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

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

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

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

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

	WDTIME	100		
	TX	#1,SMBWATCHDOG:100<CR>		
	RX	#1,OK<CR>		

Enables or disables the WATCHDOG Timer for the IO module.
WDTIME:
1..65535: Time for Watchdog in 1/100s
=0: Watchdog is deactivated
HINT: The Watchdog is internally handled every 100ms. If the IO module receives no valid frame within this time period, the outputs are set to predefined values!

GET MODBUS WATCHDOG TIMER	ASCII READ COMMAND	#GMBWATCHDOG<CR> Result: #GMBWATCHDOG:<WDTIME><CR>	ASCII	
	TX	#1,GMBWATCHDOG<CR>		
	RX	#1,GMBWATCHDOG:0,0x0<CR>		
		Current watchdog time:0 -> 0,0s		

Shows the actual configured time for the telegram watchdog function of the IO module.
WDTIME:
1..65535: Time for Watchdog in 1/100s
=0: Watchdog is deactivated
HINT: The Watchdog is internally handled every 100ms. If the IO module receives no valid frame within this time period, the outputs are set to predefined values!

CPU PARAMETERS

GET CPU VOLTAGE	ASCII READ COMMAND	#GCPUTEMP<CR> Result: #GCPUTEMP:<CPUTemp><CR>	ASCII	
	TX	#1,GCPUTEMP<CR>		
	RX	#1,GCPUTEMP:37.3360<CR>		
		Current internal temperature of CPU:37.3360°C		

Current internal temperature of CPU in ° Celsius.

GET CPU VOLTAGE	ASCII READ COMMAND	#GCPUVOLT<CR> Result: #GCPUVOLT:<CPUVoltage><CR>	ASCII	
	TX	#1,GCPUVOLT<CR>		
	RX	#1,GCPUVOLT:3.3690<CR>		
		Current supply voltage of CPU:3.3690V		

Current internal supply voltage of CPU in Volt.

GET CPU BACKUP	ASCII READ COMMAND	#GCPUBACK<CR> Result: #GCPUBACK:<CPUBackupVoltage><CR>	ASCII	
	TX	#1,GCPUBACK<CR>		
	RX	#1,GCPUBACK:0.0006<CR>		
		Current backup voltage of CPU:0.0006V		

Current internal backup capacitor voltage of CPU in Volt.

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

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

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

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

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

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

Returns the actual state of the digital outputs as decimal number and as hexadecimal number.
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 2: State of DO3 (=0:OFF, =1:ON)
...
Bit 9: State of DO10 (=0:OFF, =1:ON)
Bit 10: State of DO11 (=0:OFF, =1:ON)
Bit 11: State of DO12 (=0:OFF, =1:ON)

GET DIGITAL OUTPUT DOx	ASCII READ COMMAND	#GDO<DONR><CR> Result: #GDO<DONR>:<DOxDec>,<DOxHex><CR>	ASCII	
	DONR	2		
	TX	#1,GDO2<CR>		
	RX	N/A		
		Actual status of digital output DO2:N/A=ON		

Returns the actual state of the digital output DOx as decimal number and as hexadecimal number.
DOxDec, DOxHex
The current state of the digital output DOx:
=0: relay output is OFF
=1: relay output is ON

DIGITAL OUTPUTS: PULSE OUTPUT

PULSE DOx	ASCII WRITE COMMAND	#PDO<DONR>:<Time><CR> Result: #OK<CR>	ASCII	YES
	DONR	2		
	TIME	200		
	TX	#1,PDO2:200<CR>		
	RX	#1,OK<CR>		

<DONR>: 1=DO1..12=DO12

<Time>: 0..65535*100ms

This command switches the digital output DOx on for the pulse duration <PulseTimeIn100ms>*100ms.
PulseTimeIn100ms: A duration in 100ms units.
The corresponding digital output is switched on for this time period.

GET PULSE TIMER DOx	ASCII READ COMMAND	#GPT<DONR><CR> Result: #GPT:<TimeDec>,<TimeHex><CR>	ASCII	
	DONR	2		
	TX	#1,GPT2<CR>		
	RX	N/A		
		#WERT!		

