

CONVERTER STATUS	3x05051 4x05051 I:5050	0,0x0000 B:00 00			UINT16 R/O	
DIP SWITCH	3x10010 4x10010 I:10009	15,0x000F B:00 0F			UINT16 R/O	
Returns the current setting of the Dip switches. For ULTRA SLIM IOs 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)						
SOFTWARE RESET						
RESET	1x06001 2x06001 I:6000	0,0x00 B:00		N/A:NO CHANGE	BIT R/W	YES
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	3x06001 4x06001 I:6000	0,0x0000 B:00 00		N/A:NO CHANGE	UINT16 R/W	YES
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).						
PRODUCT DATA						
HW_GROUP	3x65201 4x65201 I:65200	8336,0x2090 B:20 90			UINT16 R/O	
This is the group of hardware of the current product						
SW_GROUP	3x65202 4x65202 I:65201	4096,0x1000 B:10 00			UINT16 R/O	
This is the group of software of the current product						
SW_VERSION	3x65203 4x65203 I:65202	4352,0x1100 B:11 00			UINT16 R/O	
		SW VERSION:1.1.0				
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	65535,0xFFFF B:FF FF		N/A:NO CHANGE	UINT16 R/W	NO
		UNIT ID:255				

If the host reads this register, the current programmed unit ID is returned. All values above unit ID 255 define also the unit ID 255.

If the host writes a new value into this register, the new value will be stored in the FLASH as the new unit ID. The new unit ID is activated after a power off/power on cycle or a software reboot of the module.

The host can execute a reboot in writing to the register RESET SYSTEM.

NOTE: DIP switch 4 must be set to OFF to activate this unit ID, otherwise the unit ID is 255.

HINT: This settings will be active after you repower or reset your device !!

BAUD_RATE	3x65223 4x65223 I:65222	4294967295,0xFFFFFFFF B:FF FF FF FF	38400	38400	UINT32 R/W	NO
		57600Bd		ENTER BAUD RATE		

This is the current configured baud rate for DIP switch mode DIP1=ON, DIP2=ON (default is 57600bd)

DIP switch settings:

DIP1-DIP2

OFF-OFF:9600bd

ON-OFF:19200bd

OFF-ON:38400bd

ON-ON:default 57600bd or the defined baud rate

Valid baud rates are:

300bd

600bd

1200bd

2400bd

4800bd

9600bd

19200bd

38400bd

all other:57600bd

HINT: This settings will be active after you repower or reset your device !!

PARITY	3x65225 4x65225 I:65224	65535,0xFFFF B:FF FF		N/A:NO CHANGE	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	3x65226 4x65226 I:65225	65535,0xFFFF B:FF FF		N/A:NO CHANGE	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

GET VERSION	ASCII READ COMMAND	#VERSION<CR> #VER<CR> Result: #VERSION:<VersionHi>,<VersionMed>,<VersionLo><CR>	ASCII	
	TX	#VERSION<CR>		
	RX	#255,VERSION:1.1.0<CR>		
		Current SW version:1.1.0		
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> #TYP<CR> Result: #TYPE:<Type><CR>	ASCII	
	TX	#TYPE<CR>		
	RX	#255,TYPE:RESI-1S0-SIO<CR>		
		Current module type:RESI-1S0-SIO		
Returns the current module type				
GET OWNER	ASCII READ COMMAND	#OWNER<CR> #OWN<CR> Result: #OWNER:<Owner><CR>	ASCII	
	TX	#OWNER<CR>		
	RX	#255,OWNER:RESI<CR>		
		Current owner:RESI		
Returns the current owner of the module				
GET CREATOR	ASCII READ COMMAND	#CREATOR<CR> #CRE<CR> Result: #CREATOR:<Creator><CR>	ASCII	
	TX	#CREATOR<CR>		
	RX	#255,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> #COPY<CR> Result: #COPYRIGHT:<Copyright><CR>	ASCII	
	TX	#COPYRIGHT<CR>		
	RX	#255,COPYRIGHT:2016,2020 BY RESI AND DI HC SIGL,MSC WWW.RESI.CC<CR>		
		Current copyright:2016,2020 BY RESI AND DI HC SIGL,MSC WWW.RESI.CC		
Returns the current copyright of the module				

