>I:40056 | 65535,0xFFFF<br>B:FF FF       |     |   | UINT16<br>R/O           |    |
|                                                                                                                                     |                               | Actual value of Clx:65535=N/V |     |   |                         |    |
| Current value of current input in x*100%, range 0-125% (100%=20mA)<br>=65535,0xFFFF: The channel is not configured as current input |                               |                               |     |   |                         |    |
| CURRENT INPUT2<br>IN PERCENT                                                                                                        | 3x40058<br>4x40058<br>I:40057 | 65535,0xFFFF<br>B:FF FF       |     |   | UINT16<br>R/O           |    |
|                                                                                                                                     |                               | Actual value of Clx:65535=N/V |     |   |                         |    |
| CURRENT INPUT3<br>IN PERCENT                                                                                                        | 3x40059<br>4x40059<br>I:40058 | 65535,0xFFFF<br>B:FF FF       |     |   | UINT16<br>R/O           |    |
|                                                                                                                                     |                               | Actual value of Clx:65535=N/V |     |   |                         |    |
| CURRENT INPUT4<br>IN PERCENT                                                                                                        | 3x40060<br>4x40060<br>I:40059 | 65535,0xFFFF<br>B:FF FF       |     |   | UINT16<br>R/O           |    |
|                                                                                                                                     |                               | Actual value of Clx:65535=N/V |     |   |                         |    |
| CURRENT INPUT5<br>IN PERCENT                                                                                                        | 3x40061<br>4x40061<br>I:40060 | 65535,0xFFFF<br>B:FF FF       |     |   | UINT16<br>R/O           |    |
|                                                                                                                                     |                               | Actual value of Clx:65535=N/V |     |   |                         |    |
| CURRENT INPUT6<br>IN PERCENT                                                                                                        | 3x40062<br>4x40062<br>I:40061 | 65535,0xFFFF<br>B:FF FF       |     |   | UINT16<br>R/O           |    |
|                                                                                                                                     |                               | Actual value of Clx:65535=N/V |     |   |                         |    |
| CURRENT INPUT7<br>IN PERCENT                                                                                                        | 3x40063<br>4x40063<br>I:40062 | 65535,0xFFFF<br>B:FF FF       |     |   | UINT16<br>R/O           |    |
|                                                                                                                                     |                               | Actual value of Clx:65535=N/V |     |   |                         |    |
| CURRENT INPUT8<br>IN PERCENT                                                                                                        | 3x40064<br>4x40064<br>I:40063 | 65535,0xFFFF<br>B:FF FF       |     |   | UINT16<br>R/O           |    |
|                                                                                                                                     |                               | Actual value of Clx:65535=N/V |     |   |                         |    |
| AIOX:CURRENT OUTPUTS                                                                                                                |                               |                               |     |   |                         |    |
| CURRENT OUTPUT1<br>IN MILIAMPERE                                                                                                    | 3x40065<br>4x40065<br>I:40064 | 65535,0xFFFF<br>B:FF FF       | 500 | 5 | UINT16<br>R/W           | NO |
|                                                                                                                                     |                               | Actual value of COx:65535=N/V |     |   | ENTER NEW VALUE FOR COx |    |

Current value of current output in x\*100mA, range 0-25mA  
 =65535,0xFFFF: The channel is not configured as current output

Writing a new value onto this register sets current output x to a new output value in Milliampere

|                                                                                                                                       |                               |                               |      |                         |               |    |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------|------|-------------------------|---------------|----|
| CURRENT OUTPUT2<br>IN MILLIAMPERE                                                                                                     | 3x40066<br>4x40066<br>I:40065 | 65535,0xFFFF<br>B:FF FF       | 500  | 5                       | UINT16<br>R/W | NO |
|                                                                                                                                       |                               | Actual value of COx:65535=N/V |      | ENTER NEW VALUE FOR COx |               |    |
| CURRENT OUTPUT3<br>IN MILLIAMPERE                                                                                                     | 3x40067<br>4x40067<br>I:40066 | 65535,0xFFFF<br>B:FF FF       | 500  | 5                       | UINT16<br>R/W | NO |
|                                                                                                                                       |                               | Actual value of COx:65535=N/V |      | ENTER NEW VALUE FOR COx |               |    |
| CURRENT OUTPUT4<br>IN MILLIAMPERE                                                                                                     | 3x40068<br>4x40068<br>I:40067 | 65535,0xFFFF<br>B:FF FF       | 500  | 5                       | UINT16<br>R/W | NO |
|                                                                                                                                       |                               | Actual value of COx:65535=N/V |      | ENTER NEW VALUE FOR COx |               |    |
| CURRENT OUTPUT5<br>IN MILLIAMPERE                                                                                                     | 3x40069<br>4x40069<br>I:40068 | 65535,0xFFFF<br>B:FF FF       | 500  | 5                       | UINT16<br>R/W | NO |
|                                                                                                                                       |                               | Actual value of COx:65535=N/V |      | ENTER NEW VALUE FOR COx |               |    |
| CURRENT OUTPUT6<br>IN MILLIAMPERE                                                                                                     | 3x40070<br>4x40070<br>I:40069 | 65535,0xFFFF<br>B:FF FF       | 500  | 5                       | UINT16<br>R/W | NO |
|                                                                                                                                       |                               | Actual value of COx:65535=N/V |      | ENTER NEW VALUE FOR COx |               |    |
| CURRENT OUTPUT7<br>IN MILLIAMPERE                                                                                                     | 3x40071<br>4x40071<br>I:40070 | 65535,0xFFFF<br>B:FF FF       | 500  | 5                       | UINT16<br>R/W | NO |
|                                                                                                                                       |                               | Actual value of COx:65535=N/V |      | ENTER NEW VALUE FOR COx |               |    |
| CURRENT OUTPUT8<br>IN MILLIAMPERE                                                                                                     | 3x40072<br>4x40072<br>I:40071 | 65535,0xFFFF<br>B:FF FF       | 500  | 5                       | UINT16<br>R/W | NO |
|                                                                                                                                       |                               | Actual value of COx:65535=N/V |      | ENTER NEW VALUE FOR COx |               |    |
| AIOX:CURRENT OUTPUTS                                                                                                                  |                               |                               |      |                         |               |    |
| CURRENT OUTPUT1<br>IN PERCENT                                                                                                         | 3x40073<br>4x40073<br>I:40072 | 65535,0xFFFF<br>B:FF FF       | 5000 | 50                      | UINT16<br>R/W | NO |
|                                                                                                                                       |                               | Actual value of COx:65535=N/V |      | ENTER NEW VALUE FOR COx |               |    |
| Current value of current output in x*100%, range 0-125% (100%=20mA)<br>=65535,0xFFFF: The channel is not configured as current output |                               |                               |      |                         |               |    |
| Writing a new value onto this register sets current output x to a new output value in percent                                         |                               |                               |      |                         |               |    |
| CURRENT OUTPUT2<br>IN PERCENT                                                                                                         | 3x40074<br>4x40074<br>I:40073 | 65535,0xFFFF<br>B:FF FF       | 5000 | 50                      | UINT16<br>R/W | NO |
|                                                                                                                                       |                               | Actual value of COx:65535=N/V |      | ENTER NEW VALUE FOR COx |               |    |

|                                                                                                                                          |                               |                                              |      |                         |               |    |
|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------------|------|-------------------------|---------------|----|
| CURRENT OUTPUT3<br>IN PERCENT                                                                                                            | 3x40075<br>4x40075<br>I:40074 | 65535,0xFFFF<br>B:FF FF                      | 5000 | 50                      | UINT16<br>R/W | NO |
|                                                                                                                                          |                               | Actual value of COx:65535=N/V                |      | ENTER NEW VALUE FOR COx |               |    |
| CURRENT OUTPUT4<br>IN PERCENT                                                                                                            | 3x40076<br>4x40076<br>I:40075 | 65535,0xFFFF<br>B:FF FF                      | 5000 | 50                      | UINT16<br>R/W | NO |
|                                                                                                                                          |                               | Actual value of COx:65535=N/V                |      | ENTER NEW VALUE FOR COx |               |    |
| CURRENT OUTPUT5<br>IN PERCENT                                                                                                            | 3x40077<br>4x40077<br>I:40076 | 65535,0xFFFF<br>B:FF FF                      | 5000 | 50                      | UINT16<br>R/W | NO |
|                                                                                                                                          |                               | Actual value of COx:65535=N/V                |      | ENTER NEW VALUE FOR COx |               |    |
| CURRENT OUTPUT6<br>IN PERCENT                                                                                                            | 3x40078<br>4x40078<br>I:40077 | 65535,0xFFFF<br>B:FF FF                      | 5000 | 50                      | UINT16<br>R/W | NO |
|                                                                                                                                          |                               | Actual value of COx:65535=N/V                |      | ENTER NEW VALUE FOR COx |               |    |
| CURRENT OUTPUT7<br>IN PERCENT                                                                                                            | 3x40079<br>4x40079<br>I:40078 | 65535,0xFFFF<br>B:FF FF                      | 5000 | 50                      | UINT16<br>R/W | NO |
|                                                                                                                                          |                               | Actual value of COx:65535=N/V                |      | ENTER NEW VALUE FOR COx |               |    |
| CURRENT OUTPUT8<br>IN PERCENT                                                                                                            | 3x40080<br>4x40080<br>I:40079 | 65535,0xFFFF<br>B:FF FF                      | 5000 | 50                      | UINT16<br>R/W | NO |
|                                                                                                                                          |                               | Actual value of COx:65535=N/V                |      | ENTER NEW VALUE FOR COx |               |    |
| AIOX:CURRENT OUTPUTS                                                                                                                     |                               |                                              |      |                         |               |    |
| CURRENT OUTPUT1<br>MEASURED VOLTS                                                                                                        | 3x40081<br>4x40081<br>I:40080 | 65535,0xFFFF<br>B:FF FF                      |      |                         | UINT16<br>R/O |    |
|                                                                                                                                          |                               | Actual measured output voltage COx:65535=N/V |      |                         |               |    |
| Current measured output voltage for current output x*100V, range 0-10V<br>=65535,0xFFFF: The channel is not configured as current output |                               |                                              |      |                         |               |    |
| CURRENT OUTPUT2<br>MEASURED VOLTS                                                                                                        | 3x40082<br>4x40082<br>I:40081 | 65535,0xFFFF<br>B:FF FF                      |      |                         | UINT16<br>R/O |    |
|                                                                                                                                          |                               | Actual measured output voltage COx:65535=N/V |      |                         |               |    |
| CURRENT OUTPUT3<br>MEASURED VOLTS                                                                                                        | 3x40083<br>4x40083<br>I:40082 | 65535,0xFFFF<br>B:FF FF                      |      |                         | UINT16<br>R/O |    |
|                                                                                                                                          |                               | Actual measured output voltage COx:65535=N/V |      |                         |               |    |
| CURRENT OUTPUT4<br>MEASURED VOLTS                                                                                                        | 3x40084<br>4x40084<br>I:40083 | 65535,0xFFFF<br>B:FF FF                      |      |                         | UINT16<br>R/O |    |
|                                                                                                                                          |                               | Actual measured output voltage COx:65535=N/V |      |                         |               |    |

|                                                                                                                                                                                                                       |                               |                                              |  |  |               |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------------|--|--|---------------|--|
| CURRENT OUTPUT5<br>MEASURED VOLTS                                                                                                                                                                                     | 3x40085<br>4x40085<br>I:40084 | 65535,0xFFFF<br>B:FF FF                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                       |                               | Actual measured output voltage COx:65535=N/V |  |  |               |  |
| CURRENT OUTPUT6<br>MEASURED VOLTS                                                                                                                                                                                     | 3x40086<br>4x40086<br>I:40085 | 65535,0xFFFF<br>B:FF FF                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                       |                               | Actual measured output voltage COx:65535=N/V |  |  |               |  |
| CURRENT OUTPUT7<br>MEASURED VOLTS                                                                                                                                                                                     | 3x40087<br>4x40087<br>I:40086 | 65535,0xFFFF<br>B:FF FF                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                       |                               | Actual measured output voltage COx:65535=N/V |  |  |               |  |
| CURRENT OUTPUT8<br>MEASURED VOLTS                                                                                                                                                                                     | 3x40088<br>4x40088<br>I:40087 | 65535,0xFFFF<br>B:FF FF                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                       |                               | Actual measured output voltage COx:65535=N/V |  |  |               |  |
| AIOX:DIGITAL INPUTS                                                                                                                                                                                                   |                               |                                              |  |  |               |  |
| DIGITAL INPUT1                                                                                                                                                                                                        | 3x40089<br>4x40089<br>I:40088 | 65535,0xFFFF<br>B:FF FF                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                       |                               | Actual state of digital input DIx:65535=N/V  |  |  |               |  |
| Current measured state of digital input DIx<br>=0: Digital input is OFF or loop is closed<br>=1: Digital input is ON (+24V attached) or loop is open<br>=65535,0xFFFF: The channel is not configured as digital input |                               |                                              |  |  |               |  |
| DIGITAL INPUT2                                                                                                                                                                                                        | 3x40090<br>4x40090<br>I:40089 | 65535,0xFFFF<br>B:FF FF                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                       |                               | Actual state of digital input DIx:65535=N/V  |  |  |               |  |
| DIGITAL INPUT3                                                                                                                                                                                                        | 3x40091<br>4x40091<br>I:40090 | 65535,0xFFFF<br>B:FF FF                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                       |                               | Actual measured output voltage COx:65535=N/V |  |  |               |  |
| DIGITAL INPUT4                                                                                                                                                                                                        | 3x40092<br>4x40092<br>I:40091 | 65535,0xFFFF<br>B:FF FF                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                       |                               | Actual measured output voltage COx:65535=N/V |  |  |               |  |
| DIGITAL INPUT5                                                                                                                                                                                                        | 3x40093<br>4x40093<br>I:40092 | 65535,0xFFFF<br>B:FF FF                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                       |                               | Actual measured output voltage COx:65535=N/V |  |  |               |  |
| DIGITAL INPUT6                                                                                                                                                                                                        | 3x40094<br>4x40094<br>I:40093 | 65535,0xFFFF<br>B:FF FF                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                       |                               | Actual measured output voltage COx:65535=N/V |  |  |               |  |