<DONR>: 1=DO1..12=DO12

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

FAN COIL #1-#3				
SET FAN COIL FCx	ASCII WRITE COMMAND	#SFC<FCNR>:<Mode><CR> Result: #OK<CR>	ASCII	YES
	FCNR	1		
	MODE	9999:DEACTIVATED		
	TX	#1,SFC1:9999<CR>		
	RX	#1,OK<CR>		
Sets a new mode for FAN COIL functionality on RO1, RO2 and RO3 of fan coil group. Fan coul groups: 1:RO1,RO2,RO3, 2:RO5,RO6,RO7, 3:RO9,RO10,RO11 =9999: This function is not used =0: All three ROs aure 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 swtiching from one stage to another stage. Also a minimum time for each stage is maintained by the module				
GET FAN COIL FCx	ASCII READ COMMAND	#GFC<FCNR><CR> Result: #GFC<FCNR>:<ModeDec>,<ModeHex><CR>	ASCII	
	FCNR	1		
	TX	#1,GFC1<CR>		
	RX	N/A		
		Current mode fo FC:N/A->????		
Current mode for FAN COIL functionality on RO1, RO2 and RO3 of fan coil group: =9999: This function is not used =0: All three ROs aure 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 swtiching from one stage to another stage. Also a minimum time for each stage is maintained by the module				
SET PAUSE TIME FCx	ASCII WRITE COMMAND	#SPTFC<FCNR>:<Time><CR> Result: #OK<CR>	ASCII	YES
	FCNR	1		
	TIME	3,123		
	TX	#1,SPTFC1:3123<CR>		
	RX	#1,OK<CR>		
Sets a new pause time with no relays ON between stage switching. Time is defined in 1ms units (0 to 65,535 Seconds selectable)				
GET PAUSE TIME FCx	ASCII READ COMMAND	#GPTFC<FCNR><CR> Result: #GPTFC<FCNR>:<TimeDec>,<TimeHex><CR>	ASCII	
	FCNR	1		
	TX	#1,GPTFC1<CR>		

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

Command NAME	ASCII command type	ASCII command structure	NEW REAL VALUE	NEW VALUE	DATA TYPE	DO WRITE
ASCII COMMANDS						
DIGITAL OUTPUTS						
INITIAL & WATCHDOG STATE FOR DIGITAL OUTPUTS						
SET INITIAL & WATCHDOG STATE FOR DIGITAL OUTPUTS	ASCII WRITE COMMAND	#SCDOS:<OutAllDOS><CR> Result: #OK<CR>			ASCII	YES
	DO1	0:OFF				
	DO2	0:OFF				
	DO3	0:OFF				
	DO4	0:OFF				
	DO5	0:OFF				
	DO6	0:OFF				
	DO7	0:OFF				
	DO8	0:OFF				
	DO9	0:OFF				
	DO10	0:OFF				
	DO11	0:OFF				
	DO12	0:OFF				
	TX	#1,SCDOS:0<CR>				
	RX	#1,OK<CR>				
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. OutAllDOS The new state for the digital outputs: Bit 0: New state of DO1 (=0:OFF, =1:ON) Bit 1: New state of DO2 (=0:OFF, =1:ON) ... Bit 10: New state of DO11 (=0:OFF, =1:ON) Bit 11: New state of DO12 (=0:OFF, =1:ON)						
GET INITIAL & WATCHDOG STATE FOR DIGITAL OUTPUTS	ASCII READ COMMAND	#GCDOS<CR> Result: #GCDOS:<DOSDec>,<DOSHex><CR>			ASCII	
	TX	#1,GCDOS<CR>				
	RX	#1,GCDOS:0,0x0<CR>				
		Init & watchdog configuration for digital outputs:				
		DO1-DO12:0000.0000.0000				