GET DIP SWITCH	ASCII READ COMMAND	#GET DIP<CR> #GDIP<CR> Result: #GDIP:<DIPSwitchDec>,<DIPSwitchHex><CR>	ASCII	
	TX	#GET DIP<CR>		
	RX	#255,GDIP:15,0xF<CR>		
		Current DIP SWITCH settings:1111		
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)				
ASCII COMMANDS				
SET MODBUS ADDRESS	ASCII WRITE COMMAND	#SET MODBUS ADDRESS:<UNITID><CR> #SMBADR:<UNITID><CR> Result: #OK<CR>	ASCII	NO
	UNITID	1		
	TX	#SET MODBUS ADDRESS:1<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	#SET MODBUS BAUDRATE:<BAUD><CR> #SMBBAUD:<BAUD><CR> Result: #OK<CR>	ASCII	NO
	BAUD	57600:57600BD		
	TX	#SET MODBUS BAUDRATE:57600<CR>		
	RX	N/A		
Sets a new baudrate for the serial interface, if DIP Switches DIP1=ON and DIP2=ON. The following baudrates are allowed: 300bd 600bd 1200bd 2400bd 4800bd 9600bd 19200bd 38400bd all others are interpreted as 57600bd HINT: The new setup parameters will be active after a restart of the module.				

SET MODBUS PARITY	ASCII WRITE COMMAND	#SET MODBUS PARITY:<PARITY><CR> #SMBPAR:<PARITY><CR> Result: #OK<CR>	ASCII	NO
	PARITY	NONE:NO PARITY		
	TX	#SET MODBUS PARITY:NONE<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	#SET MODBUS STOP:<STOPBIT><CR> #SETMBSTOP:<STOPBIT><CR> Result: #OK<CR>	ASCII	NO
	STOPBIT	ONE:ONE STOPBIT		
	TX	#SET MODBUS STOP:ONE<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	#SET MODBUS PARAMS:<UNITID>,<BAUD>,<PARITY>,<STOPBIT><CR> #SMBPARAMS:<UNITID>,<BAUD>,<PARITY>,<STOPBIT><CR> Result: #OK<CR>	ASCII	NO
	UNITID	1		
	BAUD	57600:57600BD		
	PARITY	NONE:NO PARITY		
	STOPBIT	ONE:ONE STOPBIT		
	TX	#SET MODBUS PARAMS:1,57600,NONE,ONE<CR>		
	RX	N/A		
Sets all parameters for serial interface				
GET MODBUS ADDRESS	ASCII READ COMMAND	#GET MODBUS ADDRESS<CR> #GMBADR<CR> Result: #GMBADR:<MBUnitDec>,<MBFLASHDec>,<MBUnitHex>,<MBFLASHHex><CR>	ASCII	
	TX	#GET MODBUS ADDRESS<CR>		
	RX	#255,GMBADR:255,0xFF,65535,0xFFFF<CR>		
		Current MODBUS unit ID for DIP4=OFF:255,0xFF,65535,0xFFFF		

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.

MUnitDec,MUnitHex

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	#GET MODBUS BAUDRATE<CR> #GMBBAUD<CR> Result: #GMBBAUD:<BaudRate><CR>	ASCII	
	TX	#GET MODBUS BAUDRATE<CR>		
	RX	#255,GMBBAUD:57600<CR>		
		Current baudrate for DIP1+2=ON:57600		

Returns the current defined baud rate for the serial interface, if DIP switches DIP1=ON and DIP2=ON.