|                                                                                                                                                           |                               |                                                  |  |  |               |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------|--|--|---------------|--|
| DIGITAL INPUT7                                                                                                                                            | 3x40095<br>4x40095<br>I:40094 | 65535,0xFFFF<br>B:FF FF                          |  |  | UINT16<br>R/O |  |
|                                                                                                                                                           |                               | Actual measured output voltage COx:65535=N/V     |  |  |               |  |
| DIGITAL INPUT8                                                                                                                                            | 3x40096<br>4x40096<br>I:40095 | 65535,0xFFFF<br>B:FF FF                          |  |  | UINT16<br>R/O |  |
|                                                                                                                                                           |                               | Actual measured output voltage COx:65535=N/V     |  |  |               |  |
| AIOX:DIGITAL INPUTS                                                                                                                                       |                               |                                                  |  |  |               |  |
| DIGITAL INPUT1<br>MEASURED CURRENT                                                                                                                        | 3x40097<br>4x40097<br>I:40096 | -32768,0x8000<br>B:80 00                         |  |  | SINT16<br>R/O |  |
|                                                                                                                                                           |                               | Actual measured output current of DIx:-32768=N/V |  |  |               |  |
| Returns the measured output current in x*100mA on DIGITAL INPUT VOx, Range -25mA..+25mA<br>=-32768,0x8000: The channel is not configured as DIGITAL INPUT |                               |                                                  |  |  |               |  |
| DIGITAL INPUT2<br>MEASURED CURRENT                                                                                                                        | 3x40098<br>4x40098<br>I:40097 | -32768,0x8000<br>B:80 00                         |  |  | SINT16<br>R/O |  |
|                                                                                                                                                           |                               | Actual measured output current of DIx:-32768=N/V |  |  |               |  |
| DIGITAL INPUT3<br>MEASURED CURRENT                                                                                                                        | 3x40099<br>4x40099<br>I:40098 | -32768,0x8000<br>B:80 00                         |  |  | SINT16<br>R/O |  |
|                                                                                                                                                           |                               | Actual measured output current of DIx:-32768=N/V |  |  |               |  |
| DIGITAL INPUT4<br>MEASURED CURRENT                                                                                                                        | 3x40100<br>4x40100<br>I:40099 | -32768,0x8000<br>B:80 00                         |  |  | SINT16<br>R/O |  |
|                                                                                                                                                           |                               | Actual measured output current of DIx:-32768=N/V |  |  |               |  |
| DIGITAL INPUT5<br>MEASURED CURRENT                                                                                                                        | 3x40101<br>4x40101<br>I:40100 | -32768,0x8000<br>B:80 00                         |  |  | SINT16<br>R/O |  |
|                                                                                                                                                           |                               | Actual measured output current of DIx:-32768=N/V |  |  |               |  |
| DIGITAL INPUT6<br>MEASURED CURRENT                                                                                                                        | 3x40102<br>4x40102<br>I:40101 | -32768,0x8000<br>B:80 00                         |  |  | SINT16<br>R/O |  |
|                                                                                                                                                           |                               | Actual measured output current of DIx:-32768=N/V |  |  |               |  |
| DIGITAL INPUT7<br>MEASURED CURRENT                                                                                                                        | 3x40103<br>4x40103<br>I:40102 | -32768,0x8000<br>B:80 00                         |  |  | SINT16<br>R/O |  |
|                                                                                                                                                           |                               | Actual measured output current of DIx:-32768=N/V |  |  |               |  |
| DIGITAL INPUT8<br>MEASURED CURRENT                                                                                                                        | 3x40104<br>4x40104<br>I:40103 | -32768,0x8000<br>B:80 00                         |  |  | SINT16<br>R/O |  |
|                                                                                                                                                           |                               | Actual measured output current of DIx:-32768=N/V |  |  |               |  |

| Register NAME<br>Command NAME                                                                                                                                                                                                                                 | MODBUS<br>Register<br>ASCII<br>Command | Register VALUE<br>ASCII Command               | NEW REAL<br>VALUE | NEW<br>VALUE | DATA TYPE     | DO<br>WRITE |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------|-------------------|--------------|---------------|-------------|
| AIOX:RTD INPUTS OHM*10                                                                                                                                                                                                                                        |                                        |                                               |                   |              |               |             |
| RTD INPUT1<br>IN OHM*10                                                                                                                                                                                                                                       | 3x41001<br>4x41001<br>I:41000          | 65534,0xFFFE<br>B:FF FE                       |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                               |                                        | Actual measured ohm value of RTDIx:65534=OPEN |                   |              |               |             |
| Current measured RTD in Ohm*10 between 0 and 600000<br>=0..60000: Current measured resistance in Ohm*10<br>=65534,0xFFFE: The sensor or cabling is open (broken, not connected, or out of range)<br>=65535,0xFFFF: The channel is not configured as RTD input |                                        |                                               |                   |              |               |             |
| RTD INPUT2<br>IN OHM*10                                                                                                                                                                                                                                       | 3x41002<br>4x41002<br>I:41001          | 65534,0xFFFE<br>B:FF FE                       |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                               |                                        | Actual measured ohm value of RTDIx:65534=OPEN |                   |              |               |             |
| RTD INPUT3<br>IN OHM*10                                                                                                                                                                                                                                       | 3x41003<br>4x41003<br>I:41002          | 65534,0xFFFE<br>B:FF FE                       |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                               |                                        | Actual measured ohm value of RTDIx:65534=OPEN |                   |              |               |             |
| RTD INPUT4<br>IN OHM*10                                                                                                                                                                                                                                       | 3x41004<br>4x41004<br>I:41003          | 65534,0xFFFE<br>B:FF FE                       |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                               |                                        | Actual measured ohm value of RTDIx:65534=OPEN |                   |              |               |             |
| RTD INPUT5<br>IN OHM*10                                                                                                                                                                                                                                       | 3x41005<br>4x41005<br>I:41004          | 65534,0xFFFE<br>B:FF FE                       |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                               |                                        | Actual measured ohm value of RTDIx:65534=OPEN |                   |              |               |             |
| RTD INPUT6<br>IN OHM*10                                                                                                                                                                                                                                       | 3x41006<br>4x41006<br>I:41005          | 65534,0xFFFE<br>B:FF FE                       |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                               |                                        | Actual measured ohm value of RTDIx:65534=OPEN |                   |              |               |             |
| RTD INPUT7<br>IN OHM*10                                                                                                                                                                                                                                       | 3x41007<br>4x41007<br>I:41006          | 65534,0xFFFE<br>B:FF FE                       |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                               |                                        | Actual measured ohm value of RTDIx:65534=OPEN |                   |              |               |             |
| RTD INPUT8<br>IN OHM*10                                                                                                                                                                                                                                       | 3x41008<br>4x41008<br>I:41007          | 65534,0xFFFE<br>B:FF FE                       |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                               |                                        | Actual measured ohm value of RTDIx:65534=OPEN |                   |              |               |             |
| AIOX:RTD INPUTS OHM*1                                                                                                                                                                                                                                         |                                        |                                               |                   |              |               |             |

|                                                                                                                                                                                                                                                              |                               |                                              |  |  |               |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------------|--|--|---------------|--|
| RTD INPUT1<br>IN OHM                                                                                                                                                                                                                                         | 3x41009<br>4x41009<br>I:41008 | 65535,0xFFFF<br>B:FF FF                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                              |                               | Actual measured ohm value of RTDlx:65535=N/V |  |  |               |  |
| Current measured RTD in Ohm*1 between 0 and 60000<br>=0..60000: Current measured resistance in Ohm*1<br>=65534,0xFFFE: The sensor or cabling is open (broken, not connected, or out of range)<br>=65535,0xFFFF: The channel is not configured as RTD input   |                               |                                              |  |  |               |  |
| RTD INPUT2<br>IN OHM                                                                                                                                                                                                                                         | 3x41010<br>4x41010<br>I:41009 | 65535,0xFFFF<br>B:FF FF                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                              |                               | Actual measured ohm value of RTDlx:65535=N/V |  |  |               |  |
| RTD INPUT3<br>IN OHM                                                                                                                                                                                                                                         | 3x41011<br>4x41011<br>I:41010 | 65535,0xFFFF<br>B:FF FF                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                              |                               | Actual measured ohm value of RTDlx:65535=N/V |  |  |               |  |
| RTD INPUT4<br>IN OHM                                                                                                                                                                                                                                         | 3x41012<br>4x41012<br>I:41011 | 65535,0xFFFF<br>B:FF FF                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                              |                               | Actual measured ohm value of RTDlx:65535=N/V |  |  |               |  |
| RTD INPUT5<br>IN OHM                                                                                                                                                                                                                                         | 3x41013<br>4x41013<br>I:41012 | 65535,0xFFFF<br>B:FF FF                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                              |                               | Actual measured ohm value of RTDlx:65535=N/V |  |  |               |  |
| RTD INPUT6<br>IN OHM                                                                                                                                                                                                                                         | 3x41014<br>4x41014<br>I:41013 | 65535,0xFFFF<br>B:FF FF                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                              |                               | Actual measured ohm value of RTDlx:65535=N/V |  |  |               |  |
| RTD INPUT7<br>IN OHM                                                                                                                                                                                                                                         | 3x41015<br>4x41015<br>I:41014 | 65535,0xFFFF<br>B:FF FF                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                              |                               | Actual measured ohm value of RTDlx:65535=N/V |  |  |               |  |
| RTD INPUT8<br>IN OHM                                                                                                                                                                                                                                         | 3x41016<br>4x41016<br>I:41015 | 65535,0xFFFF<br>B:FF FF                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                              |                               | Actual measured ohm value of RTDlx:65535=N/V |  |  |               |  |
| AIOX:RTD INPUTS OHM/10                                                                                                                                                                                                                                       |                               |                                              |  |  |               |  |
| RTD INPUT1<br>IN OHM/10                                                                                                                                                                                                                                      | 3x41017<br>4x41017<br>I:41016 | 65535,0xFFFF<br>B:FF FF                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                              |                               | Actual measured ohm value of RTDlx:65535=N/V |  |  |               |  |
| Current measured RTD in Ohm/10 between 0 and 60000<br>=0..60000: Current measured resistance in Ohm/10<br>=65534,0xFFFE: The sensor or cabling is open (broken, not connected, or out of range)<br>=65535,0xFFFF: The channel is not configured as RTD input |                               |                                              |  |  |               |  |

|                                                                                                                                                                                                                                                                                                  |                               |                                                    |  |  |               |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------------------|--|--|---------------|--|
| RTD INPUT2<br>IN OHM/10                                                                                                                                                                                                                                                                          | 3x41018<br>4x41018<br>I:41017 | 65535,0xFFFF<br>B:FF FF                            |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                  |                               | Actual measured ohm value of RTDlx:65535=N/V       |  |  |               |  |
| RTD INPUT3<br>IN OHM/10                                                                                                                                                                                                                                                                          | 3x41019<br>4x41019<br>I:41018 | 65535,0xFFFF<br>B:FF FF                            |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                  |                               | Actual measured ohm value of RTDlx:65535=N/V       |  |  |               |  |
| RTD INPUT4<br>IN OHM/10                                                                                                                                                                                                                                                                          | 3x41020<br>4x41020<br>I:41019 | 65535,0xFFFF<br>B:FF FF                            |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                  |                               | Actual measured ohm value of RTDlx:65535=N/V       |  |  |               |  |
| RTD INPUT5<br>IN OHM/10                                                                                                                                                                                                                                                                          | 3x41021<br>4x41021<br>I:41020 | 65535,0xFFFF<br>B:FF FF                            |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                  |                               | Actual measured ohm value of RTDlx:65535=N/V       |  |  |               |  |
| RTD INPUT6<br>IN OHM/10                                                                                                                                                                                                                                                                          | 3x41022<br>4x41022<br>I:41021 | 65535,0xFFFF<br>B:FF FF                            |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                  |                               | Actual measured ohm value of RTDlx:65535=N/V       |  |  |               |  |
| RTD INPUT7<br>IN OHM/10                                                                                                                                                                                                                                                                          | 3x41023<br>4x41023<br>I:41022 | 65535,0xFFFF<br>B:FF FF                            |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                  |                               | Actual measured ohm value of RTDlx:65535=N/V       |  |  |               |  |
| RTD INPUT8<br>IN OHM/10                                                                                                                                                                                                                                                                          | 3x41024<br>4x41024<br>I:41023 | 65535,0xFFFF<br>B:FF FF                            |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                  |                               | Actual measured ohm value of RTDlx:65535=N/V       |  |  |               |  |
| AIOX:RTD INPUTS PT100 CELSIUS                                                                                                                                                                                                                                                                    |                               |                                                    |  |  |               |  |
| RTD INPUT1<br>AS PT100 IN CELSIUS                                                                                                                                                                                                                                                                | 3x41025<br>4x41025<br>I:41024 | -32768,0x8000<br>B:80 00                           |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                  |                               | Actual measured PT100 temperature RTDlx:-32768=N/V |  |  |               |  |
| Current measured RTD sensor value linearized as PT100 sensor in Celsius*100 in the range of -5000 to +13000 for -50.0 to +130.0 °C<br>-32766,0x8002: Measured value is below -50°C<br>-32767,0x8001: Measured value is above +130°C<br>-32768,0x8000: The channel is not configured as RTD input |                               |                                                    |  |  |               |  |
| RTD INPUT2<br>AS PT100 IN CELSIUS                                                                                                                                                                                                                                                                | 3x41026<br>4x41026<br>I:41025 | -32768,0x8000<br>B:80 00                           |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                  |                               | Actual measured PT100 temperature RTDlx:-32768=N/V |  |  |               |  |
| RTD INPUT3<br>AS PT100 IN CELSIUS                                                                                                                                                                                                                                                                | 3x41027<br>4x41027<br>I:41026 | -32768,0x8000<br>B:80 00                           |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                  |                               | Actual measured PT100 temperature RTDlx:-32768=N/V |  |  |               |  |

|                                                                                                                                                                                                                                                                                                   |                               |                                                     |  |  |               |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------|--|--|---------------|--|
| RTD INPUT4<br>AS PT100 IN CELSIUS                                                                                                                                                                                                                                                                 | 3x41028<br>4x41028<br>I:41027 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                   |                               | Actual measured PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| RTD INPUT5<br>AS PT100 IN CELSIUS                                                                                                                                                                                                                                                                 | 3x41029<br>4x41029<br>I:41028 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                   |                               | Actual measured PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| RTD INPUT6<br>AS PT100 IN CELSIUS                                                                                                                                                                                                                                                                 | 3x41030<br>4x41030<br>I:41029 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                   |                               | Actual measured PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| RTD INPUT7<br>AS PT100 IN CELSIUS                                                                                                                                                                                                                                                                 | 3x41031<br>4x41031<br>I:41030 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                   |                               | Actual measured PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| RTD INPUT8<br>AS PT100 IN CELSIUS                                                                                                                                                                                                                                                                 | 3x41032<br>4x41032<br>I:41031 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                   |                               | Actual measured PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| AIOX:RTD INPUTS PT1000 CELSIUS                                                                                                                                                                                                                                                                    |                               |                                                     |  |  |               |  |
| RTD INPUT1<br>AS PT1000 IN CELSIUS                                                                                                                                                                                                                                                                | 3x41033<br>4x41033<br>I:41032 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                   |                               | Actual measured PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |
| Current measured RTD sensor value linearized as PT1000 sensor in Celsius*100 in the range of -5000 to +13000 for -50.0 to +130.0 °C<br>-32766,0x8002: Measured value is below -50°C<br>-32767,0x8001: Measured value is above +130°C<br>-32768,0x8000: The channel is not configured as RTD input |                               |                                                     |  |  |               |  |
| RTD INPUT2<br>AS PT1000 IN CELSIUS                                                                                                                                                                                                                                                                | 3x41034<br>4x41034<br>I:41033 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                   |                               | Actual measured PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |
| RTD INPUT3<br>AS PT1000 IN CELSIUS                                                                                                                                                                                                                                                                | 3x41035<br>4x41035<br>I:41034 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                   |                               | Actual measured PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |
| RTD INPUT4<br>AS PT1000 IN CELSIUS                                                                                                                                                                                                                                                                | 3x41036<br>4x41036<br>I:41035 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                   |                               | Actual measured PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |
| RTD INPUT5<br>AS PT1000 IN CELSIUS                                                                                                                                                                                                                                                                | 3x41037<br>4x41037<br>I:41036 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                   |                               | Actual measured PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |

