

| Register<br>NAME                                                                                                                                                            | MODBUS<br>Register       | Register<br>VALUE                                                              | DATA TYPE | DO<br>WRITE |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------|-----------|-------------|
| ASCII COMMANDS                                                                                                                                                              |                          |                                                                                |           |             |
| HEART BEAT                                                                                                                                                                  | ASCII<br>READ<br>COMMAND | #HB<CR><br>Result:<br>#HB<CR>                                                  | ASCII     |             |
|                                                                                                                                                                             | TX                       | #255,HB<CR>                                                                    |           |             |
|                                                                                                                                                                             | RX                       | #255,HB<CR>                                                                    |           |             |
| Sends an Heartbeat to test the communication                                                                                                                                |                          |                                                                                |           |             |
| GET VERSION                                                                                                                                                                 | ASCII<br>READ<br>COMMAND | #VERSION<CR><br>Result:<br>#VERSION:<VersionHi>,<VersionMed>,<VersionLo><CR>   | ASCII     |             |
|                                                                                                                                                                             | TX                       | #255,VERSION<CR>                                                               |           |             |
|                                                                                                                                                                             | RX                       | #255,VERSION:1.1.0<CR>                                                         |           |             |
|                                                                                                                                                                             |                          | Actual SW version:1.1.0                                                        |           |             |
| 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<br>READ<br>COMMAND | #TYPE<CR><br>Result:<br>#TYPE:<Type><CR>                                       | ASCII     |             |
|                                                                                                                                                                             | TX                       | #255,TYPE<CR>                                                                  |           |             |
|                                                                                                                                                                             | RX                       | #255,TYPE:RESI-C4-A-64DI60DO16AIOX<CR>                                         |           |             |
|                                                                                                                                                                             |                          | Actual module type:RESI-C4-A-64DI60DO16AIOX                                    |           |             |
| Returns the actual module type                                                                                                                                              |                          |                                                                                |           |             |
| GET FEATURES                                                                                                                                                                | ASCII<br>READ<br>COMMAND | #FTRS<CR><br>Result:<br>#FTRS:<Type><CR>                                       | ASCII     |             |
|                                                                                                                                                                             | TX                       | #255,FTRS<CR>                                                                  |           |             |
|                                                                                                                                                                             | RX                       | #255,FTRS:RESI-C4-A-64DI60DO16AIOX,RS485,DI:64,DO:60,AIOX:16,DOIC:MAX14915<CR> |           |             |
|                                                                                                                                                                             |                          | Actual module type:N/A                                                         |           |             |
|                                                                                                                                                                             |                          | Number of digital inputs:N/A                                                   |           |             |
|                                                                                                                                                                             |                          | Type of digital inputs:N/A                                                     |           |             |
| Returns the actual module features                                                                                                                                          |                          |                                                                                |           |             |
| GET OWNER                                                                                                                                                                   | ASCII<br>READ<br>COMMAND | #OWNER<CR><br>Result:<br>#OWNER:<Owner><CR>                                    | ASCII     |             |
|                                                                                                                                                                             | TX                       | #255,OWNER<CR>                                                                 |           |             |
|                                                                                                                                                                             | RX                       | #255,OWNER:RESI<CR>                                                            |           |             |
|                                                                                                                                                                             |                          | Actual owner:RESI                                                              |           |             |
| Returns the actual owner of the module                                                                                                                                      |                          |                                                                                |           |             |

|                                                                                                    |                           |                                                                   |       |     |
|----------------------------------------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------|-------|-----|
| GET CREATOR                                                                                        | ASCII<br>READ<br>COMMAND  | #CREATOR<CR><br>Result:<br>#CREATOR:<Creator><CR>                 | ASCII |     |
|                                                                                                    | TX                        | #255,CREATOR<CR>                                                  |       |     |
|                                                                                                    | RX                        | #255,CREATOR:DI HC SIGL,MSC<CR>                                   |       |     |
|                                                                                                    |                           | Actual creator:DI HC SIGL,MSC                                     |       |     |
| Returns the actual creator of the module                                                           |                           |                                                                   |       |     |
| GET COPYRIGHT                                                                                      | ASCII<br>READ<br>COMMAND  | #COPYRIGHT<CR><br>Result:<br>#COPYRIGHT:<Copyright><CR>           | ASCII |     |
|                                                                                                    | TX                        | #255,COPYRIGHT<CR>                                                |       |     |
|                                                                                                    | RX                        | #255,COPYRIGHT:2015-24 BY RESI AND DI HC SIGL,MSC WWW.RESI.CC<CR> |       |     |
|                                                                                                    |                           | Actual copyright:2015-24 BY RESI AND DI HC SIGL,MSC WWW.RESI.CC   |       |     |
| Returns the actual copyright of the module                                                         |                           |                                                                   |       |     |
| GET SERIAL NUMBER                                                                                  | ASCII<br>READ<br>COMMAND  | #SN<CR><br>Result:<br>#SN:<Serial><CR>                            | ASCII |     |
|                                                                                                    | TX                        | #255,SN<CR>                                                       |       |     |
|                                                                                                    | RX                        | #255,SN:39002C000253554637303820<CR>                              |       |     |
|                                                                                                    |                           | Actual serial number:39002C000253554637303820                     |       |     |
| Returns the actual serial number of the module                                                     |                           |                                                                   |       |     |
| SET BOX NAME                                                                                       | ASCII<br>WRITE<br>COMMAND | #SETBOXNAME:<BOXNAME><CR><br>Result:<br>#OK<CR>                   | ASCII | YES |
|                                                                                                    | BOXNAME                   | MYBOX                                                             |       |     |
|                                                                                                    | TX                        | #255,SETBOXNAME:MYBOX<CR>                                         |       |     |
|                                                                                                    | RX                        | #255,OK<CR>                                                       |       |     |
| Sets a new box name for the controller                                                             |                           |                                                                   |       |     |
| GET BOX NAME                                                                                       | ASCII<br>READ<br>COMMAND  | #BOXNAME<CR><br>Result:<br>#BOXNAME:<BoxName><CR>                 | ASCII |     |
|                                                                                                    | TX                        | #255,BOXNAME<CR>                                                  |       |     |
|                                                                                                    | RX                        | #255,BOXNAME:MYBOX<CR>                                            |       |     |
|                                                                                                    |                           | Actual box name:MYBOX                                             |       |     |
| Returns the actual box name of the module. If no box name is defined, the value NONAME is returned |                           |                                                                   |       |     |
| GET INTERNAL STATUS                                                                                | ASCII<br>READ<br>COMMAND  | #INTSTAT<CR><br>Result:<br>#INTSTAT:<Status><CR>                  | ASCII |     |
|                                                                                                    | TX                        | #255,INTSTAT<CR>                                                  |       |     |
|                                                                                                    | RX                        | #255,INTSTAT:I2C1:0,I2C2:0<CR>                                    |       |     |
|                                                                                                    |                           | Actual internal status:I2C1                                       |       |     |
| 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                        | #255,GDIP<CR>                                                   |       |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | RX                        | #255,GDIP:0,0x0<CR>                                             |       |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           | Actual DIP SWITCH settings:00000000                             |       |     |
| Returns the actual 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 (=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) |                           |                                                                 |       |     |
| SYSTEM COMMANDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                                                                 |       |     |
| RESET                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ASCII<br>WRITE<br>COMMAND | #RST<CR><br>Result:<br>#OK<CR>                                  | ASCII | NO  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | TX                        | #255,RST<CR>                                                    |       |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | RX                        | N/A                                                             |       |     |
| Executes a software reset (Reboot) of the module. Be aware that you will losse all serial interfaces in USB!!!                                                                                                                                                                                                                                                                                                                                                                               |                           |                                                                 |       |     |
| FACTORY RESET                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ASCII<br>WRITE<br>COMMAND | #FRST<CR><br>Result:<br>#OK<CR>                                 | ASCII | NO  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | TX                        | #255,FRST<CR>                                                   |       |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | RX                        | N/A                                                             |       |     |
| Executes a factory reset of the module                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                           |                                                                 |       |     |
| WATCHDOG TIMER                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ASCII<br>WRITE<br>COMMAND | #WD:<WDTIME> <CR><br>Result:<br>#OK<CR>                         | ASCII | YES |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | WDTIME                    | 0                                                               |       |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | TX                        | #255,WD:0<CR>                                                   |       |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | RX                        | #255,OK<CR>                                                     |       |     |
| Enables or disables the WATCHDOG Timer for the Raspberry Pi module.<br>WDTIME:<br>1..3600000: Time for Watchdog in Milliseconds (Maximum 60 Minutes)<br>=0: No Watchdog is generated<br>HINT: The Watchdog is internally handled every 10ms, so every value below 10 will reset immediately the Raspberry Pi computer.                                                                                                                                                                       |                           |                                                                 |       |     |
| SET IO WATCHDOG TIMER                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ASCII<br>WRITE<br>COMMAND | #SIOWATCHDOG:<IOWDTIME> <CR><br>Result:<br>#OK<CR>              | ASCII | YES |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | IOWDTIME                  | 0                                                               |       |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | TX                        | #255,SIOWATCHDOG:0<CR>                                          |       |     |

|                                                                                                                                                                                                                                                                                                                               |                          |                                                               |       |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------------------------------------|-------|--|
|                                                                                                                                                                                                                                                                                                                               | RX                       | #255,OK<CR>                                                   |       |  |
| Sets a new time for the internal IO WATCHDOG Timer. <IOWDTIME> is a time in 100ms.<br>=0: No IO Watchdog is used<br>HINT: The Watchdog is internally handled every 100ms, if the Timer reaches 0, all internal IOS will be set to a preconfigured state. Every ASCII command or MODBUS request will reset this timer.         |                          |                                                               |       |  |
| GET IO WATCHDOG TIMER                                                                                                                                                                                                                                                                                                         | ASCII<br>READ<br>COMMAND | #GIOWATCHDOG<CR><br>Result:<br>#GIOWATCHDOG::<IOWDTIME> <CR>  | ASCII |  |
|                                                                                                                                                                                                                                                                                                                               | TX                       | #255,GIOWATCHDOG<CR>                                          |       |  |
|                                                                                                                                                                                                                                                                                                                               | RX                       | #255,GIOWATCHDOG:0,0x0<CR>                                    |       |  |
| Returns the actual time for the internal IO WATCHDOG Timer. <IOWDTIME> is a time in 100ms.<br>=0: No IO Watchdog is used<br>HINT: The Watchdog is internally handled every 100ms, if the Timer reaches 0, all internal IOS will be set to a preconfigured state. Every ASCII command or MODBUS request will reset this timer. |                          |                                                               |       |  |
| CPU PARAMETERS                                                                                                                                                                                                                                                                                                                |                          |                                                               |       |  |
| GET CPU VOLTAGE                                                                                                                                                                                                                                                                                                               | ASCII<br>READ<br>COMMAND | #GCPUTEMP<CR><br>Result:<br>#GCPUTEMP:<CPUTemp> <CR>          | ASCII |  |
|                                                                                                                                                                                                                                                                                                                               | TX                       | #255,GCPUTEMP<CR>                                             |       |  |
|                                                                                                                                                                                                                                                                                                                               | RX                       | #255,GCPUTEMP:41.4092<CR>                                     |       |  |
|                                                                                                                                                                                                                                                                                                                               |                          | Actual internal temperature of CPU:41.4092°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                       | #255,GCPUVOLT<CR>                                             |       |  |
|                                                                                                                                                                                                                                                                                                                               | RX                       | #255,GCPUVOLT:3.3453<CR>                                      |       |  |
|                                                                                                                                                                                                                                                                                                                               |                          | Actual supply voltage of CPU:3.3453V                          |       |  |
| 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                       | #255,GCPUBACK<CR>                                             |       |  |
|                                                                                                                                                                                                                                                                                                                               | RX                       | #255,GCPUBACK:3.1871<CR>                                      |       |  |
|                                                                                                                                                                                                                                                                                                                               |                          | Actual backup voltage of CPU for RTC:3.1871V                  |       |  |
| Current internal backup voltage of CPU for the RTC in Volt.                                                                                                                                                                                                                                                                   |                          |                                                               |       |  |

| Register<br>NAME                                       | MODBUS<br>Register        | Register<br>VALUE                                                                                                               | DATA TYPE | DO<br>WRITE |
|--------------------------------------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|
| ASCII COMMANDS:REAL TIME CLOCK                         |                           |                                                                                                                                 |           |             |
| GET REAL TIME CLOCK                                    | ASCII<br>READ<br>COMMAND  | #GRTC<CR><br>Result:<br>#GRTC:YMD,<YEAR>,<MONTH>,<DAY>,HMS,<HOUR>,<MINUTE>,<SECOND>,<WEEKDAY><br>,DOK,<DATEOK>,TOK,<TIMEOK><CR> | ASCII     |             |
|                                                        | TX                        | #255,GRTC<CR>                                                                                                                   |           |             |
|                                                        | RX                        | #255,GRTC:YMD,24,1,5,HMS,15,34,47,FRI,DOK,1,TOK,1<CR>                                                                           |           |             |
|                                                        |                           | Actual date DD.MM.YYYY:5.1.2024                                                                                                 |           |             |
|                                                        |                           | Actual time HH.MM.SS (24h):15:34:47                                                                                             |           |             |
|                                                        |                           | Actual Weekday:FRI                                                                                                              |           |             |
|                                                        |                           | Battery buffered date is ok:YES                                                                                                 |           |             |
|                                                        |                           | Battery buffered time is ok:YES                                                                                                 |           |             |
| Shows current RTC time of battery backup RTC on module |                           |                                                                                                                                 |           |             |
| ASCII COMMANDS:REAL TIME CLOCK                         |                           |                                                                                                                                 |           |             |
| SET REAL TIME CLOCK                                    | ASCII<br>WRITE<br>COMMAND | #SRTC:YMD,<YEAR>,<MONTH>,<DAY>,HMS,<HOUR>,<MINUTE>,<SECOND>,<WEEKDAY><CR><br>Result:<br>#OK<CR>                                 | ASCII     | YES         |
|                                                        | YEAR                      | 2024                                                                                                                            |           |             |
|                                                        | MONTH                     | 04                                                                                                                              |           |             |
|                                                        | DAY                       | 13                                                                                                                              |           |             |
|                                                        | HOURL                     | 18                                                                                                                              |           |             |
|                                                        | MINUTE                    | 40                                                                                                                              |           |             |
|                                                        | SECOND                    | 53                                                                                                                              |           |             |
|                                                        | WEEKDAY                   | SAT                                                                                                                             |           |             |
|                                                        | TX                        | #255,SRTC:YMD,24,04,13,HMS,18,40,53,SAT<CR>                                                                                     |           |             |
|                                                        | RX                        | #255,OK<CR>                                                                                                                     |           |             |
| Executes a software reset (Reboot) of the module.      |                           |                                                                                                                                 |           |             |