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

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

Register NAME Command NAME	MODBUS Register ASCII Command	Register VALUE ASCII Command	NEW REAL VALUE	NEW VALUE	DATA TYPE	DO WRITE
STATUS DIGITAL OUTPUTS						
DO1	1x00001 2x00001 I:0	0,0x00 B:00		1	BIT R/W	NO
		Actual state of DO1:0=OFF		ENTER NEW STATE (0 or 1)		
Current state of the digital output DOx =0:DO is OFF, =1:DO is ON Writing on this register changes the state of the digital output						
DO2	1x00002 2x00002 I:1	0,0x00 B:00		0	BIT R/W	NO
		Actual state of DO2:0=OFF		ENTER NEW STATE (0 or 1)		
DO3	1x00003 2x00003 I:2	0,0x00 B:00		0	BIT R/W	NO
		Actual state of DO3:0=OFF		ENTER NEW STATE (0 or 1)		
DO4	1x00004 2x00004 I:3	0,0x00 B:00		0	BIT R/W	NO
		Actual state of DO4:0=OFF		ENTER NEW STATE (0 or 1)		
DO5	1x00005 2x00005 I:4	0,0x00 B:00		0	BIT R/W	NO
		Actual state of DO5:0=OFF		ENTER NEW STATE (0 or 1)		
DO6	1x00006 2x00006 I:5	0,0x00 B:00		0	BIT R/W	NO
		Actual state of DO6:0=OFF		ENTER NEW STATE (0 or 1)		
DO7	1x00007 2x00007 I:6	0,0x00 B:00		0	BIT R/W	NO
		Actual state of DO7:0=OFF		ENTER NEW STATE (0 or 1)		
DO8	1x00008 2x00008 I:7	0,0x00 B:00		0	BIT R/W	NO
		Actual state of DO8:0=OFF		ENTER NEW STATE (0 or 1)		
DO9	1x00009 2x00009 I:8	0,0x00 B:00		0	BIT R/W	NO

		Actual state of DO9:0=OFF		ENTER NEW STATE (0 or 1)		
DO10	1x00010 2x00010 I:9	0,0x00 B:00		0	BIT R/W	NO
		Actual state of DO10:0=OFF		ENTER NEW STATE (0 or 1)		
DO11	1x00011 2x00011 I:10	0,0x00 B:00		0	BIT R/W	NO
		Actual state of DO11:0=OFF		ENTER NEW STATE (0 or 1)		
DO12	1x00012 2x00012 I:11	0,0x00 B:00		0	BIT R/W	NO
		Actual state of DO12:0=OFF		ENTER NEW STATE (0 or 1)		
STATUS DIGITAL OUTPUTS						
DO1	1x16001 2x16001 I:16000	0,0x00 B:00		1	BIT R/W	NO
		Actual state of DO1:0=OFF		ENTER NEW STATE (0 or 1)		
Current state of the digital output DOx =0:DO is OFF, =1:DO is ON Writing on this register changes the state of the digital output						
DO2	1x16002 2x16002 I:16001	0,0x00 B:00		0	BIT R/W	NO
		Actual state of DO2:0=OFF		ENTER NEW STATE (0 or 1)		
DO3	1x16003 2x16003 I:16002	0,0x00 B:00		0	BIT R/W	NO
		Actual state of DO3:0=OFF		ENTER NEW STATE (0 or 1)		
DO4	1x16004 2x16004 I:16003	0,0x00 B:00		0	BIT R/W	NO
		Actual state of DO4:0=OFF		ENTER NEW STATE (0 or 1)		
DO5	1x16005 2x16005 I:16004	0,0x00 B:00		0	BIT R/W	NO
		Actual state of DO5:0=OFF		ENTER NEW STATE (0 or 1)		
DO6	1x16006 2x16006 I:16005	0,0x00 B:00		0	BIT R/W	NO
		Actual state of DO6:0=OFF		ENTER NEW STATE (0 or 1)		
DO7	1x16007 2x16007 I:16006	0,0x00 B:00		0	BIT R/W	NO