|                                                                                                                                                                                                                                                                                                            |                               |                                                              |  |  |               |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------|--|--|---------------|--|
| RTD INPUT6<br>AS PT1000 IN CELSIUS                                                                                                                                                                                                                                                                         | 3x41038<br>4x41038<br>I:41037 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                            |                               | Actual measured PT1000 temperature RTDlx:-32768=N/V          |  |  |               |  |
| RTD INPUT7<br>AS PT1000 IN CELSIUS                                                                                                                                                                                                                                                                         | 3x41039<br>4x41039<br>I:41038 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                            |                               | Actual measured PT1000 temperature RTDlx:-32768=N/V          |  |  |               |  |
| RTD INPUT8<br>AS PT1000 IN CELSIUS                                                                                                                                                                                                                                                                         | 3x41040<br>4x41040<br>I:41039 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                            |                               | Actual measured PT1000 temperature RTDlx:-32768=N/V          |  |  |               |  |
| AIOX:RTD INPUTS NI1000-DIN43760 CELSIUS                                                                                                                                                                                                                                                                    |                               |                                                              |  |  |               |  |
| RTD INPUT1<br>AS NI1000-DIN43760 IN CELSIUS                                                                                                                                                                                                                                                                | 3x41041<br>4x41041<br>I:41040 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                            |                               | Actual measured NI1000-DIN43760 temperature RTDlx:-32768=N/V |  |  |               |  |
| Current measured RTD sensor value linearized as NI1000-DIN43760 sensor in Celsius*100 in the range of -5000 to +13000 for -50.0 to +130.0 °C<br>-32766,0x8002: Measured value is below -50°C<br>-32767,0x8001: Measured value is above +130°C<br>-32768,0x8000: The channel is not configured as RTD input |                               |                                                              |  |  |               |  |
| RTD INPUT2<br>AS NI1000-DIN43760 IN CELSIUS                                                                                                                                                                                                                                                                | 3x41042<br>4x41042<br>I:41041 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                            |                               | Actual measured NI1000-DIN43760 temperature RTDlx:-32768=N/V |  |  |               |  |
| RTD INPUT3<br>AS NI1000-DIN43760 IN CELSIUS                                                                                                                                                                                                                                                                | 3x41043<br>4x41043<br>I:41042 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                            |                               | Actual measured NI1000-DIN43760 temperature RTDlx:-32768=N/V |  |  |               |  |
| RTD INPUT4<br>AS NI1000-DIN43760 IN CELSIUS                                                                                                                                                                                                                                                                | 3x41044<br>4x41044<br>I:41043 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                            |                               | Actual measured NI1000-DIN43760 temperature RTDlx:-32768=N/V |  |  |               |  |
| RTD INPUT5<br>AS NI1000-DIN43760 IN CELSIUS                                                                                                                                                                                                                                                                | 3x41045<br>4x41045<br>I:41044 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                            |                               | Actual measured NI1000-DIN43760 temperature RTDlx:-32768=N/V |  |  |               |  |
| RTD INPUT6<br>AS NI1000-DIN43760 IN CELSIUS                                                                                                                                                                                                                                                                | 3x41046<br>4x41046<br>I:41045 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                            |                               | Actual measured NI1000-DIN43760 temperature RTDlx:-32768=N/V |  |  |               |  |
| RTD INPUT7<br>AS NI1000-DIN43760 IN CELSIUS                                                                                                                                                                                                                                                                | 3x41047<br>4x41047<br>I:41046 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                            |                               | Actual measured NI1000-DIN43760 temperature RTDlx:-32768=N/V |  |  |               |  |

|                                                                                                                                                                                                                                                                                                      |                               |                                                              |  |  |               |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------|--|--|---------------|--|
| RTD INPUT8<br>AS NI1000-DIN43760 IN CELSIUS                                                                                                                                                                                                                                                          | 3x41048<br>4x41048<br>I:41047 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Actual measured NI1000-DIN43760 temperature RTDlx:-32768=N/V |  |  |               |  |
| AIOX:RTD INPUTS PT100 KELVIN                                                                                                                                                                                                                                                                         |                               |                                                              |  |  |               |  |
| RTD INPUT1<br>AS PT100 IN KELVIN                                                                                                                                                                                                                                                                     | 3x41049<br>4x41049<br>I:41048 | 65535,0xFFFF<br>B:FF FF                                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Actual measured PT100 temperature RTDlx:65535=655,35°K       |  |  |               |  |
| Current measured RTD sensor value linearized as PT100 sensor in Kelvin*100 in the range of 22315 to 40315 for 223.15 to 403.15 °K<br>65533,0xFFFFD: Measured value is below 223,15°K<br>65534,0xFFFFE: Measured value is above 403,15°K<br>65535,0xFFFFF: The channel is not configured as RTD input |                               |                                                              |  |  |               |  |
| RTD INPUT2<br>AS PT100 IN KELVIN                                                                                                                                                                                                                                                                     | 3x41050<br>4x41050<br>I:41049 | 65535,0xFFFF<br>B:FF FF                                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Actual measured PT100 temperature RTDlx:65535=655,35°K       |  |  |               |  |
| RTD INPUT3<br>AS PT100 IN KELVIN                                                                                                                                                                                                                                                                     | 3x41051<br>4x41051<br>I:41050 | 65535,0xFFFF<br>B:FF FF                                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Actual measured PT100 temperature RTDlx:65535=655,35°K       |  |  |               |  |
| RTD INPUT4<br>AS PT100 IN KELVIN                                                                                                                                                                                                                                                                     | 3x41052<br>4x41052<br>I:41051 | 65535,0xFFFF<br>B:FF FF                                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Actual measured PT100 temperature RTDlx:65535=655,35°K       |  |  |               |  |
| RTD INPUT5<br>AS PT100 IN KELVIN                                                                                                                                                                                                                                                                     | 3x41053<br>4x41053<br>I:41052 | 65535,0xFFFF<br>B:FF FF                                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Actual measured PT100 temperature RTDlx:65535=655,35°K       |  |  |               |  |
| RTD INPUT6<br>AS PT100 IN KELVIN                                                                                                                                                                                                                                                                     | 3x41054<br>4x41054<br>I:41053 | 65535,0xFFFF<br>B:FF FF                                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Actual measured PT100 temperature RTDlx:65535=655,35°K       |  |  |               |  |
| RTD INPUT7<br>AS PT100 IN KELVIN                                                                                                                                                                                                                                                                     | 3x41055<br>4x41055<br>I:41054 | 65535,0xFFFF<br>B:FF FF                                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Actual measured PT100 temperature RTDlx:65535=655,35°K       |  |  |               |  |
| RTD INPUT8<br>AS PT100 IN KELVIN                                                                                                                                                                                                                                                                     | 3x41056<br>4x41056<br>I:41055 | 65535,0xFFFF<br>B:FF FF                                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Actual measured PT100 temperature RTDlx:65535=655,35°K       |  |  |               |  |
| AIOX:RTD INPUTS PT1000 KELVIN                                                                                                                                                                                                                                                                        |                               |                                                              |  |  |               |  |
| RTD INPUT1<br>AS PT1000 IN KELVIN                                                                                                                                                                                                                                                                    | 3x41057<br>4x41057<br>I:41056 | 65535,0xFFFF<br>B:FF FF                                      |  |  | UINT16<br>R/O |  |

|                                                                                                                                                                                                                                                                                                                |                               |                                                                  |  |  |               |  |
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|                                                                                                                                                                                                                                                                                                                |                               | Actual measured PT1000 temperature RTDlx:65535=655,35°K          |  |  |               |  |
| Current measured RTD sensor value linearized as PT1000 sensor in Kelvin*100 in the range of 22315 to 40315 for 223.15 to 403.15 °K<br>65533,0xFFFFD: Measured value is below 223,15°K<br>65534,0xFFFFE: Measured value is above 403,15°K<br>65535,0xFFFFF: The channel is not configured as RTD input          |                               |                                                                  |  |  |               |  |
| RTD INPUT2<br>AS PT1000 IN KELVIN                                                                                                                                                                                                                                                                              | 3x41058<br>4x41058<br>I:41057 | 65535,0xFFFF<br>B:FF FF                                          |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                |                               | Actual measured PT1000 temperature RTDlx:65535=655,35°K          |  |  |               |  |
| RTD INPUT3<br>AS PT1000 IN KELVIN                                                                                                                                                                                                                                                                              | 3x41059<br>4x41059<br>I:41058 | 65535,0xFFFF<br>B:FF FF                                          |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                |                               | Actual measured PT1000 temperature RTDlx:65535=655,35°K          |  |  |               |  |
| RTD INPUT4<br>AS PT1000 IN KELVIN                                                                                                                                                                                                                                                                              | 3x41060<br>4x41060<br>I:41059 | 65535,0xFFFF<br>B:FF FF                                          |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                |                               | Actual measured PT1000 temperature RTDlx:65535=655,35°K          |  |  |               |  |
| RTD INPUT5<br>AS PT1000 IN KELVIN                                                                                                                                                                                                                                                                              | 3x41061<br>4x41061<br>I:41060 | 65535,0xFFFF<br>B:FF FF                                          |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                |                               | Actual measured PT1000 temperature RTDlx:65535=655,35°K          |  |  |               |  |
| RTD INPUT6<br>AS PT1000 IN KELVIN                                                                                                                                                                                                                                                                              | 3x41062<br>4x41062<br>I:41061 | 65535,0xFFFF<br>B:FF FF                                          |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                |                               | Actual measured PT1000 temperature RTDlx:65535=655,35°K          |  |  |               |  |
| RTD INPUT7<br>AS PT1000 IN KELVIN                                                                                                                                                                                                                                                                              | 3x41063<br>4x41063<br>I:41062 | 65535,0xFFFF<br>B:FF FF                                          |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                |                               | Actual measured PT1000 temperature RTDlx:65535=655,35°K          |  |  |               |  |
| RTD INPUT8<br>AS PT1000 IN KELVIN                                                                                                                                                                                                                                                                              | 3x41064<br>4x41064<br>I:41063 | 65535,0xFFFF<br>B:FF FF                                          |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                |                               | Actual measured PT1000 temperature RTDlx:65535=655,35°K          |  |  |               |  |
| AIOX:RTD INPUTS NI1000-DIN43760 KELVIN                                                                                                                                                                                                                                                                         |                               |                                                                  |  |  |               |  |
| RTD INPUT1<br>AS NI1000-DIN43760 IN KELVIN                                                                                                                                                                                                                                                                     | 3x41065<br>4x41065<br>I:41064 | 65535,0xFFFF<br>B:FF FF                                          |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                |                               | Actual measured NI1000-DIN43760 temperature RTDlx:65535=655,35°K |  |  |               |  |
| Current measured RTD sensor value linearized as NI1000-DIN43760 sensor in Kelvin*100 in the range of 22315 to 40315 for 223.15 to 403.15 °K<br>65533,0xFFFFD: Measured value is below 223,15°K<br>65534,0xFFFFE: Measured value is above 403,15°K<br>65535,0xFFFFF: The channel is not configured as RTD input |                               |                                                                  |  |  |               |  |
| RTD INPUT2<br>AS NI1000-DIN43760 IN KELVIN                                                                                                                                                                                                                                                                     | 3x41066<br>4x41066<br>I:41065 | 65535,0xFFFF<br>B:FF FF                                          |  |  | UINT16<br>R/O |  |

|                                                                                                                                                                                                                                                                                                     |                               |                                                                  |  |  |               |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------|--|--|---------------|--|
|                                                                                                                                                                                                                                                                                                     |                               | Actual measured NI1000-DIN43760 temperature RTDlx:65535=655,35°K |  |  |               |  |
| RTD INPUT3<br>AS NI1000-DIN43760 IN KELVIN                                                                                                                                                                                                                                                          | 3x41067<br>4x41067<br>I:41066 | 65535,0xFFFF<br>B:FF FF                                          |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                     |                               | Actual measured NI1000-DIN43760 temperature RTDlx:65535=655,35°K |  |  |               |  |
| RTD INPUT4<br>AS NI1000-DIN43760 IN KELVIN                                                                                                                                                                                                                                                          | 3x41068<br>4x41068<br>I:41067 | 65535,0xFFFF<br>B:FF FF                                          |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                     |                               | Actual measured NI1000-DIN43760 temperature RTDlx:65535=655,35°K |  |  |               |  |
| RTD INPUT5<br>AS NI1000-DIN43760 IN KELVIN                                                                                                                                                                                                                                                          | 3x41069<br>4x41069<br>I:41068 | 65535,0xFFFF<br>B:FF FF                                          |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                     |                               | Actual measured NI1000-DIN43760 temperature RTDlx:65535=655,35°K |  |  |               |  |
| RTD INPUT6<br>AS NI1000-DIN43760 IN KELVIN                                                                                                                                                                                                                                                          | 3x41070<br>4x41070<br>I:41069 | 65535,0xFFFF<br>B:FF FF                                          |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                     |                               | Actual measured NI1000-DIN43760 temperature RTDlx:65535=655,35°K |  |  |               |  |
| RTD INPUT7<br>AS NI1000-DIN43760 IN KELVIN                                                                                                                                                                                                                                                          | 3x41071<br>4x41071<br>I:41070 | 65535,0xFFFF<br>B:FF FF                                          |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                     |                               | Actual measured NI1000-DIN43760 temperature RTDlx:65535=655,35°K |  |  |               |  |
| RTD INPUT8<br>AS NI1000-DIN43760 IN KELVIN                                                                                                                                                                                                                                                          | 3x41072<br>4x41072<br>I:41071 | 65535,0xFFFF<br>B:FF FF                                          |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                     |                               | Actual measured NI1000-DIN43760 temperature RTDlx:65535=655,35°K |  |  |               |  |
| AIOX:RTD INPUTS PT100 FAHRENHEIT                                                                                                                                                                                                                                                                    |                               |                                                                  |  |  |               |  |
| RTD INPUT1<br>AS PT100 IN FAHRENHEIT                                                                                                                                                                                                                                                                | 3x41073<br>4x41073<br>I:41072 | -32768,0x8000<br>B:80 00                                         |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                     |                               | Actual measured PT100 temperature RTDlx:-32768=N/V               |  |  |               |  |
| Current measured RTD sensor value linearized as PT100 sensor in Fahrenheit*100 in the range of -5800 to +26600 for -58.0 to +266.0 °F<br>-32766,0x8002: Measured value is below -58°C<br>-32767,0x8001: Measured value is above +266°C<br>-32768,0x8000: The channel is not configured as RTD input |                               |                                                                  |  |  |               |  |
| RTD INPUT2<br>AS PT100 IN FAHRENHEIT                                                                                                                                                                                                                                                                | 3x41074<br>4x41074<br>I:41073 | -32768,0x8000<br>B:80 00                                         |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                     |                               | Actual measured PT100 temperature RTDlx:-32768=N/V               |  |  |               |  |
| RTD INPUT3<br>AS PT100 IN FAHRENHEIT                                                                                                                                                                                                                                                                | 3x41075<br>4x41075<br>I:41074 | -32768,0x8000<br>B:80 00                                         |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                     |                               | Actual measured PT100 temperature RTDlx:-32768=N/V               |  |  |               |  |
| RTD INPUT4<br>AS PT100 IN FAHRENHEIT                                                                                                                                                                                                                                                                | 3x41076<br>4x41076<br>I:41075 | -32768,0x8000<br>B:80 00                                         |  |  | SINT16<br>R/O |  |