| Register<br>NAME                                                                                                                | MODBUS<br>Register       | Register<br>VALUE                                                                                                                                     | DATA TYPE | DO<br>WRITE |
|---------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------|
| ASCII COMMANDS:FRAM                                                                                                             |                          |                                                                                                                                                       |           |             |
| GET FRAMSIZE                                                                                                                    | ASCII<br>READ<br>COMMAND | #GFRAMSIZE <CR><br>Result:<br>#GFRAMSIZE:<FRAMType>,<FRAMSize>,<UsedSizeDEC>,<UsedSizeHEX> <CR>                                                       | ASCII     |             |
|                                                                                                                                 | TX                       | #255,GFRAMSIZE <CR>                                                                                                                                   |           |             |
|                                                                                                                                 | RX                       | #255,GFRAMSIZE:FM25L16B_G,2kB,210,0xD2 <CR>                                                                                                           |           |             |
| Reads the actual type and size of the used FRAM. The <UsedSize> describes the internal used space in bytes of the FRAM          |                          |                                                                                                                                                       |           |             |
| ASCII COMMANDS:FRAM                                                                                                             |                          |                                                                                                                                                       |           |             |
| GET FRAM16                                                                                                                      | ASCII<br>READ<br>COMMAND | #GFRAM16:<INDEX> <CR><br>Result:<br>#GFRAM16:<INDEXDEC>,<VALUEDEC>,<INDEXHEX>,<VALUEHEX> <CR> or<br>#GFRAM16:<INDEXDEC>,<ERR>,<INDEXHEX>,<ERR><CR>    | ASCII     |             |
|                                                                                                                                 | INDEX                    | 350                                                                                                                                                   |           |             |
|                                                                                                                                 | TX                       | #255,GFRAM16:350 <CR>                                                                                                                                 |           |             |
|                                                                                                                                 | RX                       | #255,GFRAM16:350,0,0x15E,0x0 <CR>                                                                                                                     |           |             |
|                                                                                                                                 |                          | FRAM Index in bytes:350                                                                                                                               |           |             |
|                                                                                                                                 |                          | FRAM Value in decimal:0                                                                                                                               |           |             |
| Reads the actual UINT16 value (2 bytes) of FRAM memory <INDEX>.<br><INDEX> is a BYTE index in the FRAM strogae starting with 0. |                          |                                                                                                                                                       |           |             |
| GET FRAM32                                                                                                                      | ASCII<br>READ<br>COMMAND | #GFRAM32:<INDEX> <CR><br>Result:<br>#GFRAM32:<INDEXDEC>,<VALUEDEC>,<INDEXHEX>,<VALUEHEX> <CR> or<br>#GFRAM32:<INDEXDEC>,<ERR>,<INDEXHEX>,<ERR><CR>    | ASCII     |             |
|                                                                                                                                 | INDEX                    | 350                                                                                                                                                   |           |             |
|                                                                                                                                 | TX                       | #255,GFRAM32:350 <CR>                                                                                                                                 |           |             |
|                                                                                                                                 | RX                       | #255,GFRAM32:350,0,0x15E,0x0 <CR>                                                                                                                     |           |             |
|                                                                                                                                 |                          | FRAM Index in bytes:350                                                                                                                               |           |             |
|                                                                                                                                 |                          | FRAM Value in decimal:0                                                                                                                               |           |             |
| Reads the actual UINT32 value 4 bytes) of FRAM memory <INDEX>.<br><INDEX> is a BYTE index in the FRAM strogae starting with 0.  |                          |                                                                                                                                                       |           |             |
| GET FRAMDBL                                                                                                                     | ASCII<br>READ<br>COMMAND | #GFRAMDBL:<INDEX> <CR><br>Result:<br>#GFRAMDBL:<INDEXDEC>,<VALUEDBL>,<INDEXHEX>,<VALUEDBL> <CR> or<br>#GFRAMDBL:<INDEXDEC>,<ERR>,<INDEXHEX>,<ERR><CR> | ASCII     |             |
|                                                                                                                                 | INDEX                    | 400                                                                                                                                                   |           |             |
|                                                                                                                                 | TX                       | #255,GFRAMDBL:400 <CR>                                                                                                                                |           |             |
|                                                                                                                                 | RX                       | #255,GFRAMDBL:400,0,0x190,0 <CR>                                                                                                                      |           |             |
|                                                                                                                                 |                          | FRAM Index in bytes:400                                                                                                                               |           |             |
|                                                                                                                                 |                          | FRAM Value in decimal:0                                                                                                                               |           |             |
| Reads the actual DOUBLE value 8 bytes) of FRAM memory <INDEX>.<br><INDEX> is a BYTE index in the FRAM strogae starting with 0.  |                          |                                                                                                                                                       |           |             |
| ASCII COMMANDS:FRAM                                                                                                             |                          |                                                                                                                                                       |           |             |

|                                                                                                                              |                           |                                                                                             |       |     |
|------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------------------------------------------------------------------|-------|-----|
| SET FRAM16                                                                                                                   | ASCII<br>WRITE<br>COMMAND | #SFRAM16:<INDEX>,<VALUE> <CR><br>Result:<br>#SFRAM16:OK<CR> or<br>#SFRAM16:ERR<CR>          | ASCII | YES |
|                                                                                                                              | INDEX                     | 350                                                                                         |       |     |
|                                                                                                                              | VALUE                     | 1234                                                                                        |       |     |
|                                                                                                                              | TX                        | #255,SFRAM16:350,1234<CR>                                                                   |       |     |
|                                                                                                                              | RX                        | #255,SFRAM16:OK<CR>                                                                         |       |     |
| Writes a new UINT16 value (2 byte) into FRAM memory <INDEX>.<br><INDEX> is a BYTE index in the FRAM strogae starting with 0. |                           |                                                                                             |       |     |
| SET FRAM32                                                                                                                   | ASCII<br>WRITE<br>COMMAND | #SFRAM32:<INDEX>,<VALUE> <CR><br>Result:<br>#SFRAM32:OK<CR> or<br>#SFRAM32:ERR<CR>          | ASCII | YES |
|                                                                                                                              | INDEX                     | 350                                                                                         |       |     |
|                                                                                                                              | VALUE                     | 123456                                                                                      |       |     |
|                                                                                                                              | TX                        | #255,SFRAM32:350,123456<CR>                                                                 |       |     |
|                                                                                                                              | RX                        | #255,SFRAM32:OK<CR>                                                                         |       |     |
| Writes a new UINT32 value (4 byte) into FRAM memory <INDEX>.<br><INDEX> is a BYTE index in the FRAM strogae starting with 0. |                           |                                                                                             |       |     |
| SET FRAMDBL                                                                                                                  | ASCII<br>WRITE<br>COMMAND | #SFRAMDBL:<INDEX>,<DOUBLEVALUE> <CR><br>Result:<br>#SFRAMDBL:OK<CR> or<br>#SERAMDBL:ERR<CR> | ASCII | YES |
|                                                                                                                              | INDEX                     | 400                                                                                         |       |     |
|                                                                                                                              | DOUBLEVALUE               | 3,1415926                                                                                   |       |     |
|                                                                                                                              | TX                        | #255,SFRAMDBL:400,3.1415926<CR>                                                             |       |     |
|                                                                                                                              | RX                        | #255,SFRAMDBL:OK<CR>                                                                        |       |     |
| Writes a new DOUBLE value (8 byte) into FRAM memory <INDEX>.<br><INDEX> is a BYTE index in the FRAM strogae starting with 0. |                           |                                                                                             |       |     |

| Register NAME                                                                                                                                        | MODBUS Register           | Register VALUE                                                             | DATA TYPE | DO WRITE |
|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------------------------------------------------|-----------|----------|
| <b>LED STATUS:LED1:GREEN</b>                                                                                                                         |                           |                                                                            |           |          |
| GET LED1                                                                                                                                             | ASCII<br>READ<br>COMMAND  | #GLED1<CR><br>Result:<br>#GLED1:<LEDMode>,<LEDStateDec>,<LEDStateHex> <CR> | ASCII     |          |
|                                                                                                                                                      | TX                        | #255,GLED1<CR>                                                             |           |          |
|                                                                                                                                                      | RX                        | #255,GLED1:OFF,0,0x0<CR>                                                   |           |          |
|                                                                                                                                                      |                           | Actual LED state:OFF<br>LED ist currently 0                                |           |          |
| Returns the actual state of the LED1:GREEN on the cover of module                                                                                    |                           |                                                                            |           |          |
| <b>LED COMMANDS:LED1:GREEN</b>                                                                                                                       |                           |                                                                            |           |          |
| SET LED1 OFF                                                                                                                                         | ASCII<br>WRITE<br>COMMAND | #SL1OFF<CR><br>Result:<br>#OK<CR>                                          | ASCII     | YES      |
|                                                                                                                                                      | TX                        | #255,SL1OFF<CR>                                                            |           |          |
|                                                                                                                                                      | RX                        | #255,OK<CR>                                                                |           |          |
| Sets the current state of the LED1:GREEN on the cover of module to OFF                                                                               |                           |                                                                            |           |          |
| SET LED1 ON                                                                                                                                          | ASCII<br>WRITE<br>COMMAND | #SL1ON<CR><br>Result:<br>#OK<CR>                                           | ASCII     | YES      |
|                                                                                                                                                      | TX                        | #255,SL1ON<CR>                                                             |           |          |
|                                                                                                                                                      | RX                        | #255,OK<CR>                                                                |           |          |
| Sets the current state of the LED1:GREEN on the cover of module to ON                                                                                |                           |                                                                            |           |          |
| SET LED1 INVERT                                                                                                                                      | ASCII<br>WRITE<br>COMMAND | #SL1INV<CR><br>Result:<br>#OK<CR>                                          | ASCII     | YES      |
|                                                                                                                                                      | TX                        | #255,SL1INV<CR>                                                            |           |          |
|                                                                                                                                                      | RX                        | #255,OK<CR>                                                                |           |          |
| Inverts the current state of the LED1:GREEN on the cover of module from ON to OFF or from OFF to ON                                                  |                           |                                                                            |           |          |
| SET LED1 PULSE                                                                                                                                       | ASCII<br>WRITE<br>COMMAND | #SL1PULSE:<PULSETIME> <CR><br>Result:<br>#OK<CR>                           | ASCII     | YES      |
|                                                                                                                                                      | PULSETIME                 | 1000                                                                       |           |          |
|                                                                                                                                                      | TX                        | #255,SL1PULSE:1000<CR>                                                     |           |          |
|                                                                                                                                                      | RX                        | #255,OK<CR>                                                                |           |          |
| Sets the current state of the LED1:GREEN on the cover of module to PULSE and defines the one time pulse duration in Milliseconds between 1 and 60000 |                           |                                                                            |           |          |
| SET LED1 BLINK                                                                                                                                       | ASCII<br>WRITE<br>COMMAND | #SL1BLINK:<BLINKTIME> <CR><br>Result:<br>#OK<CR>                           | ASCII     | YES      |
|                                                                                                                                                      | BLINKTIME                 | 1000                                                                       |           |          |
|                                                                                                                                                      | TX                        | #255,SL1BLINK:1000<CR>                                                     |           |          |
|                                                                                                                                                      | RX                        | #255,OK<CR>                                                                |           |          |

|                                                                                                                                                      |                           |                                                        |       |     |
|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------------------------------------|-------|-----|
| Sets the current state of the LED1:GREEN on the cover of module to PULSE and defines the one time pulse duration in Milliseconds between 1 and 60000 |                           |                                                        |       |     |
| SET LED1 FLASH                                                                                                                                       | ASCII<br>WRITE<br>COMMAND | #SL1FLASH:<ONTIME>,<OFFTIME><CR><br>Result:<br>#OK<CR> | ASCII | YES |
|                                                                                                                                                      | ONTIME                    | 200                                                    |       |     |
|                                                                                                                                                      | OFFTIME                   | 3000                                                   |       |     |
|                                                                                                                                                      | TX                        | #255,SL1FLASH:200,3000<CR>                             |       |     |
|                                                                                                                                                      | RX                        | #255,OK<CR>                                            |       |     |
| Sets the current state of the LED1:GREEN on the cover of module to FLASH and defines the on and off intervals in Milliseconds between 20 and 600000  |                           |                                                        |       |     |

| Register NAME                                                                                                                                        | MODBUS Register           | Register VALUE                                                            | DATA TYPE | DO WRITE |
|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------------------------------------------------|-----------|----------|
| <b>LED STATUS:LED2:WHITE</b>                                                                                                                         |                           |                                                                           |           |          |
| GET LED2                                                                                                                                             | ASCII<br>READ<br>COMMAND  | #GLED2<CR><br>Result:<br>#GLED2:<LEDMode>,<LEDStateDec>,<LEDStateHex><CR> | ASCII     |          |
|                                                                                                                                                      | TX                        | #255,GLED2<CR>                                                            |           |          |
|                                                                                                                                                      | RX                        | #255,GLED2:BLINK,0,0x0<CR>                                                |           |          |
|                                                                                                                                                      |                           | Actual LED state:BLINK<br>LED ist currently 0                             |           |          |
| Returns the actual state of the LED2:WHITE on the cover of module                                                                                    |                           |                                                                           |           |          |
| <b>LED COMMANDS:LED2:WHITE</b>                                                                                                                       |                           |                                                                           |           |          |
| SET LED2 OFF                                                                                                                                         | ASCII<br>WRITE<br>COMMAND | #SL2OFF<CR><br>Result:<br>#OK<CR>                                         | ASCII     | YES      |
|                                                                                                                                                      | TX                        | #255,SL2OFF<CR>                                                           |           |          |
|                                                                                                                                                      | RX                        | #255,OK<CR>                                                               |           |          |
| Sets the current state of the LED2:WHITE on the cover of module to OFF                                                                               |                           |                                                                           |           |          |
| SET LED2 ON                                                                                                                                          | ASCII<br>WRITE<br>COMMAND | #SL2ON<CR><br>Result:<br>#OK<CR>                                          | ASCII     | YES      |
|                                                                                                                                                      | TX                        | #255,SL2ON<CR>                                                            |           |          |
|                                                                                                                                                      | RX                        | #255,OK<CR>                                                               |           |          |
| Sets the current state of the LED2:WHITE on the cover of module to ON                                                                                |                           |                                                                           |           |          |
| SET LED2 INVERT                                                                                                                                      | ASCII<br>WRITE<br>COMMAND | #SL2INV<CR><br>Result:<br>#OK<CR>                                         | ASCII     | YES      |
|                                                                                                                                                      | TX                        | #255,SL2INV<CR>                                                           |           |          |
|                                                                                                                                                      | RX                        | #255,OK<CR>                                                               |           |          |
| Inverts the current state of the LED2:WHITE on the cover of module from ON to OFF or from OFF to ON                                                  |                           |                                                                           |           |          |
| SET LED2 PULSE                                                                                                                                       | ASCII<br>WRITE<br>COMMAND | #SL2PULSE:<PULSETIME><CR><br>Result:<br>#OK<CR>                           | ASCII     | YES      |
|                                                                                                                                                      | PULSETIME                 | 1000                                                                      |           |          |
|                                                                                                                                                      | TX                        | #255,SL2PULSE:1000<CR>                                                    |           |          |
|                                                                                                                                                      | RX                        | #255,OK<CR>                                                               |           |          |
| Sets the current state of the LED2:WHITE on the cover of module to PULSE and defines the one time pulse duration in Milliseconds between 1 and 60000 |                           |                                                                           |           |          |
| SET LED2 BLINK                                                                                                                                       | ASCII<br>WRITE<br>COMMAND | #SL2BLINK:<BLINKTIME><CR><br>Result:<br>#OK<CR>                           | ASCII     | YES      |
|                                                                                                                                                      | BLINKTIME                 | 1000                                                                      |           |          |
|                                                                                                                                                      | TX                        | #255,SL2BLINK:1000<CR>                                                    |           |          |
|                                                                                                                                                      | RX                        | #255,OK<CR>                                                               |           |          |