The following baudrates are allowed:

300bd
600bd
1200bd
2400bd
4800bd
9600bd
19200bd
38400bd
all others are interpreted as 57600bd

GET MODBUS PARITY	ASCII READ COMMAND	#GET MODBUS PARITY<CR> #GMBPAR<CR> Result: #GMBPAR:<MBParity><CR>	ASCII	
	TX	#GET MODBUS PARITY<CR>		
	RX	#255,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	#GET MODBUS STOP<CR> #GMBSTOP<CR> Result: #GMBSTOP:<MBStop><CR>	ASCII	
	TX	#GET MODBUS STOP<CR>		
	RX	#255,GMBSTOP:ONE<CR>		
		Current stopbit(s):ONE		

Returns the current configured amount of stop bits for the serial interface.

MBStops

ONE: one stop bit

TWO: two stop bits

GET MODBUS PARAMS	ASCII READ COMMAND	#GET MODBUS PARAMS<CR> #GMBPARAMS<CR> Result: #GMBPARAMS:<MBUnitDec>,<MBFLASHDec>,<MBUnitHex>,<MBFLASHHex>,<MBBaudrateDec>,<MBBaudrateHex>,<MBParity>,<MBStops><CR>	ASCII	
	TX	#GET MODBUS PARAMS<CR>		
	RX	#255,GMBPARAMS:255,0xFF,65535,0xFFFF,57600,0xE100,NONE,ONE<CR>		
		Current MODBUS unit ID used:255		
		Current MODBUS unit ID in FLASH:65535		
		Current baudrate in FLASH:57600		
		Current parity in FLASH:NONE		
		Current stopbit(s) in FLASH:ONE		
Returns the complete settings for serial interface				
ASCII COMMANDS				
RESET	ASCII WRITE COMMAND	#RESET<CR> #RST<CR> Result: #OK<CR>	ASCII	NO
	TX	#RESET<CR>		
	RX	N/A		
Executes a software reset (Reboot) of the module.				
FACTORY RESET	ASCII WRITE COMMAND	#FACTORY RESET<CR> #FRST<CR> Result: #OK<CR>	ASCII	NO
	TX	#FACTORY RESET<CR>		
	RX	N/A		
Executes a factory reset of all parameters to default values within the module and reboots the module				

S0 PULSES1	3x00001 4x00001 I:0	9,0x00000009 B:00 00 00 09			UINT32 R/O	
		Total pulses:9				
Total amount of pulses counted on pulse input x						
S0 DELAY1	3x00003 4x00003 I:2	10,0x0000000A B:00 00 00 0A	30	30	UINT32 R/W	NO
		Pulse delay time:10,0ms				
Sets or returns the current delay time for the digital filter of the S0 pulse input						
S0 PULSE FACTOR1	3x00005 4x00005 I:4	1000,0x000003E8 B:00 00 03 E8	123456	123,456	UINT32 R/W	NO
		Pulse factor :1000->1,000				
Sets or returns the current factor for the multiplication of the current pulses to build the pulse sum value						
S0 PULSE SUM1	3x00007 4x00007 I:6	9000,0x00002328 B:00 00 23 28			UINT32 R/O	
		Current pulse sum:9000,0->9,0				
Returns the sum of the pulses multiplied by current pulse factor to represent a physical unit						
S0 PULSES1	3x00011 4x00011 I:10	9,0x00000009 B:00 09 00 00			UINT32R R/O	
		Total pulses:9				
Total amount of pulses counted on pulse input x						
S0 DELAY1	3x00013 4x00013 I:12	10,0x0000000A B:00 0A 00 00	30	30	UINT32R R/W	NO
		Pulse delay time:10,0ms				
Sets or returns the current delay time for the digital filter of the S0 pulse input						
S0 PULSE FACTOR1	3x00015 4x00015 I:14	1000,0x000003E8 B:03 E8 00 00	123456	123,456	UINT32R R/W	NO
		Pulse factor :1000->1,000				
Sets or returns the current factor for the multiplication of the current pulses to build the pulse sum value						
S0 PULSE SUM1	3x00017 4x00017 I:16	9000,0x00002328 B:23 28 00 00			UINT32R R/O	
		Current pulse sum:9000->9,000				
Returns the sum of the pulses multiplied by current pulse factor to represent a physical unit						
S0 PULSES1	3x00021 4x00021 I:20	9.000000,0x41100000 B:41 10 00 00			FLOAT32 R/O	
		Total pulses:9				
Total amount of pulses counted on pulse input x						