|                                                                                                                                                                                                                                                                                                      |                               |                                                     |  |  |               |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------|--|--|---------------|--|
|                                                                                                                                                                                                                                                                                                      |                               | Actual measured PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| RTD INPUT5<br>AS PT100 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x41077<br>4x41077<br>I:41076 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Actual measured PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| RTD INPUT6<br>AS PT100 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x41078<br>4x41078<br>I:41077 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Actual measured PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| RTD INPUT7<br>AS PT100 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x41079<br>4x41079<br>I:41078 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Actual measured PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| RTD INPUT8<br>AS PT100 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x41080<br>4x41080<br>I:41079 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Actual measured PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| AIOX:RTD INPUTS PT1000 FAHRENHEIT                                                                                                                                                                                                                                                                    |                               |                                                     |  |  |               |  |
| RTD INPUT1<br>AS PT1000 IN FAHRENHEIT                                                                                                                                                                                                                                                                | 3x41081<br>4x41081<br>I:41080 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Actual measured PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |
| Current measured RTD sensor value linearized as PT1000 sensor in Fahrenheit*100 in the range of -5800 to +26600 for -58.0 to +266.0 °F<br>-32766,0x8002: Measured value is below -58°C<br>-32767,0x8001: Measured value is above +266°C<br>-32768,0x8000: The channel is not configured as RTD input |                               |                                                     |  |  |               |  |
| RTD INPUT2<br>AS PT1000 IN FAHRENHEIT                                                                                                                                                                                                                                                                | 3x41082<br>4x41082<br>I:41081 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Actual measured PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |
| RTD INPUT3<br>AS PT1000 IN FAHRENHEIT                                                                                                                                                                                                                                                                | 3x41083<br>4x41083<br>I:41082 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Actual measured PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |
| RTD INPUT4<br>AS PT1000 IN FAHRENHEIT                                                                                                                                                                                                                                                                | 3x41084<br>4x41084<br>I:41083 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Actual measured PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |
| RTD INPUT5<br>AS PT1000 IN FAHRENHEIT                                                                                                                                                                                                                                                                | 3x41085<br>4x41085<br>I:41084 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Actual measured PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |
| RTD INPUT6<br>AS PT1000 IN FAHRENHEIT                                                                                                                                                                                                                                                                | 3x41086<br>4x41086<br>I:41085 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |

|                                                                                                                                                                                                                                                                                                               |                               |                                                              |  |  |               |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------|--|--|---------------|--|
|                                                                                                                                                                                                                                                                                                               |                               | Actual measured PT1000 temperature RTDlx:-32768=N/V          |  |  |               |  |
| RTD INPUT7<br>AS PT1000 IN FAHRENHEIT                                                                                                                                                                                                                                                                         | 3x41087<br>4x41087<br>I:41086 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                               |                               | Actual measured PT1000 temperature RTDlx:-32768=N/V          |  |  |               |  |
| RTD INPUT8<br>AS PT1000 IN FAHRENHEIT                                                                                                                                                                                                                                                                         | 3x41088<br>4x41088<br>I:41087 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                               |                               | Actual measured PT1000 temperature RTDlx:-32768=N/V          |  |  |               |  |
| AIOX:RTD INPUTS NI1000-DIN43760 FAHRENHEIT                                                                                                                                                                                                                                                                    |                               |                                                              |  |  |               |  |
| RTD INPUT1<br>AS NI1000-DIN43760 IN FAHRENHEIT                                                                                                                                                                                                                                                                | 3x41089<br>4x41089<br>I:41088 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                               |                               | Actual measured NI1000-DIN43760 temperature RTDlx:-32768=N/V |  |  |               |  |
| Current measured RTD sensor value linearized as NI1000-DIN43760 sensor in Fahrenheit*100 in the range of -5800 to +26600 for -58.0 to +266.0 °F<br>-32766,0x8002: Measured value is below -58°C<br>-32767,0x8001: Measured value is above +266°C<br>-32768,0x8000: The channel is not configured as RTD input |                               |                                                              |  |  |               |  |
| RTD INPUT2<br>AS NI1000-DIN43760 IN FAHRENHEIT                                                                                                                                                                                                                                                                | 3x41090<br>4x41090<br>I:41089 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                               |                               | Actual measured NI1000-DIN43760 temperature RTDlx:-32768=N/V |  |  |               |  |
| RTD INPUT3<br>AS NI1000-DIN43760 IN FAHRENHEIT                                                                                                                                                                                                                                                                | 3x41091<br>4x41091<br>I:41090 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                               |                               | Actual measured NI1000-DIN43760 temperature RTDlx:-32768=N/V |  |  |               |  |
| RTD INPUT4<br>AS NI1000-DIN43760 IN FAHRENHEIT                                                                                                                                                                                                                                                                | 3x41092<br>4x41092<br>I:41091 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                               |                               | Actual measured NI1000-DIN43760 temperature RTDlx:-32768=N/V |  |  |               |  |
| RTD INPUT5<br>AS NI1000-DIN43760 IN FAHRENHEIT                                                                                                                                                                                                                                                                | 3x41093<br>4x41093<br>I:41092 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                               |                               | Actual measured NI1000-DIN43760 temperature RTDlx:-32768=N/V |  |  |               |  |
| RTD INPUT6<br>AS NI1000-DIN43760 IN FAHRENHEIT                                                                                                                                                                                                                                                                | 3x41094<br>4x41094<br>I:41093 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                               |                               | Actual measured NI1000-DIN43760 temperature RTDlx:-32768=N/V |  |  |               |  |
| RTD INPUT7<br>AS NI1000-DIN43760 IN FAHRENHEIT                                                                                                                                                                                                                                                                | 3x41095<br>4x41095<br>I:41094 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                               |                               | Actual measured NI1000-DIN43760 temperature RTDlx:-32768=N/V |  |  |               |  |
| RTD INPUT8<br>AS NI1000-DIN43760 IN FAHRENHEIT                                                                                                                                                                                                                                                                | 3x41096<br>4x41096<br>I:41095 | -32768,0x8000<br>B:80 00                                     |  |  | SINT16<br>R/O |  |

|                                                                                            |                               |                                                              |  |  |                |  |
|--------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------|--|--|----------------|--|
|                                                                                            |                               | Actual measured NI1000-DIN43760 temperature RTDlx:-32768=N/V |  |  |                |  |
| AIOX:RTD INPUTS OHM*100                                                                    |                               |                                                              |  |  |                |  |
| RTD INPUT1<br>IN OHM*100                                                                   | 3x41501<br>4x41501<br>I:41500 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF                       |  |  | UINT32<br>R/O  |  |
|                                                                                            |                               | Actual measured ohm value of RTDlx:-1=N/V                    |  |  |                |  |
| Current measured RTD in Ohm*100<br>=0xFFFFFFFF: The channel is not configured as RTD input |                               |                                                              |  |  |                |  |
| RTD INPUT2<br>IN OHM*100                                                                   | 3x41503<br>4x41503<br>I:41502 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF                       |  |  | UINT32<br>R/O  |  |
|                                                                                            |                               | Actual measured ohm value of RTDlx:-1=N/V                    |  |  |                |  |
| RTD INPUT3<br>IN OHM*100                                                                   | 3x41505<br>4x41505<br>I:41504 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF                       |  |  | UINT32<br>R/O  |  |
|                                                                                            |                               | Actual measured ohm value of RTDlx:-1=N/V                    |  |  |                |  |
| RTD INPUT4<br>IN OHM*100                                                                   | 3x41507<br>4x41507<br>I:41506 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF                       |  |  | UINT32<br>R/O  |  |
|                                                                                            |                               | Actual measured ohm value of RTDlx:-1=N/V                    |  |  |                |  |
| RTD INPUT5<br>IN OHM*100                                                                   | 3x41509<br>4x41509<br>I:41508 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF                       |  |  | UINT32<br>R/O  |  |
|                                                                                            |                               | Actual measured ohm value of RTDlx:-1=N/V                    |  |  |                |  |
| RTD INPUT6<br>IN OHM*100                                                                   | 3x41511<br>4x41511<br>I:41510 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF                       |  |  | UINT32<br>R/O  |  |
|                                                                                            |                               | Actual measured ohm value of RTDlx:-1=N/V                    |  |  |                |  |
| RTD INPUT7<br>IN OHM*100                                                                   | 3x41513<br>4x41513<br>I:41512 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF                       |  |  | UINT32<br>R/O  |  |
|                                                                                            |                               | Actual measured ohm value of RTDlx:-1=N/V                    |  |  |                |  |
| RTD INPUT8<br>IN OHM*100                                                                   | 3x41515<br>4x41515<br>I:41514 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF                       |  |  | UINT32<br>R/O  |  |
|                                                                                            |                               | Actual measured ohm value of RTDlx:-1=N/V                    |  |  |                |  |
| AIOX:RTD INPUTS OHM*100                                                                    |                               |                                                              |  |  |                |  |
| RTD INPUT1<br>IN OHM*100                                                                   | 3x41517<br>4x41517<br>I:41516 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF                       |  |  | UINT32R<br>R/O |  |
|                                                                                            |                               | Actual measured ohm value of RTDlx:-1=N/V                    |  |  |                |  |
| Current measured RTD in Ohm*100<br>=0xFFFFFFFF: The channel is not configured as RTD input |                               |                                                              |  |  |                |  |

|                          |                               |                                           |  |  |                |  |
|--------------------------|-------------------------------|-------------------------------------------|--|--|----------------|--|
| RTD INPUT2<br>IN OHM*100 | 3x41519<br>4x41519<br>I:41518 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF    |  |  | UINT32R<br>R/O |  |
|                          |                               | Actual measured ohm value of RTDIx:-1=N/V |  |  |                |  |
| RTD INPUT3<br>IN OHM*100 | 3x41521<br>4x41521<br>I:41520 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF    |  |  | UINT32R<br>R/O |  |
|                          |                               | Actual measured ohm value of RTDIx:-1=N/V |  |  |                |  |
| RTD INPUT4<br>IN OHM*100 | 3x41523<br>4x41523<br>I:41522 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF    |  |  | UINT32R<br>R/O |  |
|                          |                               | Actual measured ohm value of RTDIx:-1=N/V |  |  |                |  |
| RTD INPUT5<br>IN OHM*100 | 3x41525<br>4x41525<br>I:41524 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF    |  |  | UINT32R<br>R/O |  |
|                          |                               | Actual measured ohm value of RTDIx:-1=N/V |  |  |                |  |
| RTD INPUT6<br>IN OHM*100 | 3x41527<br>4x41527<br>I:41526 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF    |  |  | UINT32R<br>R/O |  |
|                          |                               | Actual measured ohm value of RTDIx:-1=N/V |  |  |                |  |
| RTD INPUT7<br>IN OHM*100 | 3x41529<br>4x41529<br>I:41528 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF    |  |  | UINT32R<br>R/O |  |
|                          |                               | Actual measured ohm value of RTDIx:-1=N/V |  |  |                |  |
| RTD INPUT8<br>IN OHM*100 | 3x41531<br>4x41531<br>I:41530 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF    |  |  | UINT32R<br>R/O |  |
|                          |                               | Actual measured ohm value of RTDIx:-1=N/V |  |  |                |  |

| Register NAME<br>Command NAME                                                                                                                                                                                                                                 | MODBUS<br>Register<br>ASCII<br>Command | Register VALUE<br>ASCII Command               | NEW REAL<br>VALUE | NEW<br>VALUE | DATA TYPE     | DO<br>WRITE |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------|-------------------|--------------|---------------|-------------|
| AIOX:AVERAGE RTD INPUTS OHM*10                                                                                                                                                                                                                                |                                        |                                               |                   |              |               |             |
| AVERAGE RTD INPUT1<br>IN OHM*10                                                                                                                                                                                                                               | 3x42001<br>4x42001<br>I:42000          | 65535,0xFFFF<br>B:FF FF                       |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                               |                                        | Measured average ohm value of RTDIx:65535=N/V |                   |              |               |             |
| Measured average RTD in Ohm*10 between 0 and 600000<br>=0..60000: Measured average resistance in Ohm*10<br>=65534,0xFFFF: The sensor or cabling is open (broken, not connected, or out of range)<br>=65535,0xFFFF: The channel is not configured as RTD input |                                        |                                               |                   |              |               |             |
| AVERAGE RTD INPUT2<br>IN OHM*10                                                                                                                                                                                                                               | 3x42002<br>4x42002<br>I:42001          | 65535,0xFFFF<br>B:FF FF                       |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                               |                                        | Measured average ohm value of RTDIx:65535=N/V |                   |              |               |             |
| AVERAGE RTD INPUT3<br>IN OHM*10                                                                                                                                                                                                                               | 3x42003<br>4x42003<br>I:42002          | 65535,0xFFFF<br>B:FF FF                       |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                               |                                        | Measured average ohm value of RTDIx:65535=N/V |                   |              |               |             |
| AVERAGE RTD INPUT4<br>IN OHM*10                                                                                                                                                                                                                               | 3x42004<br>4x42004<br>I:42003          | 65535,0xFFFF<br>B:FF FF                       |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                               |                                        | Measured average ohm value of RTDIx:65535=N/V |                   |              |               |             |
| AVERAGE RTD INPUT5<br>IN OHM*10                                                                                                                                                                                                                               | 3x42005<br>4x42005<br>I:42004          | 65535,0xFFFF<br>B:FF FF                       |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                               |                                        | Measured average ohm value of RTDIx:65535=N/V |                   |              |               |             |
| AVERAGE RTD INPUT6<br>IN OHM*10                                                                                                                                                                                                                               | 3x42006<br>4x42006<br>I:42005          | 65535,0xFFFF<br>B:FF FF                       |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                               |                                        | Measured average ohm value of RTDIx:65535=N/V |                   |              |               |             |
| AVERAGE RTD INPUT7<br>IN OHM*10                                                                                                                                                                                                                               | 3x42007<br>4x42007<br>I:42006          | 65535,0xFFFF<br>B:FF FF                       |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                               |                                        | Measured average ohm value of RTDIx:65535=N/V |                   |              |               |             |
| AVERAGE RTD INPUT8<br>IN OHM*10                                                                                                                                                                                                                               | 3x42008<br>4x42008<br>I:42007          | 65535,0xFFFF<br>B:FF FF                       |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                                                                                                               |                                        | Measured average ohm value of RTDIx:65535=N/V |                   |              |               |             |
| AIOX:AVERAGE RTD INPUTS OHM*1                                                                                                                                                                                                                                 |                                        |                                               |                   |              |               |             |