|                                                                                                                                                      |                           |                                                        |       |     |
|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------------------------------------|-------|-----|
| Sets the current state of the LED2:WHITE on the cover of module to PULSE and defines the one time pulse duration in Milliseconds between 1 and 60000 |                           |                                                        |       |     |
| SET LED2 FLASH                                                                                                                                       | ASCII<br>WRITE<br>COMMAND | #SL2FLASH:<ONTIME>,<OFFTIME><CR><br>Result:<br>#OK<CR> | ASCII | YES |
|                                                                                                                                                      | ONTIME                    | 200                                                    |       |     |
|                                                                                                                                                      | OFFTIME                   | 3000                                                   |       |     |
|                                                                                                                                                      | TX                        | #255,SL2FLASH:200,3000<CR>                             |       |     |
|                                                                                                                                                      | RX                        | #255,OK<CR>                                            |       |     |
| Sets the current state of the LED2:WHITE on the cover of module to FLASH and defines the on and off intervals in Milliseconds between 20 and 600000  |                           |                                                        |       |     |

| Register<br>NAME                                                                                                                                   | MODBUS<br>Register        | Register<br>VALUE                                                         | DATA TYPE | DO<br>WRITE |
|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------------------------------------------------|-----------|-------------|
| LED STATUS:LED3:RED                                                                                                                                |                           |                                                                           |           |             |
| GET LED3                                                                                                                                           | ASCII<br>READ<br>COMMAND  | #GLED3<CR><br>Result:<br>#GLED3:<LEDMode>,<LEDStateDec>,<LEDStateHex><CR> | ASCII     |             |
|                                                                                                                                                    | TX                        | #255,GLED3<CR>                                                            |           |             |
|                                                                                                                                                    | RX                        | #255,GLED3:ON,1,0x1<CR>                                                   |           |             |
|                                                                                                                                                    |                           | Actual LED state:ON<br>LED ist currently 1                                |           |             |
| Returns the actual state of the LED3:RED on the cover of module                                                                                    |                           |                                                                           |           |             |
| LED COMMANDS:LED3:RED                                                                                                                              |                           |                                                                           |           |             |
| SET LED3 OFF                                                                                                                                       | ASCII<br>WRITE<br>COMMAND | #SL3OFF<CR><br>Result:<br>#OK<CR>                                         | ASCII     | YES         |
|                                                                                                                                                    | TX                        | #255,SL3OFF<CR>                                                           |           |             |
|                                                                                                                                                    | RX                        | #255,OK<CR>                                                               |           |             |
| Sets the current state of the LED3:RED on the cover of module to OFF                                                                               |                           |                                                                           |           |             |
| SET LED3 ON                                                                                                                                        | ASCII<br>WRITE<br>COMMAND | #SL3ON<CR><br>Result:<br>#OK<CR>                                          | ASCII     | YES         |
|                                                                                                                                                    | TX                        | #255,SL3ON<CR>                                                            |           |             |
|                                                                                                                                                    | RX                        | #255,OK<CR>                                                               |           |             |
| Sets the current state of the LED3:RED on the cover of module to ON                                                                                |                           |                                                                           |           |             |
| SET LED3 INVERT                                                                                                                                    | ASCII<br>WRITE<br>COMMAND | #SL3INV<CR><br>Result:<br>#OK<CR>                                         | ASCII     | YES         |
|                                                                                                                                                    | TX                        | #255,SL3INV<CR>                                                           |           |             |
|                                                                                                                                                    | RX                        | #255,OK<CR>                                                               |           |             |
| Inverts the current state of the LED3:RED on the cover of module from ON to OFF or from OFF to ON                                                  |                           |                                                                           |           |             |
| SET LED3 PULSE                                                                                                                                     | ASCII<br>WRITE<br>COMMAND | #SL3PULSE:<PULSETIME><CR><br>Result:<br>#OK<CR>                           | ASCII     | YES         |
|                                                                                                                                                    | PULSETIME                 | 1000                                                                      |           |             |
|                                                                                                                                                    | TX                        | #255,SL3PULSE:1000<CR>                                                    |           |             |
|                                                                                                                                                    | RX                        | #255,OK<CR>                                                               |           |             |
| Sets the current state of the LED3:RED on the cover of module to PULSE and defines the one time pulse duration in Milliseconds between 1 and 60000 |                           |                                                                           |           |             |
| SET LED3 BLINK                                                                                                                                     | ASCII<br>WRITE<br>COMMAND | #SL3BLINK:<BLINKTIME><CR><br>Result:<br>#OK<CR>                           | ASCII     | YES         |
|                                                                                                                                                    | BLINKTIME                 | 1000                                                                      |           |             |
|                                                                                                                                                    | TX                        | #255,SL3BLINK:1000<CR>                                                    |           |             |
|                                                                                                                                                    | RX                        | #255,OK<CR>                                                               |           |             |

|                                                                                                                                                    |                           |                                                        |       |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------------------------------------|-------|-----|
| Sets the current state of the LED3:RED on the cover of module to PULSE and defines the one time pulse duration in Milliseconds between 1 and 60000 |                           |                                                        |       |     |
| SET LED3 FLASH                                                                                                                                     | ASCII<br>WRITE<br>COMMAND | #SL3FLASH:<ONTIME>,<OFFTIME><CR><br>Result:<br>#OK<CR> | ASCII | YES |
|                                                                                                                                                    | ONTIME                    | 200                                                    |       |     |
|                                                                                                                                                    | OFFTIME                   | 3000                                                   |       |     |
|                                                                                                                                                    | TX                        | #255,SL3FLASH:200,3000<CR>                             |       |     |
|                                                                                                                                                    | RX                        | #255,OK<CR>                                            |       |     |
| Sets the current state of the LED3:RED on the cover of module to FLASH and defines the on and off intervals in Milliseconds between 20 and 600000  |                           |                                                        |       |     |

| Register<br>NAME                                                                                                                                      | MODBUS<br>Register        | Register<br>VALUE                                                         | DATA TYPE | DO<br>WRITE |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------------------------------------------------|-----------|-------------|
| <b>LED STATUS:LED4:YELLOW</b>                                                                                                                         |                           |                                                                           |           |             |
| GET LED4                                                                                                                                              | ASCII<br>READ<br>COMMAND  | #GLED4<CR><br>Result:<br>#GLED4:<LEDMode>,<LEDStateDec>,<LEDStateHex><CR> | ASCII     |             |
|                                                                                                                                                       | TX                        | #255,GLED4<CR>                                                            |           |             |
|                                                                                                                                                       | RX                        | #255,GLED4:OFF,0,0x0<CR>                                                  |           |             |
|                                                                                                                                                       |                           | Actual LED state:OFF<br>LED ist currently 0                               |           |             |
| Returns the actual state of the LED4:YELLOW on the cover of module                                                                                    |                           |                                                                           |           |             |
| <b>LED COMMANDS:LED4:YELLOW</b>                                                                                                                       |                           |                                                                           |           |             |
| SET LED4 OFF                                                                                                                                          | ASCII<br>WRITE<br>COMMAND | #SL4OFF<CR><br>Result:<br>#OK<CR>                                         | ASCII     | YES         |
|                                                                                                                                                       | TX                        | #255,SL4OFF<CR>                                                           |           |             |
|                                                                                                                                                       | RX                        | #255,OK<CR>                                                               |           |             |
| Sets the current state of the LED4:YELLOW on the cover of module to OFF                                                                               |                           |                                                                           |           |             |
| SET LED4 ON                                                                                                                                           | ASCII<br>WRITE<br>COMMAND | #SL4ON<CR><br>Result:<br>#OK<CR>                                          | ASCII     | YES         |
|                                                                                                                                                       | TX                        | #255,SL4ON<CR>                                                            |           |             |
|                                                                                                                                                       | RX                        | #255,OK<CR>                                                               |           |             |
| Sets the current state of the LED4:YELLOW on the cover of module to ON                                                                                |                           |                                                                           |           |             |
| SET LED4 INVERT                                                                                                                                       | ASCII<br>WRITE<br>COMMAND | #SL4INV<CR><br>Result:<br>#OK<CR>                                         | ASCII     | YES         |
|                                                                                                                                                       | TX                        | #255,SL4INV<CR>                                                           |           |             |
|                                                                                                                                                       | RX                        | #255,OK<CR>                                                               |           |             |
| Inverts the current state of the LED4:YELLOW on the cover of module from ON to OFF or from OFF to ON                                                  |                           |                                                                           |           |             |
| SET LED4 PULSE                                                                                                                                        | ASCII<br>WRITE<br>COMMAND | #SL4PULSE:<PULSETIME><CR><br>Result:<br>#OK<CR>                           | ASCII     | YES         |
|                                                                                                                                                       | PULSETIME                 | 1000                                                                      |           |             |
|                                                                                                                                                       | TX                        | #255,SL4PULSE:1000<CR>                                                    |           |             |
|                                                                                                                                                       | RX                        | #255,OK<CR>                                                               |           |             |
| Sets the current state of the LED4:YELLOW on the cover of module to PULSE and defines the one time pulse duration in Milliseconds between 1 and 60000 |                           |                                                                           |           |             |
| SET LED4 BLINK                                                                                                                                        | ASCII<br>WRITE<br>COMMAND | #SL4BLINK:<BLINKTIME><CR><br>Result:<br>#OK<CR>                           | ASCII     | YES         |
|                                                                                                                                                       | BLINKTIME                 | 1000                                                                      |           |             |
|                                                                                                                                                       | TX                        | #255,SL4BLINK:1000<CR>                                                    |           |             |
|                                                                                                                                                       | RX                        | #255,OK<CR>                                                               |           |             |

|                                                                                                                                                       |                           |                                                        |       |     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------------------------------------|-------|-----|
| Sets the current state of the LED4:YELLOW on the cover of module to PULSE and defines the one time pulse duration in Milliseconds between 1 and 60000 |                           |                                                        |       |     |
| SET LED4 FLASH                                                                                                                                        | ASCII<br>WRITE<br>COMMAND | #SL4FLASH:<ONTIME>,<OFFTIME><CR><br>Result:<br>#OK<CR> | ASCII | YES |
|                                                                                                                                                       | ONTIME                    | 200                                                    |       |     |
|                                                                                                                                                       | OFFTIME                   | 3000                                                   |       |     |
|                                                                                                                                                       | TX                        | #255,SL4FLASH:200,3000<CR>                             |       |     |
|                                                                                                                                                       | RX                        | #255,OK<CR>                                            |       |     |
| Sets the current state of the LED4:YELLOW on the cover of module to FLASH and defines the on and off intervals in Milliseconds between 20 and 600000  |                           |                                                        |       |     |

| Register<br>NAME                                     | MODBUS<br>Register            | Register<br>VALUE                      | NEW REAL<br>VALUE | NEW<br>VALUE | DATA TYPE     | DO<br>WRITE |
|------------------------------------------------------|-------------------------------|----------------------------------------|-------------------|--------------|---------------|-------------|
| PRODUCT INFO                                         |                               |                                        |                   |              |               |             |
| HW_GROUP                                             | 3x65201<br>4x65201<br>I:65200 | 50176,0xC400<br>B:C4 00                |                   |              | UINT16<br>R/O |             |
| This is the group of hardware of the current product |                               |                                        |                   |              |               |             |
| HW_TYPE                                              | 3x65202<br>4x65202<br>I:65201 | 1,0x0001<br>B:00 01                    |                   |              | UINT16<br>R/O |             |
| This is the type of hardware of the current product  |                               |                                        |                   |              |               |             |
| SW_VERSION                                           | 3x65203<br>4x65203<br>I:65202 | 272,0x0110<br>B:01 10                  |                   |              | UINT16<br>R/O |             |
|                                                      |                               | SW VERSION:0.1.0                       |                   |              |               |             |
| This is the current software version of the firmware |                               |                                        |                   |              |               |             |
| SW_AUTHOR                                            | 3x65204<br>4x65204<br>I:65203 | 21321,0x5349<br>B:53 49                |                   |              | UINT16<br>R/O |             |
|                                                      |                               |                                        |                   |              |               |             |
| This is the current software author of the firmware  |                               |                                        |                   |              |               |             |
| MANUFACTURER                                         | 3x65205<br>4x65205<br>I:65204 | 1380275017,0x52455349<br>B:52 45 53 49 |                   |              | UINT32<br>R/O |             |
|                                                      |                               |                                        |                   |              |               |             |
| This is the current software author of the firmware  |                               |                                        |                   |              |               |             |
| NUMBER OF<br>DIGITAL INPUTS                          | 3x65207<br>4x65207<br>I:65206 | 0,0x0000<br>B:00 00                    |                   |              | UINT16<br>R/O |             |
|                                                      |                               | Number of DIS:0                        |                   |              |               |             |
| This is the current software version of the firmware |                               |                                        |                   |              |               |             |
| NUMBER OF<br>DIGITAL OUTPUTS                         | 3x65208<br>4x65208<br>I:65207 | 0,0x0000<br>B:00 00                    |                   |              | UINT16<br>R/O |             |
|                                                      |                               | Number of DOS:0                        |                   |              |               |             |
| This is the current software version of the firmware |                               |                                        |                   |              |               |             |
| NUMBER OF<br>ANALOG INPUTS                           | 3x65209<br>4x65209<br>I:65208 | 0,0x0000<br>B:00 00                    |                   |              | UINT16<br>R/O |             |
|                                                      |                               | Number of AIS:0                        |                   |              |               |             |
| This is the current software version of the firmware |                               |                                        |                   |              |               |             |
| NUMBER OF<br>ANALOG OUTPUTS                          | 3x65210<br>4x65210<br>I:65209 | 0,0x0000<br>B:00 00                    |                   |              | UINT16<br>R/O |             |
|                                                      |                               | Number of AOS:0                        |                   |              |               |             |