S0 DELAY1	3x00023 4x00023 I:22	10.000000,0x41200000 B:41 20 00 00	30	30	Float32 R/W	NO
		Pulse delay time:10,0ms				
Sets or returns the current delay time for the digital filter of the S0 pulse input						
S0 PULSE FACTOR1	3x00025 4x00025 I:24	1.000000,0x3F800000 B:3F 80 00 00	3,1415926	3,142	Float32 R/W	NO
		Pulse factor :1,000->1,000				
Sets or returns the current factor for the multiplication of the current pulses to build the pulse sum value						
S0 PULSE SUM1	3x00027 4x00027 I:26	9.000000,0x41100000 B:41 10 00 00			Float32 R/O	
		Current pulse sum:9,000->9,000				
Returns the sum of the pulses multiplied by current pulse factor to represent a physical unit						
S0 PULSES1	3x00031 4x00031 I:30	9.000000,0x41100000 B:00 00 41 10			Float32R R/O	
		Total pulses:9				
Total amount of pulses counted on pulse input x						
S0 DELAY1	3x00033 4x00033 I:32	10.000000,0x41200000 B:00 00 41 20	30	30	Float32R R/W	NO
		Pulse delay time:10,0ms				
Sets or returns the current delay time for the digital filter of the S0 pulse input						
S0 PULSE FACTOR1	3x00035 4x00035 I:34	1.000000,0x3F800000 B:00 00 3F 80	3,1415926	3,142	Float32R R/W	NO
		Pulse factor :1,000->1,000				
Sets or returns the current factor for the multiplication of the current pulses to build the pulse sum value						
S0 PULSE SUM1	3x00037 4x00037 I:36	9.000000,0x41100000 B:00 00 41 10			Float32R R/O	
		Current pulse sum:9,000->9,000				
Returns the sum of the pulses multiplied by current pulse factor to represent a physical unit						
S0 PULSES1	3x00101 4x00101 I:100	9.000000,0x4022000000000000 B:40 22 00 00 00 00 00 00			DOUBLE64 R/O	
		Total pulses:9				
Total amount of pulses counted on pulse input x						
S0 DELAY1	3x00105 4x00105 I:104	10.000000,0x4024000000000000 B:40 24 00 00 00 00 00 00	30	30	DOUBLE64 R/W	NO
		Pulse delay time:10,0ms				
Sets or returns the current delay time for the digital filter of the S0 pulse input						

S0 PULSE FACTOR1	3x00109 4x00109 I:108	1.000000,0x3FF0000000000000 B:3F F0 00 00 00 00 00 00	3,1415926	3,142	DOUBLE64 R/W	NO
		Pulse factor :1,000->1,000				
Sets or returns the current factor for the multiplication of the current pulses to build the pulse sum value						
S0 PULSE SUM1	3x00113 4x00113 I:112	9.000000,0x4022000000000000 B:40 22 00 00 00 00 00 00			DOUBLE64 R/O	
		Current pulse sum:9,000->9,000				
Returns the sum of the pulses multiplied by current pulse factor to represent a physical unit						
S0 PULSES1	3x00201 4x00201 I:200	9.000000,0x4022000000000000 B:00 00 00 00 00 00 40 22			DOUBLE64R R/O	
		Total pulses:9				
Total amount of pulses counted on pulse input x						
S0 DELAY1	3x00205 4x00205 I:204	10.000000,0x4024000000000000 B:00 00 00 00 00 00 40 24	30	30	DOUBLE64R R/W	NO
		Pulse delay time:10,0ms				
Sets or returns the current delay time for the digital filter of the S0 pulse input						
S0 PULSE FACTOR1	3x00209 4x00209 I:208	1.000000,0x3FF0000000000000 B:00 00 00 00 00 00 3F F0	3,1415926	3,142	DOUBLE64R R/W	NO
		Pulse factor :1,000->1,000				
Sets or returns the current factor for the multiplication of the current pulses to build the pulse sum value						
S0 PULSE SUM1	3x00213 4x00213 I:212	9.000000,0x4022000000000000 B:00 00 00 00 00 00 40 22			DOUBLE64R R/O	
		Current pulse sum:9,000->9,000				
Returns the sum of the pulses multiplied by current pulse factor to represent a physical unit						