|                                                                                                                                                                                                                                                              |                               |                                               |  |  |               |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------|--|--|---------------|--|
| AVERAGE RTD INPUT1<br>IN OHM                                                                                                                                                                                                                                 | 3x42009<br>4x42009<br>I:42008 | 65535,0xFFFF<br>B:FF FF                       |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                              |                               | Measured average ohm value of RTDlx:65535=N/V |  |  |               |  |
| Measured average RTD in Ohm*1 between 0 and 60000<br>=0..60000: Measured average resistance in Ohm*1<br>=65534,0xFFFF: The sensor or cabling is open (broken, not connected, or out of range)<br>=65535,0xFFFF: The channel is not configured as RTD input   |                               |                                               |  |  |               |  |
| AVERAGE RTD INPUT2<br>IN OHM                                                                                                                                                                                                                                 | 3x42010<br>4x42010<br>I:42009 | 65535,0xFFFF<br>B:FF FF                       |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                              |                               | Measured average ohm value of RTDlx:65535=N/V |  |  |               |  |
| AVERAGE RTD INPUT3<br>IN OHM                                                                                                                                                                                                                                 | 3x42011<br>4x42011<br>I:42010 | 65535,0xFFFF<br>B:FF FF                       |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                              |                               | Measured average ohm value of RTDlx:65535=N/V |  |  |               |  |
| AVERAGE RTD INPUT4<br>IN OHM                                                                                                                                                                                                                                 | 3x42012<br>4x42012<br>I:42011 | 65535,0xFFFF<br>B:FF FF                       |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                              |                               | Measured average ohm value of RTDlx:65535=N/V |  |  |               |  |
| AVERAGE RTD INPUT5<br>IN OHM                                                                                                                                                                                                                                 | 3x42013<br>4x42013<br>I:42012 | 65535,0xFFFF<br>B:FF FF                       |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                              |                               | Measured average ohm value of RTDlx:65535=N/V |  |  |               |  |
| AVERAGE RTD INPUT6<br>IN OHM                                                                                                                                                                                                                                 | 3x42014<br>4x42014<br>I:42013 | 65535,0xFFFF<br>B:FF FF                       |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                              |                               | Measured average ohm value of RTDlx:65535=N/V |  |  |               |  |
| AVERAGE RTD INPUT7<br>IN OHM                                                                                                                                                                                                                                 | 3x42015<br>4x42015<br>I:42014 | 65535,0xFFFF<br>B:FF FF                       |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                              |                               | Measured average ohm value of RTDlx:65535=N/V |  |  |               |  |
| AVERAGE RTD INPUT8<br>IN OHM                                                                                                                                                                                                                                 | 3x42016<br>4x42016<br>I:42015 | 65535,0xFFFF<br>B:FF FF                       |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                              |                               | Measured average ohm value of RTDlx:65535=N/V |  |  |               |  |
| AIOX:AVERAGE RTD INPUTS OHM/10                                                                                                                                                                                                                               |                               |                                               |  |  |               |  |
| AVERAGE RTD INPUT1<br>IN OHM/10                                                                                                                                                                                                                              | 3x42017<br>4x42017<br>I:42016 | 65535,0xFFFF<br>B:FF FF                       |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                              |                               | Measured average ohm value of RTDlx:65535=N/V |  |  |               |  |
| Measured average RTD in Ohm/10 between 0 and 60000<br>=0..60000: Measured average resistance in Ohm/10<br>=65534,0xFFFF: The sensor or cabling is open (broken, not connected, or out of range)<br>=65535,0xFFFF: The channel is not configured as RTD input |                               |                                               |  |  |               |  |

|                                                                                                                                                                                                                                                                                                             |                               |                                                     |  |  |               |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------|--|--|---------------|--|
| AVERAGE RTD INPUT2<br>IN OHM/10                                                                                                                                                                                                                                                                             | 3x42018<br>4x42018<br>I:42017 | 65535,0xFFFF<br>B:FF FF                             |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                             |                               | Measured average ohm value of RTDIx:65535=N/V       |  |  |               |  |
| AVERAGE RTD INPUT3<br>IN OHM/10                                                                                                                                                                                                                                                                             | 3x42019<br>4x42019<br>I:42018 | 65535,0xFFFF<br>B:FF FF                             |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                             |                               | Measured average ohm value of RTDIx:65535=N/V       |  |  |               |  |
| AVERAGE RTD INPUT4<br>IN OHM/10                                                                                                                                                                                                                                                                             | 3x42020<br>4x42020<br>I:42019 | 65535,0xFFFF<br>B:FF FF                             |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                             |                               | Measured average ohm value of RTDIx:65535=N/V       |  |  |               |  |
| AVERAGE RTD INPUT5<br>IN OHM/10                                                                                                                                                                                                                                                                             | 3x42021<br>4x42021<br>I:42020 | 65535,0xFFFF<br>B:FF FF                             |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                             |                               | Measured average ohm value of RTDIx:65535=N/V       |  |  |               |  |
| AVERAGE RTD INPUT6<br>IN OHM/10                                                                                                                                                                                                                                                                             | 3x42022<br>4x42022<br>I:42021 | 65535,0xFFFF<br>B:FF FF                             |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                             |                               | Measured average ohm value of RTDIx:65535=N/V       |  |  |               |  |
| AVERAGE RTD INPUT7<br>IN OHM/10                                                                                                                                                                                                                                                                             | 3x42023<br>4x42023<br>I:42022 | 65535,0xFFFF<br>B:FF FF                             |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                             |                               | Measured average ohm value of RTDIx:65535=N/V       |  |  |               |  |
| AVERAGE RTD INPUT8<br>IN OHM/10                                                                                                                                                                                                                                                                             | 3x42024<br>4x42024<br>I:42023 | 65535,0xFFFF<br>B:FF FF                             |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                             |                               | Measured average ohm value of RTDIx:65535=N/V       |  |  |               |  |
| AIOX:AVERAGE RTD INPUTS PT100 CELSIUS                                                                                                                                                                                                                                                                       |                               |                                                     |  |  |               |  |
| AVERAGE RTD INPUT1<br>AS PT100 IN CELSIUS                                                                                                                                                                                                                                                                   | 3x42025<br>4x42025<br>I:42024 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                             |                               | Measured average PT100 temperature RTDIx:-32768=N/V |  |  |               |  |
| Calculated average value of RTD sensor value linearized as PT100 sensor in Celsius*100 in the range of -5000 to +13000 for -50.0 to +130.0 °C<br>-32766,0x8002: Measured value is below -50°C<br>-32767,0x8001: Measured value is above +130°C<br>-32768,0x8000: The channel is not configured as RTD input |                               |                                                     |  |  |               |  |
| AVERAGE RTD INPUT2<br>AS PT100 IN CELSIUS                                                                                                                                                                                                                                                                   | 3x42026<br>4x42026<br>I:42025 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                             |                               | Measured average PT100 temperature RTDIx:-32768=N/V |  |  |               |  |
| AVERAGE RTD INPUT3<br>AS PT100 IN CELSIUS                                                                                                                                                                                                                                                                   | 3x42027<br>4x42027<br>I:42026 | -32768,0x8000<br>B:80 00                            |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                             |                               | Measured average PT100 temperature RTDIx:-32768=N/V |  |  |               |  |

|                                                                                                                                                                                                                                                                                                              |                               |                                                      |  |  |               |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------|--|--|---------------|--|
| AVERAGE RTD INPUT4<br>AS PT100 IN CELSIUS                                                                                                                                                                                                                                                                    | 3x42028<br>4x42028<br>I:42027 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                              |                               | Measured average PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| AVERAGE RTD INPUT5<br>AS PT100 IN CELSIUS                                                                                                                                                                                                                                                                    | 3x42029<br>4x42029<br>I:42028 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                              |                               | Measured average PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| AVERAGE RTD INPUT6<br>AS PT100 IN CELSIUS                                                                                                                                                                                                                                                                    | 3x42030<br>4x42030<br>I:42029 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                              |                               | Measured average PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| AVERAGE RTD INPUT7<br>AS PT100 IN CELSIUS                                                                                                                                                                                                                                                                    | 3x42031<br>4x42031<br>I:42030 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                              |                               | Measured average PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| AVERAGE RTD INPUT8<br>AS PT100 IN CELSIUS                                                                                                                                                                                                                                                                    | 3x42032<br>4x42032<br>I:42031 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                              |                               | Measured average PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| AIOX:AVERAGE RTD INPUTS PT1000 CELSIUS                                                                                                                                                                                                                                                                       |                               |                                                      |  |  |               |  |
| AVERAGE RTD INPUT1<br>AS PT1000 IN CELSIUS                                                                                                                                                                                                                                                                   | 3x42033<br>4x42033<br>I:42032 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                              |                               | Measured average PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |
| Calculated average value of RTD sensor value linearized as PT1000 sensor in Celsius*100 in the range of -5000 to +13000 for -50.0 to +130.0 °C<br>-32766,0x8002: Measured value is below -50°C<br>-32767,0x8001: Measured value is above +130°C<br>-32768,0x8000: The channel is not configured as RTD input |                               |                                                      |  |  |               |  |
| AVERAGE RTD INPUT2<br>AS PT1000 IN CELSIUS                                                                                                                                                                                                                                                                   | 3x42034<br>4x42034<br>I:42033 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                              |                               | Measured average PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |
| AVERAGE RTD INPUT3<br>AS PT1000 IN CELSIUS                                                                                                                                                                                                                                                                   | 3x42035<br>4x42035<br>I:42034 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                              |                               | Measured average PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |
| AVERAGE RTD INPUT4<br>AS PT1000 IN CELSIUS                                                                                                                                                                                                                                                                   | 3x42036<br>4x42036<br>I:42035 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                              |                               | Measured average PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |
| AVERAGE RTD INPUT5<br>AS PT1000 IN CELSIUS                                                                                                                                                                                                                                                                   | 3x42037<br>4x42037<br>I:42036 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                              |                               | Measured average PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |

|                                                                                                                                                                                                                                                                                                                       |                               |                                                               |  |  |               |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------|--|--|---------------|--|
| AVERAGE RTD INPUT6<br>AS PT1000 IN CELSIUS                                                                                                                                                                                                                                                                            | 3x42038<br>4x42038<br>I:42037 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                       |                               | Measured average PT1000 temperature RTDIx:-32768=N/V          |  |  |               |  |
| AVERAGE RTD INPUT7<br>AS PT1000 IN CELSIUS                                                                                                                                                                                                                                                                            | 3x42039<br>4x42039<br>I:42038 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                       |                               | Measured average PT1000 temperature RTDIx:-32768=N/V          |  |  |               |  |
| AVERAGE RTD INPUT8<br>AS PT1000 IN CELSIUS                                                                                                                                                                                                                                                                            | 3x42040<br>4x42040<br>I:42039 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                       |                               | Measured average PT1000 temperature RTDIx:-32768=N/V          |  |  |               |  |
| AIOX:AVERAGE RTD INPUTS NI1000-DIN43760 CELSIUS                                                                                                                                                                                                                                                                       |                               |                                                               |  |  |               |  |
| AVERAGE RTD INPUT1<br>AS NI1000-DIN43760 IN CELSIUS                                                                                                                                                                                                                                                                   | 3x42041<br>4x42041<br>I:42040 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                       |                               | Measured average NI1000-DIN43760 temperature RTDIx:-32768=N/V |  |  |               |  |
| Calculated average value of RTD sensor value linearized as NI1000-DIN43760 sensor in Celsius*100 in the range of -5000 to +13000 for -50.0 to +130.0 °C<br>-32766,0x8002: Measured value is below -50°C<br>-32767,0x8001: Measured value is above +130°C<br>-32768,0x8000: The channel is not configured as RTD input |                               |                                                               |  |  |               |  |
| AVERAGE RTD INPUT2<br>AS NI1000-DIN43760 IN CELSIUS                                                                                                                                                                                                                                                                   | 3x42042<br>4x42042<br>I:42041 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                       |                               | Measured average NI1000-DIN43760 temperature RTDIx:-32768=N/V |  |  |               |  |
| AVERAGE RTD INPUT3<br>AS NI1000-DIN43760 IN CELSIUS                                                                                                                                                                                                                                                                   | 3x42043<br>4x42043<br>I:42042 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                       |                               | Measured average NI1000-DIN43760 temperature RTDIx:-32768=N/V |  |  |               |  |
| AVERAGE RTD INPUT4<br>AS NI1000-DIN43760 IN CELSIUS                                                                                                                                                                                                                                                                   | 3x42044<br>4x42044<br>I:42043 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                       |                               | Measured average NI1000-DIN43760 temperature RTDIx:-32768=N/V |  |  |               |  |
| AVERAGE RTD INPUT5<br>AS NI1000-DIN43760 IN CELSIUS                                                                                                                                                                                                                                                                   | 3x42045<br>4x42045<br>I:42044 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                       |                               | Measured average NI1000-DIN43760 temperature RTDIx:-32768=N/V |  |  |               |  |
| AVERAGE RTD INPUT6<br>AS NI1000-DIN43760 IN CELSIUS                                                                                                                                                                                                                                                                   | 3x42046<br>4x42046<br>I:42045 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                       |                               | Measured average NI1000-DIN43760 temperature RTDIx:-32768=N/V |  |  |               |  |
| AVERAGE RTD INPUT7<br>AS NI1000-DIN43760 IN CELSIUS                                                                                                                                                                                                                                                                   | 3x42047<br>4x42047<br>I:42046 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                       |                               | Measured average NI1000-DIN43760 temperature RTDIx:-32768=N/V |  |  |               |  |

|                                                                                                                                                                                                                                                                                                      |                               |                                                               |  |  |               |  |
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| AVERAGE RTD INPUT8<br>AS NI1000-DIN43760 IN CELSIUS                                                                                                                                                                                                                                                  | 3x42048<br>4x42048<br>I:42047 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Measured average NI1000-DIN43760 temperature RTDlx:-32768=N/V |  |  |               |  |
| AIOX:AVERAGE RTD INPUTS PT100 KELVIN                                                                                                                                                                                                                                                                 |                               |                                                               |  |  |               |  |
| AVERAGE RTD INPUT1<br>AS PT100 IN KELVIN                                                                                                                                                                                                                                                             | 3x42049<br>4x42049<br>I:42048 | 65535,0xFFFF<br>B:FF FF                                       |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Measured average PT100 temperature RTDlx:65535=655,35°K       |  |  |               |  |
| Average value of measured RTD sensor linearized as PT100 sensor in Kelvin*100 in the range of 22315 to 40315 for 223.15 to 403.15 °K<br>65533,0xFFFD: Measured value is below 223,15°K<br>65534,0xFFFE: Measured value is above 403,15°K<br>65535,0xFFFF: The channel is not configured as RTD input |                               |                                                               |  |  |               |  |
| AVERAGE RTD INPUT2<br>AS PT100 IN KELVIN                                                                                                                                                                                                                                                             | 3x42050<br>4x42050<br>I:42049 | 65535,0xFFFF<br>B:FF FF                                       |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Measured average PT100 temperature RTDlx:65535=655,35°K       |  |  |               |  |
| AVERAGE RTD INPUT3<br>AS PT100 IN KELVIN                                                                                                                                                                                                                                                             | 3x42051<br>4x42051<br>I:42050 | 65535,0xFFFF<br>B:FF FF                                       |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Measured average PT100 temperature RTDlx:65535=655,35°K       |  |  |               |  |
| AVERAGE RTD INPUT4<br>AS PT100 IN KELVIN                                                                                                                                                                                                                                                             | 3x42052<br>4x42052<br>I:42051 | 65535,0xFFFF<br>B:FF FF                                       |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Measured average PT100 temperature RTDlx:65535=655,35°K       |  |  |               |  |
| AVERAGE RTD INPUT5<br>AS PT100 IN KELVIN                                                                                                                                                                                                                                                             | 3x42053<br>4x42053<br>I:42052 | 65535,0xFFFF<br>B:FF FF                                       |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Measured average PT100 temperature RTDlx:65535=655,35°K       |  |  |               |  |
| AVERAGE RTD INPUT6<br>AS PT100 IN KELVIN                                                                                                                                                                                                                                                             | 3x42054<br>4x42054<br>I:42053 | 65535,0xFFFF<br>B:FF FF                                       |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Measured average PT100 temperature RTDlx:65535=655,35°K       |  |  |               |  |
| AVERAGE RTD INPUT7<br>AS PT100 IN KELVIN                                                                                                                                                                                                                                                             | 3x42055<br>4x42055<br>I:42054 | 65535,0xFFFF<br>B:FF FF                                       |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Measured average PT100 temperature RTDlx:65535=655,35°K       |  |  |               |  |
| AVERAGE RTD INPUT8<br>AS PT100 IN KELVIN                                                                                                                                                                                                                                                             | 3x42056<br>4x42056<br>I:42055 | 65535,0xFFFF<br>B:FF FF                                       |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                      |                               | Measured average PT100 temperature RTDlx:65535=655,35°K       |  |  |               |  |
| AIOX:AVERAGE RTD INPUTS PT1000 KELVIN                                                                                                                                                                                                                                                                |                               |                                                               |  |  |               |  |
| AVERAGE RTD INPUT1<br>AS PT1000 IN KELVIN                                                                                                                                                                                                                                                            | 3x42057<br>4x42057<br>I:42056 | 65535,0xFFFF<br>B:FF FF                                       |  |  | UINT16<br>R/O |  |