|                                                                                                                             |                               |                             |  |  |               |  |
|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------|--|--|---------------|--|
| This is the current software version of the firmware                                                                        |                               |                             |  |  |               |  |
| NUMBER OF UNIVERSAL IN/OUTPUTS                                                                                              | 3x65211<br>4x65211<br>I:65210 | 0,0x0000<br>B:00 00         |  |  | UINT16<br>R/O |  |
|                                                                                                                             |                               | Number of AIOX:0            |  |  |               |  |
| This is the current software version of the firmware                                                                        |                               |                             |  |  |               |  |
| NUMBER OF SPECIAL INPUTS                                                                                                    | 3x65212<br>4x65212<br>I:65211 | 0,0x0000<br>B:00 00         |  |  | UINT16<br>R/O |  |
|                                                                                                                             |                               | Number of special inputs:0  |  |  |               |  |
| This is the current software version of the firmware                                                                        |                               |                             |  |  |               |  |
| NUMBER OF SPECIAL OUTPUTS                                                                                                   | 3x65213<br>4x65213<br>I:65212 | 0,0x0000<br>B:00 00         |  |  | UINT16<br>R/O |  |
|                                                                                                                             |                               | Number of special outputs:0 |  |  |               |  |
| This is the current software version of the firmware                                                                        |                               |                             |  |  |               |  |
| FEATURE1                                                                                                                    | 3x65214<br>4x65214<br>I:65213 | 2,0x0002<br>B:00 02         |  |  | UINT16<br>R/O |  |
|                                                                                                                             |                               | Feature:RS485               |  |  |               |  |
| This is the feature list of the controller:<br>0:NONE, 1:RS232, 2:RS485, 3:KNX, 4:DALI, 5:MBUS, 6:LORA, 7:LTE, 8:2xETHERNET |                               |                             |  |  |               |  |
| FEATURE2                                                                                                                    | 3x65215<br>4x65215<br>I:65214 | 0,0x0000<br>B:00 00         |  |  | UINT16<br>R/O |  |
|                                                                                                                             |                               | Feature:NONE                |  |  |               |  |
| FEATURE3                                                                                                                    | 3x65216<br>4x65216<br>I:65215 | 0,0x0000<br>B:00 00         |  |  | UINT16<br>R/O |  |
|                                                                                                                             |                               | Feature:NONE                |  |  |               |  |
| FEATURE4                                                                                                                    | 3x65217<br>4x65217<br>I:65216 | 0,0x0000<br>B:00 00         |  |  | UINT16<br>R/O |  |
|                                                                                                                             |                               | Feature:NONE                |  |  |               |  |
| FEATURE5                                                                                                                    | 3x65218<br>4x65218<br>I:65217 | 0,0x0000<br>B:00 00         |  |  | UINT16<br>R/O |  |
|                                                                                                                             |                               | Feature:NONE                |  |  |               |  |
| FEATURE6                                                                                                                    | 3x65219<br>4x65219<br>I:65218 | 0,0x0000<br>B:00 00         |  |  | UINT16<br>R/O |  |
|                                                                                                                             |                               | Feature:NONE                |  |  |               |  |
| FEATURE7                                                                                                                    | 3x65220<br>4x65220<br>I:65219 | 0,0x0000<br>B:00 00         |  |  | UINT16<br>R/O |  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                                             |  |    |               |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------|--|----|---------------|----|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | Feature:NONE                                |  |    |               |    |
| FEATURE8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3x65221<br>4x65221<br>l:65220 | 0,0x0000<br>B:00 00                         |  |    | UINT16<br>R/O |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | Feature:NONE                                |  |    |               |    |
| MODBUS WATCHDOG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                                             |  |    |               |    |
| MODBUS WATCHDOG TIME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3x65222<br>4x65222<br>l:65221 | 0,0x0000<br>B:00 00                         |  | 50 | UINT16<br>R/W | NO |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | 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 register will return the current stored time from the internal FRAM |                               |                                             |  |    |               |    |
| RASPBERRY PI WATCHDOG TIMER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3x65223<br>4x65223<br>l:65222 | 0,0x0000<br>B:00 00                         |  | 50 | UINT16<br>R/W | NO |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | remaining watchdog time in 10ms:0 -> 0,000s |  |    |               |    |
| Enables or disables the WATCHDOG Timer for the Raspberry Pi module.<br>1..65535: Time for Watchdog in x10 Milliseconds (Maximum 655,35 seconds)<br>=0: No Watchdog is generated                                                                                                                                                                                                                                                                                                                                      |                               |                                             |  |    |               |    |
| FRAM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               |                                             |  |    |               |    |
| GET FRAM TYPE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3x65224<br>4x65224<br>l:65223 | 2,0x0002<br>B:00 02                         |  |    | UINT16<br>R/O |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | FRAM size & type:FM25L16 2kB                |  |    |               |    |
| Returns the current ytpе of the FRAM and its total size<br>=2:FM25L16B_G, 2kB<br>=64:FM25V05, 64kB<br>=128:FM25V10, 128kB                                                                                                                                                                                                                                                                                                                                                                                            |                               |                                             |  |    |               |    |
| GET FRAM USED BYTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 3x65225<br>4x65225<br>l:65224 | 166,0x00A6<br>B:00 A6                       |  |    | UINT16<br>R/O |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | FRAM used bytes:166                         |  |    |               |    |
| Returns the amount of used bytes from system in FRAM                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                               |                                             |  |    |               |    |
| RTC REAL TIME CLOCK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                               |                                             |  |    |               |    |
| RTC YEAR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3x65231<br>4x65231<br>l:65230 | 24,0x0018<br>B:00 18                        |  | 24 | UINT16<br>R/W | NO |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | Actual RTC year:24                          |  |    |               |    |
| Returns the actual year of the internal real time clock in the range of 24 to 99.<br>Writing to this register prepares the setting of a new time.                                                                                                                                                                                                                                                                                                                                                                    |                               |                                             |  |    |               |    |

|                                                                                                                                                                                     |                               |                         |  |                    |  |               |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------|--|--------------------|--|---------------|----|
| RTC MONTH                                                                                                                                                                           | 3x65232<br>4x65232<br>I:65231 | 2,0x0002<br>B:00 02     |  | 1                  |  | UINT16<br>R/W | NO |
|                                                                                                                                                                                     |                               | Actual RTC month:2      |  |                    |  |               |    |
| Returns the actual month of the internal real time clock in the range of 1 to 12<br>Writing to this register prepares the setting of a new time.                                    |                               |                         |  |                    |  |               |    |
| RTC DAY                                                                                                                                                                             | 3x65233<br>4x65233<br>I:65232 | 29,0x001D<br>B:00 1D    |  | 1                  |  | UINT16<br>R/W | NO |
|                                                                                                                                                                                     |                               | Actual RTC day:29       |  |                    |  |               |    |
| Returns the actual day of the internal real time clock in the range of 1 to 31<br>Writing to this register prepares the setting of a new time.                                      |                               |                         |  |                    |  |               |    |
| RTC HOUR                                                                                                                                                                            | 3x65234<br>4x65234<br>I:65233 | 18,0x0012<br>B:00 12    |  | 12                 |  | UINT16<br>R/W | NO |
|                                                                                                                                                                                     |                               | Actual RTC month:18     |  |                    |  |               |    |
| Returns the actual hour of the internal real time clock in the range of 0 to 23<br>Writing to this register prepares the setting of a new time.                                     |                               |                         |  |                    |  |               |    |
| RTC MINUTE                                                                                                                                                                          | 3x65235<br>4x65235<br>I:65234 | 0,0x0000<br>B:00 00     |  | 45                 |  | UINT16<br>R/W | NO |
|                                                                                                                                                                                     |                               | Actual RTC hour:0       |  |                    |  |               |    |
| Returns the actual minute of the internal real time clock in the range of 0 to 59<br>Writing to this register prepares the setting of a new time.                                   |                               |                         |  |                    |  |               |    |
| RTC SECOND                                                                                                                                                                          | 3x65236<br>4x65236<br>I:65235 | 23,0x0017<br>B:00 17    |  | 30                 |  | UINT16<br>R/W | NO |
|                                                                                                                                                                                     |                               | Actual RTC second:23    |  |                    |  |               |    |
| Returns the actual second of the internal real time clock in the range of 0 to 59<br>Writing to this register prepares the setting of a new time.                                   |                               |                         |  |                    |  |               |    |
| RTC DAY OF WEEK                                                                                                                                                                     | 3x65237<br>4x65237<br>I:65236 | 4,0x0004<br>B:00 04     |  | 5:FRIDAY           |  | UINT16<br>R/W | NO |
|                                                                                                                                                                                     |                               | Actual RTC week day:THU |  | SELECT DAY OF WEEK |  |               |    |
| Returns the actual day of week in the range 1 to 7<br>1:MON, 2:TUE, 3:WED, 4:THU, 5:FRI, 6:SAT, 7:SUN<br>Writing to this register writes a new date and time and weekday to the RTC |                               |                         |  |                    |  |               |    |
| DIP SWITCH STATUS                                                                                                                                                                   |                               |                         |  |                    |  |               |    |
| DIP SWITCH                                                                                                                                                                          | 3x65501<br>4x65501<br>I:65500 | 85,0x0055<br>B:00 55    |  |                    |  | UINT16<br>R/O |    |

Returns the actual setting of the Dip switches.  
Bit 0: DIP Switch 1 (=0:OFF, =1:ON)  
Bit 1: DIP Switch 2 (=0:OFF, =1:ON)  
Bit 2: DIP Switch 3 (=0:OFF, =1:ON)  
Bit 3: DIP Switch 4 (=0:OFF, =1:ON)  
Bit 4: DIP Switch 5 (=0:OFF, =1:ON)  
Bit 5: DIP Switch 6 (=0:OFF, =1:ON)  
Bit 6: DIP Switch 7 (=0:OFF, =1:ON)  
Bit 7: DIP Switch 8 (=0:OFF, =1:ON)

CPU DATA

|                                                                     |                                            |                         |  |  |               |  |
|---------------------------------------------------------------------|--------------------------------------------|-------------------------|--|--|---------------|--|
| SERIAL1                                                             | 3x65521<br>4x65521<br>I:65520              | 34,0x0022<br>B:00 22    |  |  | UINT16<br>R/O |  |
| Serial number of module as 96 bit unsigned integer number           |                                            |                         |  |  |               |  |
| SERIAL2                                                             | 3x65522<br>4x65522<br>I:65521              | 24,0x0018<br>B:00 18    |  |  | UINT16<br>R/O |  |
| SERIAL3                                                             | 3x65523<br>4x65523<br>I:65522              | 22291,0x5713<br>B:57 13 |  |  | UINT16<br>R/O |  |
| SERIAL4                                                             | 3x65524<br>4x65524<br>I:65523              | 20547,0x5043<br>B:50 43 |  |  | UINT16<br>R/O |  |
| SERIAL5                                                             | 3x65525<br>4x65525<br>I:65524              | 13361,0x3431<br>B:34 31 |  |  | UINT16<br>R/O |  |
| SERIAL6                                                             | 3x65526<br>4x65526<br>I:65525              | 8246,0x2036<br>B:20 36  |  |  | UINT16<br>R/O |  |
|                                                                     | SERIAL:220018001357435031343620            |                         |  |  |               |  |
| Serial number of module as 96 bit unsigned integer number           |                                            |                         |  |  |               |  |
| CPU TEMPERATURE                                                     | 3x65527<br>4x65527<br>I:65526              | 5061,0x13C5<br>B:13 C5  |  |  | UINT16<br>R/O |  |
|                                                                     | Actual internal temperature of CPU:50,61°C |                         |  |  |               |  |
| Current internal temperature of CPU in ° Celsius multiplied by 100. |                                            |                         |  |  |               |  |
| CPU VOLTAGE                                                         | 3x65528<br>4x65528<br>I:65527              | 333,0x014D<br>B:01 4D   |  |  | UINT16<br>R/O |  |
|                                                                     | Actual supply voltage of CPU:3,33V         |                         |  |  |               |  |
| Current internal supply voltage of CPU in Volt multiplied by 1000.  |                                            |                         |  |  |               |  |
| CPU BACKUP                                                          | 3x65529<br>4x65529<br>I:65528              | 311,0x0137<br>B:01 37   |  |  | UINT16<br>R/O |  |
|                                                                     | Actual backup voltage of CPU for RTC:3,11V |                         |  |  |               |  |