S0 PULSES2	3x00501 4x00501 I:500	0,0x00000000 B:00 00 00 00			UINT32 R/O	
		Total pulses:0				
Total amount of pulses counted on pulse input x						
S0 DELAY2	3x00503 4x00503 I:502	10,0x0000000A B:00 00 00 0A	30	30	UINT32 R/W	NO
		Pulse delay time:10,0ms				
Sets or returns the current delay time for the digital filter of the S0 pulse input						
S0 PULSE FACTOR2	3x00505 4x00505 I:504	1000,0x000003E8 B:00 00 03 E8	123456	123,456	UINT32 R/W	NO
		Pulse factor :1000->1,000				
Sets or returns the current factor for the multiplication of the current pulses to build the pulse sum value						
S0 PULSE SUM2	3x00507 4x00507 I:506	0,0x00000000 B:00 00 00 00			UINT32 R/O	
		Current pulse sum:0->0,000				
Returns the sum of the pulses multiplied by current pulse factor to represent a physical unit						
S0 PULSES2	3x00511 4x00511 I:510	0,0x00000000 B:00 00 00 00			UINT32R R/O	
		Total pulses:0				
Total amount of pulses counted on pulse input x						
S0 DELAY2	3x00513 4x00513 I:512	10,0x0000000A B:00 0A 00 00	30	30	UINT32R R/W	NO
		Pulse delay time:10,0ms				
Sets or returns the current delay time for the digital filter of the S0 pulse input						
S0 PULSE FACTOR2	3x00515 4x00515 I:514	1000,0x000003E8 B:03 E8 00 00	123456	123,456	UINT32R R/W	NO
		Pulse factor :1000->1,000				
Sets or returns the current factor for the multiplication of the current pulses to build the pulse sum value						
S0 PULSE SUM2	3x00517 4x00517 I:516	0,0x00000000 B:00 00 00 00			UINT32R R/O	
		Current pulse sum:0->0,000				
Returns the sum of the pulses multiplied by current pulse factor to represent a physical unit						
S0 PULSES2	3x00521 4x00521 I:520	0.000000,0x00000000 B:00 00 00 00			FLOAT32 R/O	
		Total pulses:0				
Total amount of pulses counted on pulse input x						

S0 DELAY2	3x00523 4x00523 I:522	10.000000,0x41200000 B:41 20 00 00	60	60	FLOAT32 R/W	NO
		Pulse delay time:10,0ms				
Sets or returns the current delay time for the digital filter of the S0 pulse input						
S0 PULSE FACTOR2	3x00525 4x00525 I:524	1.000000,0x3F800000 B:3F 80 00 00	3,1415926	3,142	FLOAT32 R/W	NO
		Pulse factor :1,000->1,000				
Sets or returns the current factor for the multiplication of the current pulses to build the pulse sum value						
S0 PULSE SUM2	3x00527 4x00527 I:526	0.000000,0x00000000 B:00 00 00 00			FLOAT32 R/O	
		Current pulse sum:0,000->0,000				
Returns the sum of the pulses multiplied by current pulse factor to represent a physical unit						
S0 PULSES2	3x00531 4x00531 I:530	0.000000,0x00000000 B:00 00 00 00			FLOAT32R R/O	
		Total pulses:0				
Total amount of pulses counted on pulse input x						
S0 DELAY2	3x00533 4x00533 I:532	10.000000,0x41200000 B:00 00 41 20	90	90	FLOAT32R R/W	NO
		Pulse delay time:10,0ms				
Sets or returns the current delay time for the digital filter of the S0 pulse input						
S0 PULSE FACTOR2	3x00535 4x00535 I:534	1.000000,0x3F800000 B:00 00 3F 80	3,1415926	3,142	FLOAT32R R/W	NO
		Pulse factor :1,000->1,000				
Sets or returns the current factor for the multiplication of the current pulses to build the pulse sum value						
S0 PULSE SUM2	3x00537 4x00537 I:536	0.000000,0x00000000 B:00 00 00 00			FLOAT32R R/O	
		Current pulse sum:0,000->0,000				
Returns the sum of the pulses multiplied by current pulse factor to represent a physical unit						
S0 PULSES2	3x00601 4x00601 I:600	0.000000,0x00000000 B:00 00 00 00 00 00 00 00			DOUBLE64 R/O	
		Total pulses:0				
Total amount of pulses counted on pulse input x						
S0 DELAY2	3x00605 4x00605 I:604	10.000000,0x4024000000000000 B:40 24 00 00 00 00 00 00	120	120	DOUBLE64 R/W	NO
		Pulse delay time:10,0ms				
Sets or returns the current delay time for the digital filter of the S0 pulse input						