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

Register NAME Command NAME	MODBUS Register ASCII Command	Register VALUE ASCII Command	NEW REAL VALUE	NEW VALUE	DATA TYPE	DO WRITE
STATUS DIGITAL OUTPUTS						
DO1	3x00001 4x00001 I:0	1,0x0001 B:00 01		1	UINT16 R/W	NO
		Actual state of DO1:1=ON		ENTER NEW STATE (0 or 1)		
Current state of the digital output DOx =0:DO is OFF, =1:DO is ON Writing on this register changes the state of the digital output						
DO2	3x00002 4x00002 I:1	1,0x0001 B:00 01		0	UINT16 R/W	NO
		Actual state of DO2:1=ON		ENTER NEW STATE (0 or 1)		
DO3	3x00003 4x00003 I:2	1,0x0001 B:00 01		0	UINT16 R/W	NO
		Actual state of DO3:1=ON		ENTER NEW STATE (0 or 1)		
DO4	3x00004 4x00004 I:3	1,0x0001 B:00 01		0	UINT16 R/W	NO
		Actual state of DO4:1=ON		ENTER NEW STATE (0 or 1)		
DO5	3x00005 4x00005 I:4	1,0x0001 B:00 01		0	UINT16 R/W	NO
		Actual state of DO5:1=ON		ENTER NEW STATE (0 or 1)		
DO6	3x00006 4x00006 I:5	1,0x0001 B:00 01		0	UINT16 R/W	NO
		Actual state of DO6:1=ON		ENTER NEW STATE (0 or 1)		
DO7	3x00007 4x00007 I:6	1,0x0001 B:00 01		0	UINT16 R/W	NO
		Actual state of DO7:1=ON		ENTER NEW STATE (0 or 1)		
DO8	3x00008 4x00008 I:7	1,0x0001 B:00 01		0	UINT16 R/W	NO
		Actual state of DO8:1=ON		ENTER NEW STATE (0 or 1)		
DO9	3x00009 4x00009 I:8	1,0x0001 B:00 01		0	UINT16 R/W	NO

		Actual state of DO9:1=ON	ENTER NEW STATE (0 or 1)		
DO10	3x00010 4x00010 I:9	1,0x0001 B:00 01	0	UINT16 R/W	NO
		Actual state of DO10:1=ON	ENTER NEW STATE (0 or 1)		
DO11	3x00011 4x00011 I:10	1,0x0001 B:00 01	0	UINT16 R/W	NO
		Actual state of DO11:1=ON	ENTER NEW STATE (0 or 1)		
DO12	3x00012 4x00012 I:11	1,0x0001 B:00 01	0	UINT16 R/W	NO
		Actual state of DO12:1=ON	ENTER NEW STATE (0 or 1)		
STATUS OF DIGITAL OUTPUTS					
STATUS OF ALL DOS DO1-DO12	3x10001 4x10001 I:10000	65535,0xFFFF B:FF FF	0x0FFF	UINT16 R/W	NO
		Actual state of DO1:1=ON	1		
		Actual state of DO2:1=ON	1		
		Actual state of DO3:1=ON	1		
		Actual state of DO4:1=ON	1		
		Actual state of DO5:1=ON	1		
		Actual state of DO6:1=ON	1		
		Actual state of DO7:1=ON	1		
		Actual state of DO8:1=ON	1		
		Actual state of DO9:1=ON	1		
		Actual state of DO10:1=ON	1		
		Actual state of DO11:1=ON	1		
		Actual state of DO12:1=ON	1		
Actual state of all digital outputs Bit 0: =0:DO1 is OFF, =1:DO1 is ON Bit 1: =0:DO2 is OFF, =1:DO2 is ON ... Bit 10: =0:DO11 is OFF, =1:DO11 is ON Bit 11: =0:DO12 is OFF, =1:DO12 is ON Write on this register sets all digital outputs to a new state					
STATUS OF DIGITAL OUTPUTS					
REAL STATUS OF ALL DOS DO1-DO12	3x10501 4x10501 I:10500	65535,0xFFFF B:FF FF		UINT16 R/O	
		Real state of DO1:1=ON			
		Real state of DO2:1=ON			
		Real state of DO3:1=ON			
		Real state of DO4:1=ON			