RESETs

| RESI Configurator RESI-C4-8CO,8COxAIOX-V1007                                                                                                                                                                        |                               |                     |  |                              | RESI-C4-xxx MB Basics |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------|--|------------------------------|-----------------------|----|
| RASPBERRY PI RESET                                                                                                                                                                                                  | 3x65534<br>4x65534<br>l:65533 | 0,0x00<br>B:00 00   |  | 1:PERFORM RASPBERRY PI RESET | BIT<br>R/W            | NO |
| Resets the Raspberry Pi                                                                                                                                                                                             |                               |                     |  |                              |                       |    |
| RASPBERRY PI RESET                                                                                                                                                                                                  | 3x65534<br>4x65534<br>l:65533 | 0,0x0000<br>B:00 00 |  | 1:PERFORM RASPBERRY PI RESET | UINT16<br>R/W         | NO |
| Resets the Raspberry Pi                                                                                                                                                                                             |                               |                     |  |                              |                       |    |
| FACTORY RESET                                                                                                                                                                                                       | 1x65535<br>2x65535<br>l:65534 | 0,0x00<br>B:00      |  | 1:PERFORM FACTORY RESET      | BIT<br>R/W            | NO |
| Performs a factory reset of all internal saved parameters                                                                                                                                                           |                               |                     |  |                              |                       |    |
| FACTORY RESET                                                                                                                                                                                                       | 3x65535<br>4x65535<br>l: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                                                                                                                                                           |                               |                     |  |                              |                       |    |
| RESET                                                                                                                                                                                                               | 1x65536<br>2x65536<br>l:65535 | 0,0x00<br>B:00      |  | 1:PERFORM ARM RESET          | 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).<br>Be aware that you will lose all serial interfaces in USB!!! |                               |                     |  |                              |                       |    |
| RESET                                                                                                                                                                                                               | 3x65536<br>4x65535<br>l:65535 | 0,0x0000<br>B:00 00 |  | 1:PERFORM ARM RESET          | 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).<br>Be aware that you will lose all serial interfaces in USB!!! |                               |                     |  |                              |                       |    |

| Register<br>NAME                                                                   | MODBUS<br>Register            | Register<br>VALUE | NEW REAL<br>VALUE | NEW<br>VALUE   | DATA TYPE  | DO<br>WRITE |
|------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------------|----------------|------------|-------------|
| DIP SWITCH STATUS                                                                  |                               |                   |                   |                |            |             |
| DIP SWITCH DIP1                                                                    | 1x65001<br>2x65001<br>I:65000 | ????              |                   |                | BIT<br>R/O |             |
| Returns the actual setting of the Dip switches.<br>=0: DIP is OFF<br>=1: DIP is ON |                               |                   |                   |                |            |             |
| DIP SWITCH DIP2                                                                    | 1x65002<br>2x65002<br>I:65001 | ????              |                   |                | BIT<br>R/O |             |
| DIP SWITCH DIP3                                                                    | 1x65003<br>2x65003<br>I:65002 | ????              |                   |                | BIT<br>R/O |             |
| DIP SWITCH DIP4                                                                    | 1x65004<br>2x65004<br>I:65003 | ????              |                   |                | BIT<br>R/O |             |
| DIP SWITCH DIP5                                                                    | 1x65005<br>2x65005<br>I:65004 | ????              |                   |                | BIT<br>R/O |             |
| DIP SWITCH DIP6                                                                    | 1x65006<br>2x65006<br>I:65005 | ????              |                   |                | BIT<br>R/O |             |
| DIP SWITCH DIP7                                                                    | 1x65007<br>2x65007<br>I:65006 | ????              |                   |                | BIT<br>R/O |             |
| DIP SWITCH DIP8                                                                    | 1x65008<br>2x65008<br>I:65007 | ????              |                   |                | BIT<br>R/O |             |
| LED1:GREEN                                                                         |                               |                   |                   |                |            |             |
| LED1:GREEN<br>SET TO OFF                                                           | 1x65009<br>2x65009<br>I:65008 | ????              |                   | N/A:DO NOTHING | BIT<br>W/O | NO          |
| Writing 1 to this coil sets the LED to OFF                                         |                               |                   |                   |                |            |             |
| LED1:GREEN<br>SET TO ON                                                            | 1x65010<br>2x65010<br>I:65009 | ????              |                   | N/A:DO NOTHING | BIT<br>W/O | NO          |
| Writing 1 to this coil sets the LED to ON                                          |                               |                   |                   |                |            |             |
| LED1:GREEN<br>INVERT LED STATE                                                     | 1x65011<br>2x65011<br>I:65010 | ????              |                   | N/A:DO NOTHING | BIT<br>W/O | NO          |
| Writing 1 to this coil inverts the actual LED state                                |                               |                   |                   |                |            |             |
| LED1:GREEN<br>BLINK                                                                | 1x65012<br>2x65012<br>I:65011 | ????              |                   | N/A:DO NOTHING | BIT<br>W/O | NO          |

|                                                                                         |                               |      |  |                |            |    |
|-----------------------------------------------------------------------------------------|-------------------------------|------|--|----------------|------------|----|
| Writing 1 to this coil start symmetrical blinking of LED with last defined time         |                               |      |  |                |            |    |
| LED1:GREEN<br>FLASH                                                                     | 1x65013<br>2x65013<br>I:65012 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with last defined times       |                               |      |  |                |            |    |
| LED1:GREEN<br>PULSE                                                                     | 1x65014<br>2x65014<br>I:65013 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start one time pulse of LED with last defined time               |                               |      |  |                |            |    |
| LED1:GREEN<br>BLINK 5s                                                                  | 1x65015<br>2x65015<br>I:65014 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start symmetrical blinking of LED with 5s ON-5s OFF cycle        |                               |      |  |                |            |    |
| LED1:GREEN<br>BLINK 1s                                                                  | 1x65016<br>2x65016<br>I:65015 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start symmetrical blinking of LED with 1s ON-1s OFF cycle        |                               |      |  |                |            |    |
| LED1:GREEN<br>BLINK 250ms                                                               | 1x65017<br>2x65017<br>I:65016 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start symmetrical blinking of LED with 250ms ON-250ms OFF cycle  |                               |      |  |                |            |    |
| LED1:GREEN<br>BLINK 50ms                                                                | 1x65018<br>2x65018<br>I:65017 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start symmetrical blinking of LED with 50ms ON-50ms OFF cycle    |                               |      |  |                |            |    |
| LED1:GREEN<br>FLASH 5s-1s                                                               | 1x65019<br>2x65019<br>I:65018 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with 5s ON-1s OFF cycle       |                               |      |  |                |            |    |
| LED1:GREEN<br>FLASH 1s-250ms                                                            | 1x65020<br>2x65020<br>I:65019 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with 1s ON-250ms OFF cycle    |                               |      |  |                |            |    |
| LED1:GREEN<br>FLASH 500ms-100ms                                                         | 1x65021<br>2x65021<br>I:65020 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with 500ms ON-100ms OFF cycle |                               |      |  |                |            |    |
| LED1:GREEN<br>FLASH 300ms-50ms                                                          | 1x65022<br>2x65022<br>I:65021 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with 300ms ON-50ms OFF cycle  |                               |      |  |                |            |    |
| LED1:GREEN<br>PULSE 1s                                                                  | 1x65023<br>2x65023<br>I:65022 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start one time pulse of LED with 1s ON                           |                               |      |  |                |            |    |

|                                                                                   |                               |      |  |                |            |    |
|-----------------------------------------------------------------------------------|-------------------------------|------|--|----------------|------------|----|
| LED1:GREEN<br>PULSE 500ms                                                         | 1x65024<br>2x65024<br>I:65023 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start one time pulse of LED with 500ms ON                  |                               |      |  |                |            |    |
| LED1:GREEN<br>PULSE 250ms                                                         | 1x65025<br>2x65025<br>I:65024 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start one time pulse of LED with 250ms ON                  |                               |      |  |                |            |    |
| LED1:GREEN<br>PULSE 100ms                                                         | 1x65026<br>2x65026<br>I:65025 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start one time pulse of LED with 100ms ON                  |                               |      |  |                |            |    |
| LED1:GREEN<br>PULSE 20ms                                                          | 1x65027<br>2x65027<br>I:65026 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start one time pulse of LED with 20ms ON                   |                               |      |  |                |            |    |
| LED2:WHITE                                                                        |                               |      |  |                |            |    |
| LED2:WHITE<br>SET TO OFF                                                          | 1x65029<br>2x65029<br>I:65028 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil sets the LED to OFF                                        |                               |      |  |                |            |    |
| LED2:WHITE<br>SET TO ON                                                           | 1x65030<br>2x65030<br>I:65029 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil sets the LED to ON                                         |                               |      |  |                |            |    |
| LED2:WHITE<br>INVERT LED STATE                                                    | 1x65031<br>2x65031<br>I:65030 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil inverts the actual LED state                               |                               |      |  |                |            |    |
| LED2:WHITE<br>BLINK                                                               | 1x65032<br>2x65032<br>I:65031 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start symmetrical blinking of LED with last defined time   |                               |      |  |                |            |    |
| LED2:WHITE<br>FLASH                                                               | 1x65033<br>2x65033<br>I:65032 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with last defined times |                               |      |  |                |            |    |
| LED2:WHITE<br>PULSE                                                               | 1x65034<br>2x65034<br>I:65033 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start one time pulse of LED with last defined time         |                               |      |  |                |            |    |
| LED2:WHITE<br>BLINK 5s                                                            | 1x65035<br>2x65035<br>I:65034 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start symmetrical blinking of LED with 5s ON-5s OFF cycle  |                               |      |  |                |            |    |

|                                                                                         |                               |      |  |                |            |    |
|-----------------------------------------------------------------------------------------|-------------------------------|------|--|----------------|------------|----|
| LED2:WHITE<br>BLINK 1s                                                                  | 1x65036<br>2x65036<br>I:65035 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start symmetrical blinking of LED with 1s ON-1s OFF cycle        |                               |      |  |                |            |    |
| LED2:WHITE<br>BLINK 250ms                                                               | 1x65037<br>2x65037<br>I:65036 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start symmetrical blinking of LED with 250ms ON-250ms OFF cycle  |                               |      |  |                |            |    |
| LED2:WHITE<br>BLINK 50ms                                                                | 1x65038<br>2x65038<br>I:65037 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start symmetrical blinking of LED with 50ms ON-50ms OFF cycle    |                               |      |  |                |            |    |
| LED2:WHITE<br>FLASH 5s-1s                                                               | 1x65039<br>2x65039<br>I:65038 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with 5s ON-1s OFF cycle       |                               |      |  |                |            |    |
| LED2:WHITE<br>FLASH 1s-250ms                                                            | 1x65040<br>2x65040<br>I:65039 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with 1s ON-250ms OFF cycle    |                               |      |  |                |            |    |
| LED2:WHITE<br>FLASH 500ms-100ms                                                         | 1x65041<br>2x65041<br>I:65040 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with 500ms ON-100ms OFF cycle |                               |      |  |                |            |    |
| LED2:WHITE<br>FLASH 300ms-50ms                                                          | 1x65042<br>2x65042<br>I:65041 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with 300ms ON-50ms OFF cycle  |                               |      |  |                |            |    |
| LED2:WHITE<br>PULSE 1s                                                                  | 1x65043<br>2x65043<br>I:65042 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start one time pulse of LED with 1s ON                           |                               |      |  |                |            |    |
| LED2:WHITE<br>PULSE 500ms                                                               | 1x65044<br>2x65044<br>I:65043 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start one time pulse of LED with 500ms ON                        |                               |      |  |                |            |    |
| LED2:WHITE<br>PULSE 250ms                                                               | 1x65045<br>2x65045<br>I:65044 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start one time pulse of LED with 250ms ON                        |                               |      |  |                |            |    |
| LED2:WHITE<br>PULSE 100ms                                                               | 1x65046<br>2x65046<br>I:65045 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start one time pulse of LED with 100ms ON                        |                               |      |  |                |            |    |

|                                                                                        |                               |      |  |                |            |    |
|----------------------------------------------------------------------------------------|-------------------------------|------|--|----------------|------------|----|
| LED2:WHITE<br>PULSE 20ms                                                               | 1x65047<br>2x65047<br>I:65046 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start one time pulse of LED with 20ms ON                        |                               |      |  |                |            |    |
| <b>LED3:RED</b>                                                                        |                               |      |  |                |            |    |
| LED3:RED<br>SET TO OFF                                                                 | 1x65049<br>2x65049<br>I:65048 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil sets the LED to OFF                                             |                               |      |  |                |            |    |
| LED3:RED<br>SET TO ON                                                                  | 1x65050<br>2x65050<br>I:65049 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil sets the LED to ON                                              |                               |      |  |                |            |    |
| LED3:RED<br>INVERT LED STATE                                                           | 1x65051<br>2x65051<br>I:65050 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil inverts the actual LED state                                    |                               |      |  |                |            |    |
| LED3:RED<br>BLINK                                                                      | 1x65052<br>2x65052<br>I:65051 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start symmetrical blinking of LED with last defined time        |                               |      |  |                |            |    |
| LED3:RED<br>FLASH                                                                      | 1x65053<br>2x65053<br>I:65052 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with last defined times      |                               |      |  |                |            |    |
| LED3:RED<br>PULSE                                                                      | 1x65054<br>2x65054<br>I:65053 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start one time pulse of LED with last defined time              |                               |      |  |                |            |    |
| LED3:RED<br>BLINK 5s                                                                   | 1x65055<br>2x65055<br>I:65054 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start symmetrical blinking of LED with 5s ON-5s OFF cycle       |                               |      |  |                |            |    |
| LED3:RED<br>BLINK 1s                                                                   | 1x65056<br>2x65056<br>I:65055 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start symmetrical blinking of LED with 1s ON-1s OFF cycle       |                               |      |  |                |            |    |
| LED3:RED<br>BLINK 250ms                                                                | 1x65057<br>2x65057<br>I:65056 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start symmetrical blinking of LED with 250ms ON-250ms OFF cycle |                               |      |  |                |            |    |
| LED3:RED<br>BLINK 50ms                                                                 | 1x65058<br>2x65058<br>I:65057 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start symmetrical blinking of LED with 50ms ON-50ms OFF cycle   |                               |      |  |                |            |    |

|                                                                                         |                               |      |  |                |            |    |
|-----------------------------------------------------------------------------------------|-------------------------------|------|--|----------------|------------|----|
| LED3:RED<br>FLASH 5s-1s                                                                 | 1x65059<br>2x65059<br>I:65058 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with 5s ON-1s OFF cycle       |                               |      |  |                |            |    |
| LED3:RED<br>FLASH 1s-250ms                                                              | 1x65060<br>2x65060<br>I:65059 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with 1s ON-250ms OFF cycle    |                               |      |  |                |            |    |
| LED3:RED<br>FLASH 500ms-100ms                                                           | 1x65061<br>2x65061<br>I:65060 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with 500ms ON-100ms OFF cycle |                               |      |  |                |            |    |
| LED3:RED<br>FLASH 300ms-50ms                                                            | 1x65062<br>2x65062<br>I:65061 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with 300ms ON-50ms OFF cycle  |                               |      |  |                |            |    |
| LED3:RED<br>PULSE 1s                                                                    | 1x65063<br>2x65063<br>I:65062 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start one time pulse of LED with 1s ON                           |                               |      |  |                |            |    |
| LED3:RED<br>PULSE 500ms                                                                 | 1x65064<br>2x65064<br>I:65063 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start one time pulse of LED with 500ms ON                        |                               |      |  |                |            |    |
| LED3:RED<br>PULSE 250ms                                                                 | 1x65065<br>2x65065<br>I:65064 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start one time pulse of LED with 250ms ON                        |                               |      |  |                |            |    |
| LED3:RED<br>PULSE 100ms                                                                 | 1x65066<br>2x65066<br>I:65065 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start one time pulse of LED with 100ms ON                        |                               |      |  |                |            |    |
| LED3:RED<br>PULSE 20ms                                                                  | 1x65067<br>2x65067<br>I:65066 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start one time pulse of LED with 20ms ON                         |                               |      |  |                |            |    |
| <b>LED4:YELLOW</b>                                                                      |                               |      |  |                |            |    |
| LED4:YELLOW<br>SET TO OFF                                                               | 1x65069<br>2x65069<br>I:65068 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil sets the LED to OFF                                              |                               |      |  |                |            |    |
| LED4:YELLOW<br>SET TO ON                                                                | 1x65070<br>2x65070<br>I:65069 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil sets the LED to ON                                               |                               |      |  |                |            |    |