S0 PULSE FACTOR2	3x00609 4x00609 I:608	1.000000,0x3FF0000000000000 B:3F F0 00 00 00 00 00 00	3,1415926	3,142	DOUBLE64 R/W	NO
		Pulse factor :1,000->1,000				
Sets or returns the current factor for the multiplication of the current pulses to build the pulse sum value						
S0 PULSE SUM2	3x00613 4x00613 I:612	0.000000,0x00000000 B:00 00 00 00 00 00 00 00			DOUBLE64 R/O	
		Current pulse sum:0,000->0,000				
Returns the sum of the pulses multiplied by current pulse factor to represent a physical unit						
S0 PULSES2	3x00701 4x00701 I:700	0.000000,0x00000000 B:00 00 00 00 00 00 00 00			DOUBLE64R R/O	
		Total pulses:0				
Total amount of pulses counted on pulse input x						
S0 DELAY2	3x00705 4x00705 I:704	10.000000,0x4024000000000000 B:00 00 00 00 00 00 40 24	150	150	DOUBLE64R R/W	YES
		Pulse delay time:10,0ms				
Sets or returns the current delay time for the digital filter of the S0 pulse input						
S0 PULSE FACTOR2	3x00709 4x00709 I:708	1.000000,0x3FF0000000000000 B:00 00 00 00 00 00 3F F0	3,1415926	3,142	DOUBLE64R R/W	NO
		Pulse factor :1,000->1,000				
Sets or returns the current factor for the multiplication of the current pulses to build the pulse sum value						
S0 PULSE SUM2	3x00713 4x00713 I:712	0.000000,0x00000000 B:00 00 00 00 00 00 00 00			DOUBLE64R R/O	
		Current pulse sum:0,000->0,000				
Returns the sum of the pulses multiplied by current pulse factor to represent a physical unit						