|                                                                                                                                                                                                                                                                                                                |                               |                                                                   |  |               |
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|                                                                                                                                                                                                                                                                                                                |                               | Measured average PT1000 temperature RTDlx:65535=655,35°K          |  |               |
| Average value of measured RTD sensor linearized as PT1000 sensor in Kelvin*100 in the range of 22315 to 40315 for 223.15 to 403.15 °K<br>65533,0xFFFD: Measured value is below 223,15°K<br>65534,0xFFFE: Measured value is above 403,15°K<br>65535,0xFFFF: The channel is not configured as RTD input          |                               |                                                                   |  |               |
| AVERAGE RTD INPUT2<br>AS PT1000 IN KELVIN                                                                                                                                                                                                                                                                      | 3x42058<br>4x42058<br>I:42057 | 65535,0xFFFF<br>B:FF FF                                           |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                |                               | Measured average PT1000 temperature RTDlx:65535=655,35°K          |  |               |
| AVERAGE RTD INPUT3<br>AS PT1000 IN KELVIN                                                                                                                                                                                                                                                                      | 3x42059<br>4x42059<br>I:42058 | 65535,0xFFFF<br>B:FF FF                                           |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                |                               | Measured average PT1000 temperature RTDlx:65535=655,35°K          |  |               |
| AVERAGE RTD INPUT4<br>AS PT1000 IN KELVIN                                                                                                                                                                                                                                                                      | 3x42060<br>4x42060<br>I:42059 | 65535,0xFFFF<br>B:FF FF                                           |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                |                               | Measured average PT1000 temperature RTDlx:65535=655,35°K          |  |               |
| AVERAGE RTD INPUT5<br>AS PT1000 IN KELVIN                                                                                                                                                                                                                                                                      | 3x42061<br>4x42061<br>I:42060 | 65535,0xFFFF<br>B:FF FF                                           |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                |                               | Measured average PT1000 temperature RTDlx:65535=655,35°K          |  |               |
| AVERAGE RTD INPUT6<br>AS PT1000 IN KELVIN                                                                                                                                                                                                                                                                      | 3x42062<br>4x42062<br>I:42061 | 65535,0xFFFF<br>B:FF FF                                           |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                |                               | Measured average PT1000 temperature RTDlx:65535=655,35°K          |  |               |
| AVERAGE RTD INPUT7<br>AS PT1000 IN KELVIN                                                                                                                                                                                                                                                                      | 3x42063<br>4x42063<br>I:42062 | 65535,0xFFFF<br>B:FF FF                                           |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                |                               | Measured average PT1000 temperature RTDlx:65535=655,35°K          |  |               |
| AVERAGE RTD INPUT8<br>AS PT1000 IN KELVIN                                                                                                                                                                                                                                                                      | 3x42064<br>4x42064<br>I:42063 | 65535,0xFFFF<br>B:FF FF                                           |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                |                               | Measured average PT1000 temperature RTDlx:65535=655,35°K          |  |               |
| <b>AIOX:AVERAGE RTD INPUTS NI1000-DIN43760 KELVIN</b>                                                                                                                                                                                                                                                          |                               |                                                                   |  |               |
| AVERAGE RTD INPUT1<br>AS NI1000-DIN43760 IN KELVIN                                                                                                                                                                                                                                                             | 3x42065<br>4x42065<br>I:42064 | 65535,0xFFFF<br>B:FF FF                                           |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                |                               | Measured average NI1000-DIN43760 temperature RTDlx:65535=655,35°K |  |               |
| Average value of measured RTD sensor linearized as NI1000-DIN43760 sensor in Kelvin*100 in the range of 22315 to 40315 for 223.15 to 403.15 °K<br>65533,0xFFFD: Measured value is below 223,15°K<br>65534,0xFFFE: Measured value is above 403,15°K<br>65535,0xFFFF: The channel is not configured as RTD input |                               |                                                                   |  |               |
| AVERAGE RTD INPUT2<br>AS NI1000-DIN43760 IN KELVIN                                                                                                                                                                                                                                                             | 3x42066<br>4x42066<br>I:42065 | 65535,0xFFFF<br>B:FF FF                                           |  | UINT16<br>R/O |

|                                                                                                                                                                                                                                                                                                              |                               |                                                                   |  |  |               |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------------------------------------------|--|--|---------------|--|
|                                                                                                                                                                                                                                                                                                              |                               | Measured average NI1000-DIN43760 temperature RTDlx:65535=655,35°K |  |  |               |  |
| AVERAGE RTD INPUT3<br>AS NI1000-DIN43760 IN KELVIN                                                                                                                                                                                                                                                           | 3x42067<br>4x42067<br>I:42066 | 65535,0xFFFF<br>B:FF FF                                           |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                              |                               | Measured average NI1000-DIN43760 temperature RTDlx:65535=655,35°K |  |  |               |  |
| AVERAGE RTD INPUT4<br>AS NI1000-DIN43760 IN KELVIN                                                                                                                                                                                                                                                           | 3x42068<br>4x42068<br>I:42067 | 65535,0xFFFF<br>B:FF FF                                           |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                              |                               | Measured average NI1000-DIN43760 temperature RTDlx:65535=655,35°K |  |  |               |  |
| AVERAGE RTD INPUT5<br>AS NI1000-DIN43760 IN KELVIN                                                                                                                                                                                                                                                           | 3x42069<br>4x42069<br>I:42068 | 65535,0xFFFF<br>B:FF FF                                           |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                              |                               | Measured average NI1000-DIN43760 temperature RTDlx:65535=655,35°K |  |  |               |  |
| AVERAGE RTD INPUT6<br>AS NI1000-DIN43760 IN KELVIN                                                                                                                                                                                                                                                           | 3x42070<br>4x42070<br>I:42069 | 65535,0xFFFF<br>B:FF FF                                           |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                              |                               | Measured average NI1000-DIN43760 temperature RTDlx:65535=655,35°K |  |  |               |  |
| AVERAGE RTD INPUT7<br>AS NI1000-DIN43760 IN KELVIN                                                                                                                                                                                                                                                           | 3x42071<br>4x42071<br>I:42070 | 65535,0xFFFF<br>B:FF FF                                           |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                              |                               | Measured average NI1000-DIN43760 temperature RTDlx:65535=655,35°K |  |  |               |  |
| AVERAGE RTD INPUT8<br>AS NI1000-DIN43760 IN KELVIN                                                                                                                                                                                                                                                           | 3x42072<br>4x42072<br>I:42071 | 65535,0xFFFF<br>B:FF FF                                           |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                              |                               | Measured average NI1000-DIN43760 temperature RTDlx:65535=655,35°K |  |  |               |  |
| AIOX:AVERAGE RTD INPUTS PT100 FAHRENHEIT                                                                                                                                                                                                                                                                     |                               |                                                                   |  |  |               |  |
| AVERAGE RTD INPUT1<br>AS PT100 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x42073<br>4x42073<br>I:42072 | -32768,0x8000<br>B:80 00                                          |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                              |                               | Measured average PT100 temperature RTDlx:-32768=N/V               |  |  |               |  |
| Average value of measured RTD sensor value linearized as PT100 sensor in Fahrenheit*100 in the range of -5800 to +26600 for -58.0 to +266.0 °F<br>-32766,0x8002: Measured value is below -58°C<br>-32767,0x8001: Measured value is above +266°C<br>-32768,0x8000: The channel is not configured as RTD input |                               |                                                                   |  |  |               |  |
| AVERAGE RTD INPUT2<br>AS PT100 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x42074<br>4x42074<br>I:42073 | -32768,0x8000<br>B:80 00                                          |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                              |                               | Measured average PT100 temperature RTDlx:-32768=N/V               |  |  |               |  |
| AVERAGE RTD INPUT3<br>AS PT100 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x42075<br>4x42075<br>I:42074 | -32768,0x8000<br>B:80 00                                          |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                              |                               | Measured average PT100 temperature RTDlx:-32768=N/V               |  |  |               |  |
| AVERAGE RTD INPUT4<br>AS PT100 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x42076<br>4x42076<br>I:42075 | -32768,0x8000<br>B:80 00                                          |  |  | SINT16<br>R/O |  |

|                                                                                                                                                                                                                                                                                                               |                               |                                                      |  |  |               |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------|--|--|---------------|--|
|                                                                                                                                                                                                                                                                                                               |                               | Measured average PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| AVERAGE RTD INPUT5<br>AS PT100 IN FAHRENHEIT                                                                                                                                                                                                                                                                  | 3x42077<br>4x42077<br>I:42076 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                               |                               | Measured average PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| AVERAGE RTD INPUT6<br>AS PT100 IN FAHRENHEIT                                                                                                                                                                                                                                                                  | 3x42078<br>4x42078<br>I:42077 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                               |                               | Measured average PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| AVERAGE RTD INPUT7<br>AS PT100 IN FAHRENHEIT                                                                                                                                                                                                                                                                  | 3x42079<br>4x42079<br>I:42078 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                               |                               | Measured average PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| AVERAGE RTD INPUT8<br>AS PT100 IN FAHRENHEIT                                                                                                                                                                                                                                                                  | 3x42080<br>4x42080<br>I:42079 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                               |                               | Measured average PT100 temperature RTDlx:-32768=N/V  |  |  |               |  |
| AIOX:AVERAGE RTD INPUTS PT1000 FAHRENHEIT                                                                                                                                                                                                                                                                     |                               |                                                      |  |  |               |  |
| AVERAGE RTD INPUT1<br>AS PT1000 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x42081<br>4x42081<br>I:42080 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                               |                               | Measured average PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |
| Average value of measured RTD sensor value linearized as PT1000 sensor in Fahrenheit*100 in the range of -5800 to +26600 for -58.0 to +266.0 °F<br>-32766,0x8002: Measured value is below -58°C<br>-32767,0x8001: Measured value is above +266°C<br>-32768,0x8000: The channel is not configured as RTD input |                               |                                                      |  |  |               |  |
| AVERAGE RTD INPUT2<br>AS PT1000 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x42082<br>4x42082<br>I:42081 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                               |                               | Measured average PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |
| AVERAGE RTD INPUT3<br>AS PT1000 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x42083<br>4x42083<br>I:42082 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                               |                               | Measured average PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |
| AVERAGE RTD INPUT4<br>AS PT1000 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x42084<br>4x42084<br>I:42083 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                               |                               | Measured average PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |
| AVERAGE RTD INPUT5<br>AS PT1000 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x42085<br>4x42085<br>I:42084 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                               |                               | Measured average PT1000 temperature RTDlx:-32768=N/V |  |  |               |  |
| AVERAGE RTD INPUT6<br>AS PT1000 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x42086<br>4x42086<br>I:42085 | -32768,0x8000<br>B:80 00                             |  |  | SINT16<br>R/O |  |

|                                                                                                                                                                                                                                                                                                                        |                               |                                                               |  |  |               |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------|--|--|---------------|--|
|                                                                                                                                                                                                                                                                                                                        |                               | Measured average PT1000 temperature RTDIx:-32768=N/V          |  |  |               |  |
| AVERAGE RTD INPUT7<br>AS PT1000 IN FAHRENHEIT                                                                                                                                                                                                                                                                          | 3x42087<br>4x42087<br>I:42086 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                        |                               | Measured average PT1000 temperature RTDIx:-32768=N/V          |  |  |               |  |
| AVERAGE RTD INPUT8<br>AS PT1000 IN FAHRENHEIT                                                                                                                                                                                                                                                                          | 3x42088<br>4x42088<br>I:42087 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                        |                               | Measured average PT1000 temperature RTDIx:-32768=N/V          |  |  |               |  |
| AIOX:AVERAGE RTD INPUTS NI1000-DIN43760 FAHRENHEIT                                                                                                                                                                                                                                                                     |                               |                                                               |  |  |               |  |
| AVERAGE RTD INPUT1<br>AS NI1000-DIN43760 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x42089<br>4x42089<br>I:42088 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                        |                               | Measured average NI1000-DIN43760 temperature RTDIx:-32768=N/V |  |  |               |  |
| Average value of measured RTD sensor value linearized as NI1000-DIN43760 sensor in Fahrenheit*100 in the range of -5800 to +26600 for -58.0 to +266.0 °F<br>-32766,0x8002: Measured value is below -58°C<br>-32767,0x8001: Measured value is above +266°C<br>-32768,0x8000: The channel is not configured as RTD input |                               |                                                               |  |  |               |  |
| AVERAGE RTD INPUT2<br>AS NI1000-DIN43760 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x42090<br>4x42090<br>I:42089 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                        |                               | Measured average NI1000-DIN43760 temperature RTDIx:-32768=N/V |  |  |               |  |
| AVERAGE RTD INPUT3<br>AS NI1000-DIN43760 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x42091<br>4x42091<br>I:42090 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                        |                               | Measured average NI1000-DIN43760 temperature RTDIx:-32768=N/V |  |  |               |  |
| AVERAGE RTD INPUT4<br>AS NI1000-DIN43760 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x42092<br>4x42092<br>I:42091 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                        |                               | Measured average NI1000-DIN43760 temperature RTDIx:-32768=N/V |  |  |               |  |
| AVERAGE RTD INPUT5<br>AS NI1000-DIN43760 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x42093<br>4x42093<br>I:42092 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                        |                               | Measured average NI1000-DIN43760 temperature RTDIx:-32768=N/V |  |  |               |  |
| AVERAGE RTD INPUT6<br>AS NI1000-DIN43760 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x42094<br>4x42094<br>I:42093 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                        |                               | Measured average NI1000-DIN43760 temperature RTDIx:-32768=N/V |  |  |               |  |
| AVERAGE RTD INPUT7<br>AS NI1000-DIN43760 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x42095<br>4x42095<br>I:42094 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                        |                               | Measured average NI1000-DIN43760 temperature RTDIx:-32768=N/V |  |  |               |  |
| AVERAGE RTD INPUT8<br>AS NI1000-DIN43760 IN FAHRENHEIT                                                                                                                                                                                                                                                                 | 3x42096<br>4x42096<br>I:42095 | -32768,0x8000<br>B:80 00                                      |  |  | SINT16<br>R/O |  |