|                                                                                         |                               |      |  |                |            |    |
|-----------------------------------------------------------------------------------------|-------------------------------|------|--|----------------|------------|----|
| LED4:YELLOW<br>INVERT LED STATE                                                         | 1x65071<br>2x65071<br>I:65070 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil inverts the actual LED state                                     |                               |      |  |                |            |    |
| LED4:YELLOW<br>BLINK                                                                    | 1x65072<br>2x65072<br>I:65071 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start symmetrical blinking of LED with last defined time         |                               |      |  |                |            |    |
| LED4:YELLOW<br>FLASH                                                                    | 1x65073<br>2x65073<br>I:65072 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with last defined times       |                               |      |  |                |            |    |
| LED4:YELLOW<br>PULSE                                                                    | 1x65074<br>2x65074<br>I:65073 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start one time pulse of LED with last defined time               |                               |      |  |                |            |    |
| LED4:YELLOW<br>BLINK 5s                                                                 | 1x65075<br>2x65075<br>I:65074 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start symmetrical blinking of LED with 5s ON-5s OFF cycle        |                               |      |  |                |            |    |
| LED4:YELLOW<br>BLINK 1s                                                                 | 1x65076<br>2x65076<br>I:65075 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start symmetrical blinking of LED with 1s ON-1s OFF cycle        |                               |      |  |                |            |    |
| LED4:YELLOW<br>BLINK 250ms                                                              | 1x65077<br>2x65077<br>I:65076 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start symmetrical blinking of LED with 250ms ON-250ms OFF cycle  |                               |      |  |                |            |    |
| LED4:YELLOW<br>BLINK 50ms                                                               | 1x65078<br>2x65078<br>I:65077 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start symmetrical blinking of LED with 50ms ON-50ms OFF cycle    |                               |      |  |                |            |    |
| LED4:YELLOW<br>FLASH 5s-1s                                                              | 1x65079<br>2x65079<br>I:65078 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with 5s ON-1s OFF cycle       |                               |      |  |                |            |    |
| LED4:YELLOW<br>FLASH 1s-250ms                                                           | 1x65080<br>2x65080<br>I:65079 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with 1s ON-250ms OFF cycle    |                               |      |  |                |            |    |
| LED4:YELLOW<br>FLASH 500ms-100ms                                                        | 1x65081<br>2x65081<br>I:65080 | ???? |  | N/A:DO NOTHING | BIT<br>W/O | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with 500ms ON-100ms OFF cycle |                               |      |  |                |            |    |

|                                                                                                                                                                                                                                                                                                                                                                         |                               |                   |  |                |               |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|--|----------------|---------------|----|
| LED4:YELLOW<br>FLASH 300ms-50ms                                                                                                                                                                                                                                                                                                                                         | 1x65082<br>2x65082<br>I:65081 | ????              |  | N/A:DO NOTHING | BIT<br>W/O    | NO |
| Writing 1 to this coil start asymmetrical flashing of LED with 300ms ON-50ms OFF cycle                                                                                                                                                                                                                                                                                  |                               |                   |  |                |               |    |
| LED4:YELLOW<br>PULSE 1s                                                                                                                                                                                                                                                                                                                                                 | 1x65083<br>2x65083<br>I:65082 | ????              |  | N/A:DO NOTHING | BIT<br>W/O    | NO |
| Writing 1 to this coil start one time pulse of LED with 1s ON                                                                                                                                                                                                                                                                                                           |                               |                   |  |                |               |    |
| LED4:YELLOW<br>PULSE 500ms                                                                                                                                                                                                                                                                                                                                              | 1x65084<br>2x65084<br>I:65083 | ????              |  | N/A:DO NOTHING | BIT<br>W/O    | NO |
| Writing 1 to this coil start one time pulse of LED with 500ms ON                                                                                                                                                                                                                                                                                                        |                               |                   |  |                |               |    |
| LED4:YELLOW<br>PULSE 250ms                                                                                                                                                                                                                                                                                                                                              | 1x65085<br>2x65085<br>I:65084 | ????              |  | N/A:DO NOTHING | BIT<br>W/O    | NO |
| Writing 1 to this coil start one time pulse of LED with 250ms ON                                                                                                                                                                                                                                                                                                        |                               |                   |  |                |               |    |
| LED4:YELLOW<br>PULSE 100ms                                                                                                                                                                                                                                                                                                                                              | 1x65086<br>2x65086<br>I:65085 | ????              |  | N/A:DO NOTHING | BIT<br>W/O    | NO |
| Writing 1 to this coil start one time pulse of LED with 100ms ON                                                                                                                                                                                                                                                                                                        |                               |                   |  |                |               |    |
| LED4:YELLOW<br>PULSE 20ms                                                                                                                                                                                                                                                                                                                                               | 1x65087<br>2x65087<br>I:65086 | ????              |  | N/A:DO NOTHING | BIT<br>W/O    | NO |
| Writing 1 to this coil start one time pulse of LED with 20ms ON                                                                                                                                                                                                                                                                                                         |                               |                   |  |                |               |    |
| DIP SWITCH STATUS                                                                                                                                                                                                                                                                                                                                                       |                               |                   |  |                |               |    |
| DIP SWITCH                                                                                                                                                                                                                                                                                                                                                              | 3x65501<br>4x65501<br>I:65500 | ????              |  |                | UINT16<br>R/O |    |
| Returns the actual 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) |                               |                   |  |                |               |    |
| LED1:GREEN                                                                                                                                                                                                                                                                                                                                                              |                               |                   |  |                |               |    |
| LED1:GREEN<br>STATE                                                                                                                                                                                                                                                                                                                                                     | 3x65502<br>4x65502<br>I:65501 | ????              |  | 1:SET TO ON    | UINT16<br>R/W | NO |
|                                                                                                                                                                                                                                                                                                                                                                         |                               | State of LED:???? |  |                |               |    |

|                                                                                                                                                                                                                                                                                                                                                                                                        |                               |                       |  |             |               |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------|--|-------------|---------------|-----|
| Returns the actual state of the LED<br>Writing to this register will set a new state for the LED<br>0: Switch LED permanent OFF<br>1: Switch LED permanent ON<br>2: Invert last state of LED<br>3: Start symmetrical blinking of LED with TIME1 ON and TIME1 OFF<br>4: Start asymmetrical flashing of LED with TIME1 ON and TIME2 OFF<br>5: Start one time pulse of LED with TIME1 ON and infinite OFF |                               |                       |  |             |               |     |
| LED1:GREEN<br>TIME1                                                                                                                                                                                                                                                                                                                                                                                    | 3x65503<br>4x65503<br>I:65502 | ????                  |  | 1000        | UINT16<br>R/W | YES |
|                                                                                                                                                                                                                                                                                                                                                                                                        |                               | Actual time 1 in ms:0 |  |             |               |     |
| Returns the actual time1 for blink,flash and pulse ON time in Milliseconds<br>Writing to this register sets a new time in the range 20-65534ms                                                                                                                                                                                                                                                         |                               |                       |  |             |               |     |
| LED1:GREEN<br>TIME2                                                                                                                                                                                                                                                                                                                                                                                    | 3x65504<br>4x65504<br>I:65503 | ????                  |  | 2000        | UINT16<br>R/W | YES |
|                                                                                                                                                                                                                                                                                                                                                                                                        |                               | Actual time 2 in ms:0 |  |             |               |     |
| Returns the actual time2 for blink and flash OFF time in Milliseconds<br>Writing to this register sets a new time in the range 20-65534ms                                                                                                                                                                                                                                                              |                               |                       |  |             |               |     |
| LED2:WHITE                                                                                                                                                                                                                                                                                                                                                                                             |                               |                       |  |             |               |     |
| LED2:WHITE<br>STATE                                                                                                                                                                                                                                                                                                                                                                                    | 3x65505<br>4x65505<br>I:65504 | ????                  |  | 1:SET TO ON | UINT16<br>R/W | NO  |
|                                                                                                                                                                                                                                                                                                                                                                                                        |                               | State of LED:????     |  |             |               |     |
| Returns the actual state of the LED<br>Writing to this register will set a new state for the LED<br>0: Switch LED permanent OFF<br>1: Switch LED permanent ON<br>2: Invert last state of LED<br>3: Start symmetrical blinking of LED with TIME1 ON and TIME1 OFF<br>4: Start asymmetrical flashing of LED with TIME1 ON and TIME2 OFF<br>5: Start one time pulse of LED with TIME1 ON and infinite OFF |                               |                       |  |             |               |     |
| LED2:WHITE<br>TIME1                                                                                                                                                                                                                                                                                                                                                                                    | 3x65506<br>4x65506<br>I:65505 | ????                  |  | 1000        | UINT16<br>R/W | YES |
|                                                                                                                                                                                                                                                                                                                                                                                                        |                               | Actual time 1 in ms:0 |  |             |               |     |
| Returns the actual time1 for blink,flash and pulse ON time in Milliseconds<br>Writing to this register sets a new time in the range 20-65534ms                                                                                                                                                                                                                                                         |                               |                       |  |             |               |     |
| LED2:WHITE<br>TIME2                                                                                                                                                                                                                                                                                                                                                                                    | 3x65507<br>4x65507<br>I:65506 | ????                  |  | 2000        | UINT16<br>R/W | YES |
|                                                                                                                                                                                                                                                                                                                                                                                                        |                               | Actual time 2 in ms:0 |  |             |               |     |
| Returns the actual time2 for blink and flash OFF time in Milliseconds<br>Writing to this register sets a new time in the range 20-65534ms                                                                                                                                                                                                                                                              |                               |                       |  |             |               |     |
| LED3:RED                                                                                                                                                                                                                                                                                                                                                                                               |                               |                       |  |             |               |     |
| LED3:RED<br>STATE                                                                                                                                                                                                                                                                                                                                                                                      | 3x65508<br>4x65508<br>I:65507 | ????                  |  | 1:SET TO ON | UINT16<br>R/W | NO  |

|                                                                                                                                                                                                                                                                                                                                                                                                        |                               |                   |  |             |               |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------|--|-------------|---------------|-----|
|                                                                                                                                                                                                                                                                                                                                                                                                        |                               | State of LED:???? |  |             |               |     |
| Returns the actual state of the LED<br>Writing to this register will set a new state for the LED<br>0: Switch LED permanent OFF<br>1: Switch LED permanent ON<br>2: Invert last state of LED<br>3: Start symmetrical blinking of LED with TIME1 ON and TIME1 OFF<br>4: Start asymmetrical flashing of LED with TIME1 ON and TIME2 OFF<br>5: Start one time pulse of LED with TIME1 ON and infinite OFF |                               |                   |  |             |               |     |
| LED3:RED<br>TIME1                                                                                                                                                                                                                                                                                                                                                                                      | 3x65509<br>4x65509<br>I:65508 | ????              |  | 1000        | UINT16<br>R/W | YES |
|                                                                                                                                                                                                                                                                                                                                                                                                        | Actual time 1 in ms:0         |                   |  |             |               |     |
| Returns the actual time1 for blink,flash and pulse ON time in Milliseconds<br>Writing to this register sets a new time in the range 20-65534ms                                                                                                                                                                                                                                                         |                               |                   |  |             |               |     |
| LED3:RED<br>TIME2                                                                                                                                                                                                                                                                                                                                                                                      | 3x65510<br>4x65510<br>I:65509 | ????              |  | 2000        | UINT16<br>R/W | YES |
|                                                                                                                                                                                                                                                                                                                                                                                                        | Actual time 2 in ms:0         |                   |  |             |               |     |
| Returns the actual time2 for blink and flash OFF time in Milliseconds<br>Writing to this register sets a new time in the range 20-65534ms                                                                                                                                                                                                                                                              |                               |                   |  |             |               |     |
| LED4:YELLOW                                                                                                                                                                                                                                                                                                                                                                                            |                               |                   |  |             |               |     |
| LED4:YELLOW<br>STATE                                                                                                                                                                                                                                                                                                                                                                                   | 3x65511<br>4x65511<br>I:65510 | ????              |  | 1:SET TO ON | UINT16<br>R/W | NO  |
|                                                                                                                                                                                                                                                                                                                                                                                                        |                               | State of LED:???? |  |             |               |     |
| Returns the actual state of the LED<br>Writing to this register will set a new state for the LED<br>0: Switch LED permanent OFF<br>1: Switch LED permanent ON<br>2: Invert last state of LED<br>3: Start symmetrical blinking of LED with TIME1 ON and TIME1 OFF<br>4: Start asymmetrical flashing of LED with TIME1 ON and TIME2 OFF<br>5: Start one time pulse of LED with TIME1 ON and infinite OFF |                               |                   |  |             |               |     |
| LED4:YELLOW<br>TIME1                                                                                                                                                                                                                                                                                                                                                                                   | 3x65512<br>4x65512<br>I:65511 | ????              |  | 1000        | UINT16<br>R/W | YES |
|                                                                                                                                                                                                                                                                                                                                                                                                        | Actual time 1 in ms:0         |                   |  |             |               |     |
| Returns the actual time1 for blink,flash and pulse ON time in Milliseconds<br>Writing to this register sets a new time in the range 20-65534ms                                                                                                                                                                                                                                                         |                               |                   |  |             |               |     |
| LED4:YELLOW<br>TIME2                                                                                                                                                                                                                                                                                                                                                                                   | 3x65513<br>4x65513<br>I:65512 | ????              |  | 2000        | UINT16<br>R/W | YES |
|                                                                                                                                                                                                                                                                                                                                                                                                        | Actual time 2 in ms:0         |                   |  |             |               |     |
| Returns the actual time2 for blink and flash OFF time in Milliseconds<br>Writing to this register sets a new time in the range 20-65534ms                                                                                                                                                                                                                                                              |                               |                   |  |             |               |     |