S0 DELAY1	3x01001 4x01001 I:1000	10,0x000A B:00 0A	30	30	UINT16 R/W	NO
		Pulse delay time:10,0ms				
Sets or returns the current delay time for the digital filter of the S0 pulse input						
S0 DELAY2	3x01002 4x01002 I:1001	10,0x000A B:00 0A	30	30	UINT16 R/W	NO
		Pulse delay time:10,0ms				
Sets or returns the current delay time for the digital filter of the S0 pulse input						
CLEAR PARAMS CH1+CH2	3x01003 4x01003 I:1002	0,0x0000 B:00 00	21061	0x5245	UINT16 R/W	NO
Clear all pulses for both S0 input channels and resets the parameters to default values. But you have to write the magic number 0x5245 or 21061 in decimal to this register to activate this function						
CLEAR PARAMS CH1	3x01004 4x01004 I:1003	0,0x0000 B:00 00	21061	0x5245	UINT16 R/W	NO
Clear all pulses for S0 input channel 1 and reset the parameters to default values. But you have to write the magic number 0x5245 or 21061 in decimal to this register to activate this function						
CLEAR PARAMS CH2	3x01005 4x01005 I:1004	0,0x0000 B:00 00	21061	0x5245	UINT16 R/W	NO
Clear all pulses for S0 input channel 2 and reset the parameters to default values. But you have to write the magic number 0x5245 or 21061 in decimal to this register to activate this function						
S0 INPUTS #1+#2						
S0 PULSES1	3x02001 4x02001 I:2000	0,0x00000000 B:00 00 00 00			UINT32 R/O	
		Total pulses:0				
Total amount of pulses counted on pulse input x						
S0 DELAY1	3x02003 4x02003 I:2002	10,0x0000000A B:00 00 00 0A	30	30	UINT32 R/W	NO
		Pulse delay time:10,0ms				
Sets or returns the current delay time for the digital filter of the S0 pulse input						
S0 PULSE FACTOR1	3x02005 4x02005 I:2004	1000,0x000003E8 B:00 00 03 E8	123456	123,456	UINT32 R/W	NO
		Pulse factor :1000->1,000				
Sets or returns the current factor for the multiplication of the current pulses to build the pulse sum value						
S0 PULSE SUM1	3x02007 4x02007 I:2006	0,0x00000000 B:00 00 00 00			UINT32 R/O	

		Current pulse sum:0->0,000				
Returns the sum of the pulses multiplied by current pulse factor to represent a physical unit						
S0 PULSES2	3x02009 4x02009 I:2008	0,0x00000000 B:00 00 00 00			UINT32 R/O	
		Total pulses:0				
Total amount of pulses counted on pulse input x						
S0 DELAY2	3x02011 4x02011 I:2010	10,0x0000000A B:00 00 00 0A	30	30	UINT32 R/W	NO
		Pulse delay time:10,0ms				
Sets or returns the current delay time for the digital filter of the S0 pulse input						
S0 PULSE FACTOR2	3x02013 4x02013 I:2012	1000,0x000003E8 B:00 00 03 E8	123456	123,456	UINT32 R/W	NO
		Pulse factor :1000->1,000				
Sets or returns the current factor for the multiplication of the current pulses to build the pulse sum value						
S0 PULSE SUM2	3x02015 4x02015 I:2014	0,0x00000000 B:00 00 00 00			UINT32 R/O	
		Current pulse sum:0->0,000				
Returns the sum of the pulses multiplied by current pulse factor to represent a physical unit						
S0 PULSES1	3x02021 4x02021 I:2020	0,0x00000000 B:00 00 00 00			UINT32R R/O	
		Total pulses:0				
Total amount of pulses counted on pulse input x						
S0 DELAY1	3x02023 4x02023 I:2022	10,0x0000000A B:00 0A 00 00	30	30	UINT32R R/W	NO
		Pulse delay time:10,0ms				
Sets or returns the current delay time for the digital filter of the S0 pulse input						
S0 PULSE FACTOR1	3x02025 4x02025 I:2024	1000,0x000003E8 B:03 E8 00 00	123456	123,456	UINT32R R/W	NO
		Pulse factor :1000->1,000				
Sets or returns the current factor for the multiplication of the current pulses to build the pulse sum value						
S0 PULSE SUM1	3x02027 4x02027 I:2026	0,0x00000000 B:00 00 00 00			UINT32R R/O	
		Current pulse sum:0->0,000				
Returns the sum of the pulses multiplied by current pulse factor to represent a physical unit						
S0 PULSES2	3x02029 4x02029 I:2028	0,0x00000000 B:00 00 00 00			UINT32R R/O	
		Total pulses:0				

Total amount of pulses counted on pulse input x						
S0 DELAY2	3x02031 4x02031 I:2030	10,0x0000000A B:00 0A 00 00	30	30	UINT32R R/W	NO
		Pulse delay time:10,0ms				
Sets or returns the current delay time for the digital filter of the S0 pulse input						
S0 PULSE FACTOR2	3x02033 4x02033 I:2032	1000,0x000003E8 B:03 E8 00 00	123456	123,456	UINT32R R/W	NO
		Pulse factor :1000->1,000				
Sets or returns the current factor for the multiplication of the current pulses to build the pulse sum value						
S0 PULSE SUM2	3x02035 4x02035 I:2034	0,0x00000000 B:00 00 00 00			UINT32R R/O	
		Current pulse sum:0->0,000				
Returns the sum of the pulses multiplied by current pulse factor to represent a physical unit						