|                                                                                            |                               |                                                               |  |  |                |  |
|--------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------|--|--|----------------|--|
|                                                                                            |                               | Measured average NI1000-DIN43760 temperature RTDIx:-32768=N/V |  |  |                |  |
| AIOX:RTD INPUTS OHM*100                                                                    |                               |                                                               |  |  |                |  |
| AVERAGE RTD INPUT1<br>IN OHM*100                                                           | 3x42501<br>4x42501<br>I:42500 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF                        |  |  | UINT32<br>R/O  |  |
|                                                                                            |                               | Measured average ohm value of RTDIx:-1=N/V                    |  |  |                |  |
| Measured average RTD in Ohm*100<br>=0xFFFFFFFF: The channel is not configured as RTD input |                               |                                                               |  |  |                |  |
| AVERAGE RTD INPUT2<br>IN OHM*100                                                           | 3x42503<br>4x42503<br>I:42502 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF                        |  |  | UINT32<br>R/O  |  |
|                                                                                            |                               | Measured average ohm value of RTDIx:-1=N/V                    |  |  |                |  |
| AVERAGE RTD INPUT3<br>IN OHM*100                                                           | 3x42505<br>4x42505<br>I:42504 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF                        |  |  | UINT32<br>R/O  |  |
|                                                                                            |                               | Measured average ohm value of RTDIx:-1=N/V                    |  |  |                |  |
| AVERAGE RTD INPUT4<br>IN OHM*100                                                           | 3x42507<br>4x42507<br>I:42506 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF                        |  |  | UINT32<br>R/O  |  |
|                                                                                            |                               | Measured average ohm value of RTDIx:-1=N/V                    |  |  |                |  |
| AVERAGE RTD INPUT5<br>IN OHM*100                                                           | 3x42509<br>4x42509<br>I:42508 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF                        |  |  | UINT32<br>R/O  |  |
|                                                                                            |                               | Measured average ohm value of RTDIx:-1=N/V                    |  |  |                |  |
| AVERAGE RTD INPUT6<br>IN OHM*100                                                           | 3x42511<br>4x42511<br>I:42510 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF                        |  |  | UINT32<br>R/O  |  |
|                                                                                            |                               | Measured average ohm value of RTDIx:-1=N/V                    |  |  |                |  |
| AVERAGE RTD INPUT7<br>IN OHM*100                                                           | 3x42513<br>4x42513<br>I:42512 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF                        |  |  | UINT32<br>R/O  |  |
|                                                                                            |                               | Measured average ohm value of RTDIx:-1=N/V                    |  |  |                |  |
| AVERAGE RTD INPUT8<br>IN OHM*100                                                           | 3x42515<br>4x42515<br>I:42514 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF                        |  |  | UINT32<br>R/O  |  |
|                                                                                            |                               | Measured average ohm value of RTDIx:-1=N/V                    |  |  |                |  |
| AIOX:AVERAGE RTD INPUTS OHM*100                                                            |                               |                                                               |  |  |                |  |
| AVERAGE RTD INPUT1<br>IN OHM*100                                                           | 3x42517<br>4x42517<br>I:42516 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF                        |  |  | UINT32R<br>R/O |  |
|                                                                                            |                               | Measured average ohm value of RTDIx:-1=N/V                    |  |  |                |  |
| Measured average RTD in Ohm*100<br>=0xFFFFFFFF: The channel is not configured as RTD input |                               |                                                               |  |  |                |  |

|                                  |                               |                                            |  |  |                |  |
|----------------------------------|-------------------------------|--------------------------------------------|--|--|----------------|--|
| AVERAGE RTD INPUT2<br>IN OHM*100 | 3x42519<br>4x42519<br>I:42518 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF     |  |  | UINT32R<br>R/O |  |
|                                  |                               | Measured average ohm value of RTDix:-1=N/V |  |  |                |  |
| AVERAGE RTD INPUT3<br>IN OHM*100 | 3x42521<br>4x42521<br>I:42520 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF     |  |  | UINT32R<br>R/O |  |
|                                  |                               | Measured average ohm value of RTDix:-1=N/V |  |  |                |  |
| AVERAGE RTD INPUT4<br>IN OHM*100 | 3x42523<br>4x42523<br>I:42522 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF     |  |  | UINT32R<br>R/O |  |
|                                  |                               | Measured average ohm value of RTDix:-1=N/V |  |  |                |  |
| AVERAGE RTD INPUT5<br>IN OHM*100 | 3x42525<br>4x42525<br>I:42524 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF     |  |  | UINT32R<br>R/O |  |
|                                  |                               | Measured average ohm value of RTDix:-1=N/V |  |  |                |  |
| AVERAGE RTD INPUT6<br>IN OHM*100 | 3x42527<br>4x42527<br>I:42526 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF     |  |  | UINT32R<br>R/O |  |
|                                  |                               | Measured average ohm value of RTDix:-1=N/V |  |  |                |  |
| AVERAGE RTD INPUT7<br>IN OHM*100 | 3x42529<br>4x42529<br>I:42528 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF     |  |  | UINT32R<br>R/O |  |
|                                  |                               | Measured average ohm value of RTDix:-1=N/V |  |  |                |  |
| AVERAGE RTD INPUT8<br>IN OHM*100 | 3x42531<br>4x42531<br>I:42530 | 4294967295,0xFFFFFFFF<br>B:FF FF FF FF     |  |  | UINT32R<br>R/O |  |
|                                  |                               | Measured average ohm value of RTDix:-1=N/V |  |  |                |  |

| Register NAME<br>Command NAME                                                                                                                                                 | MODBUS<br>Register<br>ASCII<br>Command | Register VALUE<br>ASCII Command               | NEW REAL<br>VALUE | NEW<br>VALUE | DATA TYPE     | DO<br>WRITE |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------|-------------------|--------------|---------------|-------------|
| AIOX CHIP TEMPERATURE                                                                                                                                                         |                                        |                                               |                   |              |               |             |
| TEMPERATURE CHIP 1<br>IN CELSIUS                                                                                                                                              | 3x43001<br>4x43001<br>l:43000          | 464,0x01D0<br>B:01 D0                         |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                               |                                        | Actual measured temperature of CHIPx:46,4°C   |                   |              |               |             |
| Current measured chip temperature for CHIPx in x*10 °C. Each CHIP supports 4 AIOX channels.                                                                                   |                                        |                                               |                   |              |               |             |
| TEMPERATURE CHIP 2<br>IN CELSIUS                                                                                                                                              | 3x43002<br>4x43002<br>l:43001          | 475,0x01DB<br>B:01 DB                         |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                               |                                        | Actual measured temperature of CHIPx:47,5°C   |                   |              |               |             |
| AIOX CHIP TEMPERATURE                                                                                                                                                         |                                        |                                               |                   |              |               |             |
| AVERAGE TEMPERATURE CHIP 1<br>IN CELSIUS                                                                                                                                      | 3x43003<br>4x43003<br>l:43002          | 464,0x01D0<br>B:01 D0                         |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                               |                                        | Measured average temperature of CHIPx:46,4°C  |                   |              |               |             |
| Measured average chip temperature for CHIPx in x*10 °C. Each CHIP supports 4 AIOX channels.                                                                                   |                                        |                                               |                   |              |               |             |
| AVERAGE TEMPERATURE CHIP 2<br>IN CELSIUS                                                                                                                                      | 3x43004<br>4x43004<br>l:43003          | 475,0x01DB<br>B:01 DB                         |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                               |                                        | Measured average temperature of CHIPx:47,5°C  |                   |              |               |             |
| AIOX CHIP VOLTAGES                                                                                                                                                            |                                        |                                               |                   |              |               |             |
| Vavdd CHIP 1<br>IN VOLT                                                                                                                                                       | 3x43005<br>4x43005<br>l:43004          | 146,0x0092<br>B:00 92                         |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                               |                                        | Actual measured voltage Vavdd of CHIPx:14,6V  |                   |              |               |             |
| Current measured voltage Vavdd for CHIPx in x*10 Volts. Each CHIP supports 4 AIOX channels.<br>This must be >14.5V, if not, there is a severe wiring or other hardware issue! |                                        |                                               |                   |              |               |             |
| Vavdd CHIP 2<br>IN VOLT                                                                                                                                                       | 3x43006<br>4x43006<br>l:43005          | 146,0x0092<br>B:00 92                         |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                               |                                        | Actual measured voltage Vavdd of CHIPx:14,6V  |                   |              |               |             |
| AIOX CHIP VOLTAGES                                                                                                                                                            |                                        |                                               |                   |              |               |             |
| AVERAGE Vavdd CHIP 1<br>IN VOLT                                                                                                                                               | 3x43007<br>4x43007<br>l:43006          | 146,0x0092<br>B:00 92                         |                   |              | UINT16<br>R/O |             |
|                                                                                                                                                                               |                                        | Measured average voltage Vavdd of CHIPx:14,6V |                   |              |               |             |
| Current measured voltage Vavdd for CHIPx in x*10 Volts. Each CHIP supports 4 AIOX channels.<br>This must be >14.5V, if not, there is a severe wiring or other hardware issue! |                                        |                                               |                   |              |               |             |
| AVERAGE Vavdd CHIP 2<br>IN VOLT                                                                                                                                               | 3x43008<br>4x43008<br>l:43007          | 146,0x0092<br>B:00 92                         |                   |              | UINT16<br>R/O |             |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               |                                               |  |  |               |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Measured average voltage Vavdd of CHIPx:14,6V |  |  |               |
| AIOX CHIP VOLTAGES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                                               |  |  |               |
| Vagnd CHIP 1<br>IN VOLT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3x43009<br>4x43009<br>I:43008 | 0,0x0000<br>B:00 00                           |  |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Actual measured voltage Vagnd of CHIPx:0,0V   |  |  |               |
| Current measured voltage Vagnd for CHIPx in x*10 Volts. Each CHIP supports 4 AIOX channels.<br>This must be 0V, if not, there is a severe wiring or other hardware issue!                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               |                                               |  |  |               |
| Vagnd CHIP 2<br>IN VOLT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3x43010<br>4x43010<br>I:43009 | 0,0x0000<br>B:00 00                           |  |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Actual measured voltage Vagnd of CHIPx:0,0V   |  |  |               |
| AIOX CHIP VOLTAGES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                                               |  |  |               |
| AVERAGE Vagnd CHIP 1<br>IN VOLT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 3x43011<br>4x43011<br>I:43010 | 0,0x0000<br>B:00 00                           |  |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Measured average voltage Vagnd of CHIPx:0,0V  |  |  |               |
| Current measured voltage Vagnd for CHIPx in x*10 Volts. Each CHIP supports 4 AIOX channels.<br>This must be 0V, if not, there is a severe wiring or other hardware issue!                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               |                                               |  |  |               |
| AVERAGE Vagnd CHIP 2<br>IN VOLT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 3x43012<br>4x43012<br>I:43011 | 0,0x0000<br>B:00 00                           |  |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Measured average voltage Vagnd of CHIPx:0,0V  |  |  |               |
| AIOX CHIP STATUS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                               |                                               |  |  |               |
| LIVE STATUS CHIP 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3x43013<br>4x43013<br>I:43012 | 30720,0x7800<br>B:78 00                       |  |  | UINT16<br>R/O |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               | Actual live status of CHIPx:7800              |  |  |               |
| Current live status for CHIPx. Each CHIP supports 4 AIOX channels.<br>Each result bit stands for a different state:<br>Bit 0: VI_ERR_CURR_A: Status of channel A:Voltage or current error detected on Channel A. This bit is interpreted differently depending on which of the following IO function selected:<br>Voltage output: short-circuit error. The error condition is debounced for 2 ms before the status bit is set.<br>Current output: open circuit error. The error condition is debounced for 2 ms before the status bit is set.<br>Current input, loop powered: short-circuit error. A short to ground is detected<br>Current input, externally powered: short-circuit error. A current source >25 mA is detected<br>Bit 1: VI_ERR_CURR_B: Status of voltage input B. Same like VI_ERR_CURR_A<br>Bit 2: VI_ERR_CURR_C: Status of voltage input C. Same like VI_ERR_CURR_A<br>Bit 3: VI_ERR_CURR_D: Status of voltage input D. Same like VI_ERR_CURR_A<br>Bit 4: HI_TEMP_STATUS: If the die temperature is typically at or above 115°C, the HI_TEMP_STATUS bit is asserted<br>Bit 5: CHARGE_PUMP_STATUS: Charge pump error detected.<br>Bit 6: ALDO5V_STATUS: ALDO5V Power Supply Monitor Error. This bit is asserted when the ALDO5V pin falls below 4.05 V. Usually ~5V.<br>Bit 7: AVDD_STATUS: AVDD Power Supply Monitor Error. This bit is asserted when the AVDD pin falls below 9.26 V. Usually ~17V.<br>Bit 8: DVCC_STATUS: DVCC Power Supply Monitor Error. This bit is asserted when the DVCC pin falls below 1.93 V. Usually ~3.3V.<br>Bit 9: ALDO1V8_STATUS: ALDO1V8 Power Supply Monitor Error. This bit is asserted when the ALDO1V8 pin falls below 1.35 V. Usually ~1.8V.<br>Bit 10-12: ADC_CH_CURR: Current converted channel of the ADC (0:A, 1:B, 2:C, 3:D, 4:Diagnostic 0, 5:Diagnostic 1, 6:Diagnostic 2, 7:Diagnostic 3)<br>Bit 13: ADC_BUSY: ADC busy status bit.<br>Bit 14: ADC_DATA_RDY:ADC data ready. The ADC_DATA_RDY bit asserts when a conversion cycle has completed. The bit stays asserted until a user writes 1 to clear the bit. In single conversion mode, the ADC_RDY pin follows the ADC_DATA_RDY bit and only deasserts when the ADC_DATA_RDY bit is cleared. In continuous conversion mode, the ADC_RDY pin returns high after 24 µs.<br>Bit 15: RESERVED: Reserved |                               |                                               |  |  |               |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               |                                              |  |  |               |  |
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| LIVE STATUS CHIP 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3x43014<br>4x43014<br>I:43013 | 24576,0x6000<br>B:60 00                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               | Actual live status of CHIPx:6000             |  |  |               |  |
| AIOX CHIP STATUS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                               |                                              |  |  |               |  |
| ALERT STATUS CHIP 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3x43015<br>4x43015<br>I:43014 | 33792,0x8400<br>B:84 00                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               | Actual alert status of CHIPx:8400            |  |  |               |  |
| <p>Current alert status for CHIPx. Each CHIP supports 4 AIOX channels.</p> <p>Each result bit stands for a different state:</p> <p>Bit 0: VI_ERR_CURR_A: Status of channel A:Voltage or current error detected on Channel A. This bit is interpreted differently depending on which of the following IO function selected:</p> <p>Voltage output: short-circuit error. The error condition is debounced for 2 ms before the status bit is set.</p> <p>Current output: open circuit error. The error condition is debounced for 2 ms before the status bit is set.</p> <p>Current input, loop powered: short-circuit error. A short to ground is detected</p> <p>Current input, externally powered: short-circuit error. A current source &gt;25 mA is detected</p> <p>Bit 1: VI_ERR_CURR_B: Status of voltage input B. Same like VI_ERR_CURR_A</p> <p>Bit 2: VI_ERR_CURR_C: Status of voltage input C. Same like VI_ERR_CURR_A</p> <p>Bit 3: VI_ERR_CURR_D: Status of voltage input D. Same like VI_ERR_CURR_A</p> <p>Bit 4: HI_TEMP_STATUS: If the die temperature is typically at or above 115°C, the HI_TEMP_STATUS bit is asserted</p> <p>Bit 5: CHARGE_PUMP_STATUS: Charge pump error detected.</p> <p>Bit 6: ALDO5V_STATUS: ALDO5V Power Supply Monitor Error. This bit is asserted when the ALDO5V pin falls below 4.05 V. Usually ~5V.</p> <p>Bit 7: AVDD_STATUS: AVDD Power Supply Monitor Error. This bit is asserted when the AVDD pin falls below 9.26 V. Usually ~17V.</p> <p>Bit 8: DVCC_STATUS: DVCC Power Supply Monitor Error. This bit is asserted when the DVCC pin falls below 1.93 V. Usually ~3.3V.</p> <p>Bit 9: ALDO1V8_STATUS: ALDO1V8 Power Supply Monitor Error. This bit is asserted when the ALDO1V8 pin falls below 1.35 V. Usually ~1.8V.</p> <p>Bit 10: ADC_CONV_ERR: ADC Conversion Error. ADC results may be outside the selected measurement range.</p> <p>Bit 11: ADC_SAT_ERR: ADC Saturation Error. ADC may be outside the user selected measurement range.</p> <p>Bit 12: SPI_SCLK_CNT_ERR: SPI SCLK count error detected. This bit is asserted if an SPI command is applied but 32 SCLKs are not provided.</p> <p>Bit 13: SPI_CRC_ERR: SPI CRC error detected. This bit is asserted if an invalid CRC is received.</p> <p>Bit 14: CAL_MEM_ERR: Calibration Memory Error. This flag asserts under the following two conditions: When a calibration memory CRC error or an uncorrectable error correcting code (ECC) error is detected on the calibration memory upload. It is not possible to clear this bit if there is a CRC error or uncorrectable ECC error. It is recommended to reset the device and check the supplies in this situation. When there is an attempted SPI access to a register before the calibration memory refresh is complete. Do not address the device until the calibration memory is refreshed. Writing 1 to this bit clears the flag, if the flag is asserted due to this condition.</p> <p>Bit 15: RESET_OCCURRED: Reset occurred. This bit is asserted after a reset event, which asserts the ALERT pin after the reset. Write a 1 to this bit to clear the flag. Note that a mask bit is not provided for this bit.</p> |                               |                                              |  |  |               |  |
| ALERT STATUS CHIP 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3x43016<br>4x43016<br>I:43015 | 33792,0x8400<br>B:84 00                      |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               | Actual alert status of CHIPx:8400            |  |  |               |  |
| AIOX SPI STATUS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               |                                              |  |  |               |  |
| SPI ERRORS CHIP 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 3x43017<br>4x43017<br>I:43016 | 0,0x0000<br>B:00 00                          |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               | Actual SPI error counter of CHIPx:0 error(s) |  |  |               |  |
| <p>Current SPI error counter for CHIPx. Each CHIP supports 4 AIOX channels.</p> <p>This command shows the acutal SPI errors since power up for every chip</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               |                                              |  |  |               |  |
| SPI ERRORS CHIP 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 3x43018<br>4x43018<br>I:43017 | 0,0x0000<br>B:00 00                          |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               | Actual SPI error counter of CHIPx:0 error(s) |  |  |               |  |
| AIOX STATE MACHINES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                               |                                              |  |  |               |  |