| Command NAME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ASCII command type  | ASCII command structure                              | NEW REAL VALUE | NEW VALUE | DATA TYPE | DO WRITE |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------------------------------|----------------|-----------|-----------|----------|
| ASCII COMMANDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                     |                                                      |                |           |           |          |
| DIGITAL OUTPUTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                     |                                                      |                |           |           |          |
| SET DIGITAL OUTPUTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ASCII WRITE COMMAND | #SDOS:<OutAllROS> <CR><br>Result:<br>#OK<CR>         |                |           | ASCII     | YES      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RO1                 | 1:ON                                                 |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RO2                 | 1:ON                                                 |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RO3                 | 1:ON                                                 |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RO4                 | 1:ON                                                 |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RO5                 | 1:ON                                                 |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RO6                 | 1:ON                                                 |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RO7                 | 1:ON                                                 |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RO8                 | 1:ON                                                 |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | TX                  | #255,SDOS:255<CR>                                    |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RX                  | #255,OK<CR>                                          |                |           |           |          |
| <div>Sets all eight relay outputs to the new state OutAllROS</div> <div>The new state for all relay outputs</div> <div>Bit 0: State of RO1 (=0:OFF, =1:ON)</div> <div>Bit 1: State of RO2 (=0:OFF, =1:ON)</div> <div>Bit 2: State of RO3 (=0:OFF, =1:ON)</div> <div>Bit 3: State of RO4 (=0:OFF, =1:ON)</div> <div>Bit 4: State of RO5 (=0:OFF, =1:ON)</div> <div>Bit 5: State of RO6 (=0:OFF, =1:ON)</div> <div>Bit 6: State of RO7 (=0:OFF, =1:ON)</div> <div>Bit 7: State of RO8 (=0:OFF, =1:ON)</div> <div>Bits 8-15: Always 0</div> |                     |                                                      |                |           |           |          |
| SET DIGITAL OUTPUT ROx                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ASCII WRITE COMMAND | #SDO<RONR>:<Out> <CR><br>Result:<br>#OK<CR>          |                |           | ASCII     | YES      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RONR                | 2                                                    |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RO1                 | 0:OFF                                                |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | TX                  | #255,SDO2:0<CR>                                      |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RX                  | #255,OK<CR>                                          |                |           |           |          |
| <div>Sets the new state for relay output ROx. The state is defined with &lt;Out&gt;.</div> <div>Out</div> <div>The new state of the relay output ROx:</div> <div>=0: relay output is OFF</div> <div>=1: relay output is ON</div>                                                                                                                                                                                                                                                                                                         |                     |                                                      |                |           |           |          |
| GET DIGITAL OUTPUTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ASCII READ COMMAND  | #GDOS<CR><br>Result:<br>#GDOS:<ROSDec>,<ROSHex> <CR> |                |           | ASCII     |          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                           |                                                                 |       |    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------------------------------------------------------|-------|----|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | TX                        | #255,GDOS<CR>                                                   |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RX                        | #255,GDOS:253,0xFD<CR>                                          |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                           | Current status of relay outputs:0000.0000.1111.1101             |       |    |
| <p>Returns the current state of the eight relay outputs as decimal number and as hexadecimal number.<br/>         ROSDec, ROSHex<br/>         The current state of the eight relay outputs:<br/>         Bit 0: State of RO1 (=0:OFF, =1:ON)<br/>         Bit 1: State of RO2 (=0:OFF, =1:ON)<br/>         Bit 2: State of RO3 (=0:OFF, =1:ON)<br/>         Bit 3: State of RO4 (=0:OFF, =1:ON)<br/>         Bit 4: State of RO5 (=0:OFF, =1:ON)<br/>         Bit 5: State of RO6 (=0:OFF, =1:ON)<br/>         Bit 6: State of RO7 (=0:OFF, =1:ON)<br/>         Bit 7: State of RO8 (=0:OFF, =1:ON)<br/>         Bits 8-15: Always 0</p> |                           |                                                                 |       |    |
| GET DIGITAL OUTPUT ROx                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ASCII<br>READ<br>COMMAND  | #GDO<RONR> <CR><br>Result:<br>#GDO<RONR>:<ROxDec>,<ROxHex> <CR> | ASCII |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RONR                      | 2                                                               |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | TX                        | #255,GDO2<CR>                                                   |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RX                        | #255,GDO2:0,0x0<CR>                                             |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                           | Current status of relay output RO2:0=OFF                        |       |    |
| <p>Returns the current state of the relay output ROx as decimal number and as hexadecimal number. X stands for the number of the relay output from 1 to 8.<br/>         ROxDec, ROxHex<br/>         The current state of the bistable relay output ROx:<br/>         =0: relay output is OFF<br/>         =1: relay output is ON</p>                                                                                                                                                                                                                                                                                                     |                           |                                                                 |       |    |
| PULSE DOx                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ASCII<br>WRITE<br>COMMAND | #PDO<RONR>:<Time> <CR><br>Result:<br>#OK<CR>                    | ASCII | NO |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RONR                      | 3                                                               |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | TIME                      | 20                                                              |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | TX                        | #255,PDO3:20<CR>                                                |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RX                        | N/A                                                             |       |    |
| <p>This command switches the relay output ROx on for the pulse duration &lt;PulseTimeIn100ms&gt;*100ms.<br/>         PulseTimeIn100ms: A duration in 100ms units.<br/>         The corresponding relay output is switched on for this time period.</p>                                                                                                                                                                                                                                                                                                                                                                                   |                           |                                                                 |       |    |
| GET PULSE TIMER DOx                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ASCII<br>READ<br>COMMAND  | #GPT<RONR> <CR><br>Result:<br>#GPT:<TimeDec>,<TimeHex> <CR>     | ASCII |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RONR                      | 3                                                               |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | TX                        | #255,GPT3<CR>                                                   |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | RX                        | #255,GPT3:0,0x0<CR>                                             |       |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                           | Current pulse time for RO3:0,0s                                 |       |    |

Returns the remaining timer value of the pulse for relay output ROx in ms.  
PulseTimeInMSDec, PulseTimeInMSHex  
The remaining time of the pulse in Milliseconds

|                  |                           |                                              |       |     |
|------------------|---------------------------|----------------------------------------------|-------|-----|
| FAN COIL #1,#2   |                           |                                              |       |     |
| 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                        | #255,SFC1:9999<CR>                           |       |     |
|                  | RX                        | #255,OK<CR>                                  |       |     |

Sets a new mode for FAN COIL functionality on RO1, RO2 and RO3 or RO5, RO6 and RO7:  
=9999: This function is not used  
=0: All three ROs are OFF  
=1: STAGE 1: RO1 ist 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                       | #255,GFC1<CR>                                                     |       |  |
|                  | RX                       | #255,GFC1:9999,0x270F<CR>                                         |       |  |
|                  |                          | Current mode fo FC:9999->DEACTIVATED                              |       |  |

Current mode for FAN COIL functionality on RO1, RO2 and RO3 or RO5, RO6 and RO7:  
=9999: This function is not used  
=0: All three ROs are OFF  
=1: STAGE 1: RO1 ist 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                        | #255,SPTFC1:3123<CR>                           |       |     |
|                    | RX                        | #255,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                        | #255,GPTFC1<CR>                                                     |       |     |
|                                                                                                                                                                                 | RX                        | #255,GPTFC1:3123,0xC33<CR>                                          |       |     |
|                                                                                                                                                                                 |                           | Current pause time for FC1:3,123s                                   |       |     |
| 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                        | #255,SSTFC1:7250<CR>                                                |       |     |
|                                                                                                                                                                                 | RX                        | #255,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                        | #255,GSTFC1<CR>                                                     |       |     |
|                                                                                                                                                                                 | RX                        | #255,GSTFC1:7250,0x1C52<CR>                                         |       |     |
|                                                                                                                                                                                 |                           | Current stage time for FC1:7,250s                                   |       |     |
| 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                                                  |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | OutAllDOS           | 0x00000000   0                                         |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | TX                  | #255,SCDOS:0x00000000<CR>                              |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | RX                  | #255,OK<CR>                                            |                |           |           |          |
| <div>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.</div> <div>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 6: New state of DO7 (=0:OFF, =1:ON)<br/>Bit 7: New state of DO8 (=0:OFF, =1:ON)</div> |                     |                                                        |                |           |           |          |
| GET INITIAL & WATCHDOG STATE FOR DIGITAL OUTPUTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ASCII READ COMMAND  | #GCDOS<CR><br>Result:<br>#GCDOS:<DOSDec>,<DOSHex> <CR> |                |           | ASCII     |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | TX                  | #255,GCDOS<CR>                                         |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | RX                  | #255,GCDOS:0,0x0<CR>                                   |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                     | Init & watchdog configuration for digital outputs:     |                |           |           |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                     | DO1-DO8:0000.0000                                      |                |           |           |          |

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 6: State of DO7 (=0:OFF, =1:ON)  
Bit 7: State of DO8 (=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                                                             |                                        |                                 |                   |                          |            |             |
| RO1                                                                | 1x00001<br>2x00001<br>l:0              | 1,0x01<br>B:01                  |                   | 1                        | BIT<br>R/W | NO          |
|                                                                    |                                        | Current state of RO1:1=ON       |                   | ENTER NEW STATE (0 or 1) |            |             |
| Current state of the relay output ROx<br>=0:RO is OFF, =1:RO is ON |                                        |                                 |                   |                          |            |             |
| Writing on this register changes the state of the relay output     |                                        |                                 |                   |                          |            |             |
| RO2                                                                | 1x00002<br>2x00002<br>l:1              | 0,0x00<br>B:00                  |                   | 1                        | BIT<br>R/W | NO          |
|                                                                    |                                        | Current state of RO2:0=OFF      |                   | ENTER NEW STATE (0 or 1) |            |             |
| RO3                                                                | 1x00003<br>2x00003<br>l:2              | 1,0x01<br>B:01                  |                   | 1                        | BIT<br>R/W | NO          |
|                                                                    |                                        | Current state of RO3:1=ON       |                   | ENTER NEW STATE (0 or 1) |            |             |
| RO4                                                                | 1x00004<br>2x00004<br>l:3              | 1,0x01<br>B:01                  |                   | 0                        | BIT<br>R/W | NO          |
|                                                                    |                                        | Current state of RO4:1=ON       |                   | ENTER NEW STATE (0 or 1) |            |             |
| RO5                                                                | 1x00005<br>2x00005<br>l:4              | 1,0x01<br>B:01                  |                   | 0                        | BIT<br>R/W | NO          |
|                                                                    |                                        | Current state of RO5:1=ON       |                   | ENTER NEW STATE (0 or 1) |            |             |
| RO6                                                                | 1x00006<br>2x00006<br>l:5              | 1,0x01<br>B:01                  |                   | 0                        | BIT<br>R/W | NO          |
|                                                                    |                                        | Current state of RO6:1=ON       |                   | ENTER NEW STATE (0 or 1) |            |             |
| RO7                                                                | 1x00007<br>2x00007<br>l:6              | 1,0x01<br>B:01                  |                   | 0                        | BIT<br>R/W | NO          |
|                                                                    |                                        | Current state of RO7:1=ON       |                   | ENTER NEW STATE (0 or 1) |            |             |
| RO8                                                                | 1x00008<br>2x00008<br>l:7              | 1,0x01<br>B:01                  |                   | 0                        | BIT<br>R/W | NO          |
|                                                                    |                                        | Current state of RO8:1=ON       |                   | ENTER NEW STATE (0 or 1) |            |             |
| STATUS                                                             |                                        |                                 |                   |                          |            |             |

|                                                                    |                             |                            |  |                          |               |    |
|--------------------------------------------------------------------|-----------------------------|----------------------------|--|--------------------------|---------------|----|
| RO1                                                                | 3x00001<br>4x00001<br>I:0   | 1,0x0001<br>B:00 01        |  | 1                        | UINT16<br>R/W | NO |
|                                                                    |                             | Current state of RO1:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| Current state of the relay output ROx<br>=0:RO is OFF, =1:RO is ON |                             |                            |  |                          |               |    |
| Writing on this register changes the state of the relay output     |                             |                            |  |                          |               |    |
| RO2                                                                | 3x00002<br>4x00002<br>I:1   | 0,0x0000<br>B:00 00        |  | 1                        | UINT16<br>R/W | NO |
|                                                                    |                             | Current state of RO2:0=OFF |  | ENTER NEW STATE (0 or 1) |               |    |
| RO3                                                                | 3x00003<br>4x00003<br>I:2   | 1,0x0001<br>B:00 01        |  | 1                        | UINT16<br>R/W | NO |
|                                                                    |                             | Current state of RO3:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| RO4                                                                | 3x00004<br>4x00004<br>I:3   | 1,0x0001<br>B:00 01        |  | 0                        | UINT16<br>R/W | NO |
|                                                                    |                             | Current state of RO4:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| RO5                                                                | 3x00005<br>4x00005<br>I:4   | 1,0x0001<br>B:00 01        |  | 0                        | UINT16<br>R/W | NO |
|                                                                    |                             | Current state of RO5:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| RO6                                                                | 3x00006<br>4x00006<br>I:5   | 1,0x0001<br>B:00 01        |  | 0                        | UINT16<br>R/W | NO |
|                                                                    |                             | Current state of RO6:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| RO7                                                                | 3x00007<br>4x00007<br>I:6   | 1,0x0001<br>B:00 01        |  | 0                        | UINT16<br>R/W | NO |
|                                                                    |                             | Current state of RO7:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| RO8                                                                | 3x00008<br>4x00008<br>I:7   | 1,0x0001<br>B:00 01        |  | 0                        | UINT16<br>R/W | NO |
|                                                                    |                             | Current state of RO8:1=ON  |  | ENTER NEW STATE (0 or 1) |               |    |
| STATUS OF RELAY OUTPUTS                                            |                             |                            |  |                          |               |    |
| STATUS OF ALL ROS                                                  | 3x00101<br>4x00101<br>I:100 | 253,0x00FD<br>B:00 FD      |  | 0x0000                   | UINT16<br>R/W | NO |
|                                                                    |                             | Current state of RO1:1=ON  |  | 0                        |               |    |
|                                                                    |                             | Current state of RO2:0=OFF |  | 0                        |               |    |
|                                                                    |                             | Current state of RO3:1=ON  |  | 0                        |               |    |
|                                                                    |                             | Current state of RO4:1=ON  |  | 0                        |               |    |
|                                                                    |                             | Current state of RO5:1=ON  |  | 0                        |               |    |

|  |  |                           |   |  |  |
|--|--|---------------------------|---|--|--|
|  |  | Current state of RO6:1=ON | 0 |  |  |
|  |  | Current state of RO7:1=ON | 0 |  |  |
|  |  | Current state of RO8:1=ON | 0 |  |  |