		Real state of DO5:1=ON				
		Real state of DO6:1=ON				
		Real state of DO7:1=ON				
		Real state of DO8:1=ON				
		Real state of DO9:1=ON				
		Real state of DO10:1=ON				
		Real state of DO11:1=ON				
		Real state of DO12:1=ON				
Actual state of all digital outputs in the DO chips Bit 0: =0:DO1 is OFF, =1:DO1 is ON Bit 1: =0:DO2 is OFF, =1:DO2 is ON ... Bit 10: =0:DO11 is OFF, =1:DO11 is ON Bit 11: =0:DO12 is OFF, =1:DO12 is ON Write on this register sets all digital outputs to a new state						
STATUS DIGITAL OUTPUTS						
DO1	3x16001 4x16001 I:16000	1,0x0001 B:00 01		1	UINT16 R/W	NO
		Actual state of DO1:1=ON		ENTER NEW STATE (0 or 1)		
Current state of the digital output DOx =0:DO is OFF, =1:DO is ON Writing on this register changes the state of the digital output						
DO2	3x16002 4x16002 I:16001	1,0x0001 B:00 01		0	UINT16 R/W	NO
		Actual state of DO2:1=ON		ENTER NEW STATE (0 or 1)		
DO3	3x16003 4x16003 I:16002	1,0x0001 B:00 01		0	UINT16 R/W	NO
		Actual state of DO3:1=ON		ENTER NEW STATE (0 or 1)		
DO4	3x16004 4x16004 I:16003	1,0x0001 B:00 01		0	UINT16 R/W	NO
		Actual state of DO4:1=ON		ENTER NEW STATE (0 or 1)		
DO5	3x16005 4x16005 I:16004	1,0x0001 B:00 01		0	UINT16 R/W	NO
		Actual state of DO5:1=ON		ENTER NEW STATE (0 or 1)		
DO6	3x16006 4x16006 I:16005	1,0x0001 B:00 01		0	UINT16 R/W	NO
		Actual state of DO6:1=ON		ENTER NEW STATE (0 or 1)		

DO7	3x16007 4x16007 I:16006	1,0x0001 B:00 01		0	UINT16 R/W	NO
		Actual state of DO7:1=ON		ENTER NEW STATE (0 or 1)		
DO8	3x16008 4x16008 I:16007	1,0x0001 B:00 01		0	UINT16 R/W	NO
		Actual state of DO8:1=ON		ENTER NEW STATE (0 or 1)		
DO9	3x16009 4x16009 I:16008	1,0x0001 B:00 01		0	UINT16 R/W	NO
		Actual state of DO9:1=ON		ENTER NEW STATE (0 or 1)		
DO10	3x16010 4x16010 I:16009	1,0x0001 B:00 01		0	UINT16 R/W	NO
		Actual state of DO10:1=ON		ENTER NEW STATE (0 or 1)		
DO11	3x16011 4x16011 I:16010	1,0x0001 B:00 01		0	UINT16 R/W	NO
		Actual state of DO11:1=ON		ENTER NEW STATE (0 or 1)		
DO12	3x16012 4x16012 I:16011	1,0x0001 B:00 01		0	UINT16 R/W	NO
		Actual state of DO12:1=ON		ENTER NEW STATE (0 or 1)		

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

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

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

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

Register NAME Command NAME	MODBUS Register ASCII Command	Register VALUE ASCII Command	NEW REAL VALUE	NEW VALUE	DATA TYPE	DO WRITE
INITIAL & WATCHDOG STATUS FOR ALL DIGITAL OUTPUTS						
FRAM INTIAL & WATCHDOG STATUS OF DO1-DO12	3x59001 4x59001 I:59000	65535,0xFFFF B:FF FF		0x0FFF	UINT16 R/W	YES
		Actual init & watchdog state of DO1:1=ON		1		
		Actual init & watchdog state of DO2:1=ON		1		
		Actual init & watchdog state of DO3:1=ON		1		
		Actual init & watchdog state of DO4:1=ON		1		
		Actual init & watchdog state of DO5:1=ON		1		
		Actual init & watchdog state of DO6:1=ON		1		
		Actual init & watchdog state of DO7:1=ON		1		
		Actual init & watchdog state of DO8:1=ON		1		
		Actual init & watchdog state of DO9:1=ON		1		
		Actual init & watchdog state of DO10:1=ON		1		
		Actual init & watchdog state of DO11:1=ON		1		
		Actual init & watchdog state of DO12:1=ON		1		

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 confgured
Bit 0: =0:DO1 is OFF, =1:DO1 is ON
Bit 1: =0:DO2 is OFF, =1:DO2 is ON
...
Bit 10: =0:DO11 is OFF, =1:DO11 is ON
Bit 11: =0:DO12 is OFF, =1:DO12 is ON

Write on this register sets all digital outputs to a new state for module restart and watchdog function. The state is saved in FRAM