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|---------------------------------------------------------------------------------------------|-------------------------------|-----------------------------|-------|--------------|---------------|-----|
| STATE MACHINE CHIP 1                                                                        | 3x43019<br>4x43019<br>I:43018 | 12070,0x2F26<br>B:2F 26     |       |              | UINT16<br>R/O |     |
|                                                                                             |                               | Actual state of CHIPx:12070 |       |              |               |     |
| This command shows the acutal state of the internal communication state machine for CHIPx   |                               |                             |       |              |               |     |
| STATE MACHINE CHIP 2                                                                        | 3x43020<br>4x43020<br>I:43019 | 12050,0x2F12<br>B:2F 12     |       |              | UINT16<br>R/O |     |
|                                                                                             |                               | Actual state of CHIPx:12050 |       |              |               |     |
| AIOX ONLINE                                                                                 |                               |                             |       |              |               |     |
| IS ONLINE CHIP 1                                                                            | 3x43021<br>4x43021<br>I:43020 | 1,0x0001<br>B:00 01         |       |              | UINT16<br>R/O |     |
|                                                                                             |                               | Is CHIPx online:1=YES       |       |              |               |     |
| This command shows the acutal state of the internal communication state machine for CHIPx   |                               |                             |       |              |               |     |
| IS ONLINE CHIP 2                                                                            | 3x43022<br>4x43022<br>I:43021 | 1,0x0001<br>B:00 01         |       |              | UINT16<br>R/O |     |
|                                                                                             |                               | Is CHIPx online:1=YES       |       |              |               |     |
| AIOX CLEAR ALARM STATE                                                                      |                               |                             |       |              |               |     |
| CLEAR ALERT STATES CHIP 1                                                                   | 3x43023<br>4x43023<br>I:43022 | 0,0x0000<br>B:00 00         | 65535 |              | UINT16<br>R/W | YES |
|                                                                                             |                               | 0:VI_ERR_A                  |       | 1:RESET FLAG |               |     |
|                                                                                             |                               | 1:VI_ERR_B                  |       | 1:RESET FLAG |               |     |
|                                                                                             |                               | 2:VI_ERR_C                  |       | 1:RESET FLAG |               |     |
|                                                                                             |                               | 3:VI_ERR_D                  |       | 1:RESET FLAG |               |     |
|                                                                                             |                               | 4:HI_TEMP_ERR               |       | 1:RESET FLAG |               |     |
|                                                                                             |                               | 5:CHARGE_PUMP_ERR           |       | 1:RESET FLAG |               |     |
|                                                                                             |                               | 6:ALDO5V_ERR                |       | 1:RESET FLAG |               |     |
|                                                                                             |                               | 7:AVDD_ERR                  |       | 1:RESET FLAG |               |     |
|                                                                                             |                               | 8:DVCC_ERR                  |       | 1:RESET FLAG |               |     |
|                                                                                             |                               | 9:ALDO1V8_ERR               |       | 1:RESET FLAG |               |     |
|                                                                                             |                               | 10:ADC_CONV_ERR             |       | 1:RESET FLAG |               |     |
|                                                                                             |                               | 11:ADC_SAT_ERR              |       | 1:RESET FLAG |               |     |
|                                                                                             |                               | 12:SPI_SCLK_ERR             |       | 1:RESET FLAG |               |     |
|                                                                                             |                               | 13:SPI_CRC_ERR              |       | 1:RESET FLAG |               |     |
|                                                                                             |                               | 14:CAL_MEM_ERR              |       | 1:RESET FLAG |               |     |
|                                                                                             |                               | 15:RESET_OCCURED            |       | 1:RESET FLAG |               |     |
| With this command you can reset individual alert bits in the alert status register of CHIPx |                               |                             |       |              |               |     |
| CLEAR ALERT STATES CHIP 2                                                                   | 3x43024<br>4x43024<br>I:43023 | 0,0x0000<br>B:00 00         | 65535 |              | UINT16<br>R/W | YES |
|                                                                                             |                               | 0:VI_ERR_A                  |       | 1:RESET FLAG |               |     |
|                                                                                             |                               | 1:VI_ERR B                  |       | 1:RESET FLAG |               |     |

|  |  |                   |              |  |  |
|--|--|-------------------|--------------|--|--|
|  |  | 2:VI_ERR_C        | 1:RESET FLAG |  |  |
|  |  | 3:VI_ERR_D        | 1:RESET FLAG |  |  |
|  |  | 4:HI_TEMP_ERR     | 1:RESET FLAG |  |  |
|  |  | 5:CHARGE_PUMP_ERR | 1:RESET FLAG |  |  |
|  |  | 6:ALDO5V_ERR      | 1:RESET FLAG |  |  |
|  |  | 7:AVDD_ERR        | 1:RESET FLAG |  |  |
|  |  | 8:DVCC_ERR        | 1:RESET FLAG |  |  |
|  |  | 9:ALDO1V8_ERR     | 1:RESET FLAG |  |  |
|  |  | 10:ADC_CONV_ERR   | 1:RESET FLAG |  |  |
|  |  | 11:ADC_SAT_ERR    | 1:RESET FLAG |  |  |
|  |  | 12:SPI_SCLK_ERR   | 1:RESET FLAG |  |  |
|  |  | 13:SPI_CRC_ERR    | 1:RESET FLAG |  |  |
|  |  | 14:CAL_MEM_ERR    | 1:RESET FLAG |  |  |
|  |  | 15:RESET_OCCURED  | 1:RESET FLAG |  |  |

With this command you can reset individual alert bits in the alert status register of CHIPx

AIOX RESET STATE MACHINE

|                                                                                                                      |                               |                     |   |                       |               |     |
|----------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------|---|-----------------------|---------------|-----|
| RESET CHIP 1<br>STATE MACHINE                                                                                        | 3x43025<br>4x43025<br>I:43024 | 0,0x0000<br>B:00 00 | 1 | 1:RESET STATE MACHINE | UINT16<br>R/W | YES |
| This command restarts the state machine for chip CHIPx . The affected chip will be resetted & initialized completely |                               |                     |   |                       |               |     |
| RESET CHIP 2<br>STATE MACHINE                                                                                        | 3x43026<br>4x43026<br>I:43025 | 0,0x0000<br>B:00 00 | 1 | 1:RESET STATE MACHINE | UINT16<br>R/W | YES |

| Register NAME<br>Command NAME                                                                                                                                                                                                                                                                                                                                                                                           | MODBUS<br>Register<br>ASCII<br>Command | Register VALUE<br>ASCII Command  | NEW REAL<br>VALUE | NEW<br>VALUE                    | DATA TYPE     | DO<br>WRITE |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------------------------|-------------------|---------------------------------|---------------|-------------|
| AIOX CONFIG OUTPUT VALUES                                                                                                                                                                                                                                                                                                                                                                                               |                                        |                                  |                   |                                 |               |             |
| CONFIG OUTPUT VALUE AIOX1                                                                                                                                                                                                                                                                                                                                                                                               | 3x44001<br>4x44001<br>I:44000          | 65535,0xFFFF<br>B:FF FF          | 100               | 1                               | UINT16<br>R/W | YES         |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual config value for AIOx:N/A |                   | ENTER NEW CONFIG VALUE FOR AIOx |               |             |
| This command sets for all outputs the standard value in Volt*100 or in mA*100, which are used when the controller is restartet or a watchdog condition has occured and the channel is used as voltage output or current output.<br>For voltage outputs the range is 0 to 1100 (0 to 11,0V).<br>For current outputs the range is 0 to 2500 (0 to 25mA).<br>All IOs with a different usage type will return 65535,0xFFFF. |                                        |                                  |                   |                                 |               |             |
| CONFIG OUTPUT VALUE AIOX2                                                                                                                                                                                                                                                                                                                                                                                               | 3x44002<br>4x44002<br>I:44001          | 65535,0xFFFF<br>B:FF FF          | 200               | 2                               | UINT16<br>R/W | YES         |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual config value for AIOx:N/A |                   | ENTER NEW CONFIG VALUE FOR AIOx |               |             |
| CONFIG OUTPUT VALUE AIOX3                                                                                                                                                                                                                                                                                                                                                                                               | 3x44003<br>4x44003<br>I:44002          | 65535,0xFFFF<br>B:FF FF          | 300               | 3                               | UINT16<br>R/W | YES         |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual config value for AIOx:N/A |                   | ENTER NEW CONFIG VALUE FOR AIOx |               |             |
| CONFIG OUTPUT VALUE AIOX4                                                                                                                                                                                                                                                                                                                                                                                               | 3x44004<br>4x44004<br>I:44003          | 65535,0xFFFF<br>B:FF FF          | 400               | 4                               | UINT16<br>R/W | YES         |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual config value for AIOx:N/A |                   | ENTER NEW CONFIG VALUE FOR AIOx |               |             |
| CONFIG OUTPUT VALUE AIOX5                                                                                                                                                                                                                                                                                                                                                                                               | 3x44005<br>4x44005<br>I:44004          | 65535,0xFFFF<br>B:FF FF          | 500               | 5                               | UINT16<br>R/W | YES         |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual config value for AIOx:N/A |                   | ENTER NEW CONFIG VALUE FOR AIOx |               |             |
| CONFIG OUTPUT VALUE AIOX6                                                                                                                                                                                                                                                                                                                                                                                               | 3x44006<br>4x44006<br>I:44005          | 65535,0xFFFF<br>B:FF FF          | 600               | 6                               | UINT16<br>R/W | YES         |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual config value for AIOx:N/A |                   | ENTER NEW CONFIG VALUE FOR AIOx |               |             |
| CONFIG OUTPUT VALUE AIOX7                                                                                                                                                                                                                                                                                                                                                                                               | 3x44007<br>4x44007<br>I:44006          | 65535,0xFFFF<br>B:FF FF          | 700               | 7                               | UINT16<br>R/W | YES         |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual config value for AIOx:N/A |                   | ENTER NEW CONFIG VALUE FOR AIOx |               |             |
| CONFIG OUTPUT VALUE AIOX8                                                                                                                                                                                                                                                                                                                                                                                               | 3x44008<br>4x44008<br>I:44007          | 65535,0xFFFF<br>B:FF FF          | 800               | 8                               | UINT16<br>R/W | YES         |
|                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        | Actual config value for AIOx:N/A |                   | ENTER NEW CONFIG VALUE FOR AIOx |               |             |
| INTER PROCESSOR COMMUNICATION                                                                                                                                                                                                                                                                                                                                                                                           |                                        |                                  |                   |                                 |               |             |

|                                                                                                                                                                                                                                                                |                               |                                                               |  |  |               |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------|--|--|---------------|--|
| AIOX IS ONLINE                                                                                                                                                                                                                                                 | 3x50000<br>4x50000<br>I:49999 | 1,0x0001<br>B:00 01                                           |  |  | UINT16<br>R/O |  |
|                                                                                                                                                                                                                                                                |                               | Actual communication status co-processor to AIOX processor:OK |  |  |               |  |
| This command returns the actual state of the serial communication between the ARM co-processor and the additional processor for the AIOX.<br>=1: Currently the communication is fine<br>=0: There is a mayor problem/hardware fault between the two processors |                               |                                                               |  |  |               |  |