Current state of all relay outputs  
Bit 0: =0:RO1 is OFF, =1:RO1 is ON  
Bit 1: =0:RO2 is OFF, =1:RO2 is ON  
Bit 2: =0:RO3 is OFF, =1:RO3 is ON  
Bit 3: =0:RO4 is OFF, =1:RO4 is ON  
Bit 4: =0:RO5 is OFF, =1:RO5 is ON  
Bit 5: =0:RO6 is OFF, =1:RO6 is ON  
Bit 6: =0:RO7 is OFF, =1:RO7 is ON  
Bit 7: =0:RO8 is OFF, =1:RO8 is ON  
Bit 8-15: always 0

Write on this register sets all eight relay to a new state

STATUS OF RELAY OUTPUTS

|                   |                               |                            |   |        |               |    |
|-------------------|-------------------------------|----------------------------|---|--------|---------------|----|
| STATUS OF ALL ROS | 3x10001<br>4x10001<br>l:10000 | 253,0x00FD<br>B:00 FD      |   | 0x0000 | UINT16<br>R/W | NO |
|                   |                               | Current state of RO1:1=ON  | 0 |        |               |    |
|                   |                               | Current state of RO2:0=OFF | 0 |        |               |    |
|                   |                               | Current state of RO3:1=ON  | 0 |        |               |    |
|                   |                               | Current state of RO4:1=ON  | 0 |        |               |    |
|                   |                               | Current state of RO5:1=ON  | 0 |        |               |    |
|                   |                               | Current state of RO6:1=ON  | 0 |        |               |    |
|                   |                               | Current state of RO7:1=ON  | 0 |        |               |    |
|                   |                               | Current state of RO8:1=ON  | 0 |        |               |    |

Current state of all relay outputs  
Bit 0: =0:RO1 is OFF, =1:RO1 is ON  
Bit 1: =0:RO2 is OFF, =1:RO2 is ON  
Bit 2: =0:RO3 is OFF, =1:RO3 is ON  
Bit 3: =0:RO4 is OFF, =1:RO4 is ON  
Bit 4: =0:RO5 is OFF, =1:RO5 is ON  
Bit 5: =0:RO6 is OFF, =1:RO6 is ON  
Bit 6: =0:RO7 is OFF, =1:RO7 is ON  
Bit 7: =0:RO8 is OFF, =1:RO8 is ON  
Bit 8-15: always 0

Write on this register sets all eight relay to a new state

PULSE TIME FOR RELAY OUTPUTS

|                |                               |                     |    |     |               |    |
|----------------|-------------------------------|---------------------|----|-----|---------------|----|
| PULSE TIME RO1 | 3x20001<br>4x20001<br>l:20000 | 0,0x0000<br>B:00 00 | 20 | 2,0 | UINT16<br>R/W | NO |
|                |                               | 0,0 seconds         |    |     |               |    |

Generate a pulse on relay output x in 100ms units (0,1 to 6553,5 Seconds selectable)  
If you write onto this register, the relay output will be switched on for the desired time in 100ms units.

|                                                                |                               |                               |    |     |               |    |
|----------------------------------------------------------------|-------------------------------|-------------------------------|----|-----|---------------|----|
| PULSE TIME RO2                                                 | 3x20002<br>4x20002<br>I:20001 | 0,0x0000<br>B:00 00           | 20 | 2,0 | UINT16<br>R/W | NO |
|                                                                |                               | 0,0 seconds                   |    |     |               |    |
| PULSE TIME RO3                                                 | 3x20003<br>4x20003<br>I:20002 | 0,0x0000<br>B:00 00           | 20 | 2,0 | UINT16<br>R/W | NO |
|                                                                |                               | 0,0 seconds                   |    |     |               |    |
| PULSE TIME RO4                                                 | 3x20004<br>4x20004<br>I:20003 | 0,0x0000<br>B:00 00           | 20 | 2,0 | UINT16<br>R/W | NO |
|                                                                |                               | 0,0 seconds                   |    |     |               |    |
| PULSE TIME RO5                                                 | 3x20005<br>4x20005<br>I:20004 | 0,0x0000<br>B:00 00           | 20 | 2,0 | UINT16<br>R/W | NO |
|                                                                |                               | 0,0 seconds                   |    |     |               |    |
| PULSE TIME RO6                                                 | 3x20006<br>4x20006<br>I:20005 | 0,0x0000<br>B:00 00           | 20 | 2,0 | UINT16<br>R/W | NO |
|                                                                |                               | 0,0 seconds                   |    |     |               |    |
| PULSE TIME RO7                                                 | 3x20007<br>4x20007<br>I:20006 | 0,0x0000<br>B:00 00           | 20 | 2,0 | UINT16<br>R/W | NO |
|                                                                |                               | 0,0 seconds                   |    |     |               |    |
| PULSE TIME RO8                                                 | 3x20008<br>4x20008<br>I:20007 | 0,0x0000<br>B:00 00           | 20 | 2,0 | UINT16<br>R/W | NO |
|                                                                |                               | 0,0 seconds                   |    |     |               |    |
| PULSE STATUS FOR RELAY OUTPUTS                                 |                               |                               |    |     |               |    |
| PULSE TIMER RO1                                                | 3x21001<br>4x21001<br>I:21000 | 0,0x00000000<br>B:00 00 00 00 |    |     | UINT32<br>R/O |    |
|                                                                |                               | 0,0 seconds                   |    |     |               |    |
| Remaining time of the pulse on relay output x in Milliseconds. |                               |                               |    |     |               |    |
| PULSE TIMER RO2                                                | 3x21003<br>4x21003<br>I:21002 | 0,0x00000000<br>B:00 00 00 00 |    |     | UINT32<br>R/O |    |
|                                                                |                               | 0,0 seconds                   |    |     |               |    |
| PULSE TIMER RO3                                                | 3x21005<br>4x21005<br>I:21004 | 0,0x00000000<br>B:00 00 00 00 |    |     | UINT32<br>R/O |    |
|                                                                |                               | 0,0 seconds                   |    |     |               |    |
| PULSE TIMER RO4                                                | 3x21007<br>4x21007<br>I:21006 | 0,0x00000000<br>B:00 00 00 00 |    |     | UINT32<br>R/O |    |

|                                                                |                               |                               |  |  |                |  |
|----------------------------------------------------------------|-------------------------------|-------------------------------|--|--|----------------|--|
|                                                                |                               | 0,0 seconds                   |  |  |                |  |
| PULSE TIMER RO5                                                | 3x21009<br>4x21009<br>I:21008 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O  |  |
|                                                                |                               | 0,0 seconds                   |  |  |                |  |
| PULSE TIMER RO6                                                | 3x21011<br>4x21011<br>I:21010 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O  |  |
|                                                                |                               | 0,0 seconds                   |  |  |                |  |
| PULSE TIMER RO7                                                | 3x21013<br>4x21013<br>I:21012 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O  |  |
|                                                                |                               | 0,0 seconds                   |  |  |                |  |
| PULSE TIMER RO8                                                | 3x21015<br>4x21015<br>I:21014 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32<br>R/O  |  |
|                                                                |                               | 0,0 seconds                   |  |  |                |  |
| <b>PULSE STATUS FOR RELAY OUTPUTS</b>                          |                               |                               |  |  |                |  |
| PULSE TIMER RO1                                                | 3x21017<br>4x21017<br>I:21016 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32R<br>R/O |  |
|                                                                |                               | 0,0 seconds                   |  |  |                |  |
| Remaining time of the pulse on relay output x in Milliseconds. |                               |                               |  |  |                |  |
| PULSE TIMER RO2                                                | 3x21019<br>4x21019<br>I:21018 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32R<br>R/O |  |
|                                                                |                               | 0,0 seconds                   |  |  |                |  |
| PULSE TIMER RO3                                                | 3x21021<br>4x21021<br>I:21020 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32R<br>R/O |  |
|                                                                |                               | 0,0 seconds                   |  |  |                |  |
| PULSE TIMER RO4                                                | 3x21023<br>4x21023<br>I:21022 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32R<br>R/O |  |
|                                                                |                               | 0,0 seconds                   |  |  |                |  |
| PULSE TIMER RO5                                                | 3x21025<br>4x21025<br>I:21024 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32R<br>R/O |  |
|                                                                |                               | 0,0 seconds                   |  |  |                |  |
| PULSE TIMER RO6                                                | 3x21027<br>4x21027<br>I:21026 | 0,0x00000000<br>B:00 00 00 00 |  |  | UINT32R<br>R/O |  |
|                                                                |                               | 0,0 seconds                   |  |  |                |  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               |                                      |       |                  |                |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------|-------|------------------|----------------|-----|
| PULSE TIMER RO7                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3x21029<br>4x21029<br>I:21028 | 0,0x00000000<br>B:00 00 00 00        |       |                  | UINT32R<br>R/O |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | 0,0 seconds                          |       |                  |                |     |
| PULSE TIMER RO8                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3x21031<br>4x21031<br>I:21030 | 0,0x00000000<br>B:00 00 00 00        |       |                  | UINT32R<br>R/O |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | 0,0 seconds                          |       |                  |                |     |
| FAN COIL #1                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                               |                                      |       |                  |                |     |
| FC1 MODE                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3x40001<br>4x40001<br>I:40000 | 9999,0x270F<br>B:27 0F               |       | 3:LEVEL 3        | UINT16<br>R/W  | YES |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | Current mode of FC:9999->DEACTIVATED |       |                  |                |     |
| <div>Current mode for FAN COIL functionality on RO1, RO2 and RO3:<br/>=9999: This function is not used<br/>=0: All three ROs are OFF<br/>=1: STAGE 1: RO1 is ON, RO2,RO3 are OFF<br/>=2: STAGE 2: RO2 is ON, RO1,RO3 are OFF<br/>=3: STAGE 3: RO3 is ON, RO1,RO2 are OFF</div> <div>In this mode the module inserts a pause with no outputs on, when swtiching from one stage to another stage. Also a minimum time for each stage is maintained by the module</div> |                               |                                      |       |                  |                |     |
| FC1 PAUSE TIME                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 3x40002<br>4x40002<br>I:40001 | 3123,0x0C33<br>B:0C 33               | 5000  | 5,0              | UINT16<br>R/W  | NO  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | 3,123 seconds                        |       |                  |                |     |
| Sets and returns the pause time with no relays ON between stage switching. Time is defined in 1ms units (0 to 65,535 Seconds selectable)                                                                                                                                                                                                                                                                                                                             |                               |                                      |       |                  |                |     |
| FC1 STAGE TIME                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 3x40003<br>4x40003<br>I:40002 | 7250,0x00001C52<br>B:00 00 1C 52     | 10000 | 10,0             | UINT32<br>R/W  | NO  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | 7,250 seconds                        |       |                  |                |     |
| Sets and returns 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 changing to another stage.                                                                                                                                                                                                                                                                           |                               |                                      |       |                  |                |     |
| FC1 STAGE TIME                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 3x40005<br>4x40005<br>I:40004 | 7250,0x00001C52<br>B:1C 52 00 00     | 10000 | 10,0             | UINT32R<br>R/W | NO  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | 7,250 seconds                        |       |                  |                |     |
| Sets and returns 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 changing to another stage.                                                                                                                                                                                                                                                                           |                               |                                      |       |                  |                |     |
| FAN COIL #2                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                               |                                      |       |                  |                |     |
| FC2 MODE                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3x40011<br>4x40011<br>I:40010 | 9999,0x270F<br>B:27 0F               |       | 9999:DEACTIVATED | UINT16<br>R/W  | YES |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                               | Current mode of FC:9999->DEACTIVATED |       |                  |                |     |

Current mode for FAN COIL functionality on RO5, RO6 and RO7:  
=9999: This function is not used  
=0: All three ROs are OFF  
=1: STAGE 1: RO5 is ON, RO6,RO7 are OFF  
=2: STAGE 2: RO6 is ON, RO5,RO7 are OFF  
=3: STAGE 3: RO7 is ON, RO5,RO6 are OFF

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

|                                                                                                                                                                                            |                               |                                   |       |      |                |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------|-------|------|----------------|-----|
| FC2 PAUSE TIME                                                                                                                                                                             | 3x40012<br>4x40012<br>I:40011 | 1000,0x03E8<br>B:03 E8            | 5000  | 5,0  | UINT16<br>R/W  | NO  |
|                                                                                                                                                                                            |                               | 1,000 seconds                     |       |      |                |     |
| Sets and returns the pause time with no relays ON between stage switching. Time is defined in 1ms units (0 to 65,535 Seconds selectable)                                                   |                               |                                   |       |      |                |     |
| FC2 STAGE TIME                                                                                                                                                                             | 3x40013<br>4x40013<br>I:40012 | 15000,0x00003A98<br>B:00 00 3A 98 | 10000 | 10,0 | UINT32<br>R/W  | YES |
|                                                                                                                                                                                            |                               | 15,000 seconds                    |       |      |                |     |
| Sets and returns 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 changing to another stage. |                               |                                   |       |      |                |     |
| FC2 STAGE TIME                                                                                                                                                                             | 3x40015<br>4x40015<br>I:40014 | 15000,0x00003A98<br>B:3A 98 00 00 | 10000 | 10,0 | UINT32R<br>R/W | NO  |
|                                                                                                                                                                                            |                               | 15,000 seconds                    |       |      |                |     |
| Sets and returns 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 changing to another stage. |                               |                                   |       |      |                |     |

| 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-DO8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3x59001<br>4x59001<br>l:59000          | 0,0x0000<br>B:00 00                       |                   | 0x0000       | UINT16<br>R/W | YES         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                        | Actual init & watchdog state of DO1:0=OFF | 0                 |              |               |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                        | Actual init & watchdog state of DO2:0=OFF | 0                 |              |               |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                        | Actual init & watchdog state of DO3:0=OFF | 0                 |              |               |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                        | Actual init & watchdog state of DO4:0=OFF | 0                 |              |               |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                        | Actual init & watchdog state of DO5:0=OFF | 0                 |              |               |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                        | Actual init & watchdog state of DO6:0=OFF | 0                 |              |               |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                        | Actual init & watchdog state of DO7:0=OFF | 0                 |              |               |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                        | Actual init & watchdog state of DO8:0=OFF | 0                 |              |               |             |
| <div>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</div> <div>Bit 0: =0:DO1 is OFF, =1:DO1 is ON</div> <div>Bit 1: =0:DO2 is OFF, =1:DO2 is ON</div> <div>...</div> <div>Bit 6: =0:DO7 is OFF, =1:DO15 is ON</div> <div>Bit 7: =0:DO8 is OFF, =1:DO16 is ON</div> <div>Write on this register sets all digital outputs to a new state for module restart and watchdog function. The state is saved in FRAM</div> |                                        |                                           |                   |              |               |             |