CLEAR PARAMS CH1	ASCII WRITE COMMAND	#CLEAR PARAMS CH1<CR> #CP1<CR> Result: #OK<CR>	ASCII	NO
	TX	#CLEAR PARAMS CH1<CR>		
	RX	N/A		
This command clears all parameters for S0 input 1 and initialize the channel to default values				
CLEAR PARAMS CH2	ASCII WRITE COMMAND	#CLEAR PARAMS CH2<CR> #CP2<CR> Result: #OK<CR>	ASCII	NO
	TX	#CLEAR PARAMS CH2<CR>		
	RX	N/A		
This command clears all parameters for S0 input 2 and initialize the channel to default values				
CLEAR PARAMS	ASCII WRITE COMMAND	#CLEAR PARAMS<CR> #CPS<CR> Result: #OK<CR>	ASCII	NO
	TX	#CLEAR PARAMS<CR>		
	RX	N/A		
This command clears all parameters for S0 inputs 1 and 2 and initialize the channels to default values				
SHOW VALUES CH1	ASCII READ COMMAND	#SHOW VALUES CH1<CR> #SV1<CR> Result: #SV1:<PulsesDec>,<DelayDec>,<FactorFlt>,<SumFlt><CR>	ASCII	
	TX	#SHOW VALUES CH1<CR>		
	RX	#255,SV1:9,10,1.000000,9.000000<CR>		
		Current pulses on CH1:9 pulses		
		Current delay on CH1:10ms		
		Current factor on CH1:1.000000		
		Current sum on CH1:9.000000		
Shows all current values for S0 input 1. PulsesDec: The current amount of counted pulses as a decimal number DelayDec: The delay time for S0 input in Milliseconds for digital noise filtering as a decimal number FactorFlt: The factor to multiply the pulses for calculating a meaningful summation value as a floating point value				
SHOW VALUES CH2	ASCII READ COMMAND	#SHOW VALUES CH2<CR> #SV2<CR> Result: #SV2:<PulsesDec>,<DelayDec>,<FactorFlt>,<SumFlt><CR>	ASCII	
	TX	#SHOW VALUES CH2<CR>		
	RX	#255,SV2:0,10,1.000000,0.000000<CR>		
		Current pulses on CH2:0 pulses		
		Current delay on CH2:10ms		
		Current factor on CH2:1.000000		
		Current sum on CH2:0.000000		

Shows all current values for S0 input 2.

PulsesDec: The current amount of counted pulses as a decimal number

DelayDec: The delay time for S0 input in Milliseconds for digital noise filtering as a decimal number

FactorFlt: The factor to multiply the pulses for calculating a meaningful summation value as a floating point value

SHOW VALUES	ASCII READ COMMAND	#SHOW VALUES<CR> #SVS<CR> Result: #SVS:<Pulses1Dec>,<Delay1Dec>,<Factor1Flt>,<Sum1Flt>, <Pulses2Dec>,<Delay2Dec>,<Factor2Flt>,<Sum2Flt><CR>	ASCII	
	TX	#SHOW VALUES<CR>		
	RX	#255,SVS:9,10,1.000000,9.000000,0,10,1.000000,0.000000<CR>		
		Current pulses on CH1:9 pulses		
		Current delay on CH1:10ms		
		Current factor on CH1:1.000000		
		Current sum on CH1:9.000000		
		Current pulses on CH2:0 pulses		
		Current delay on CH2:10ms		
		Current factor on CH2:1.000000		
		Current sum on CH2:0.000000		

Shows all current values for S0 inputs 1 and 2.

Pulses1Dec,Pulses2Dec: The current amount of counted pulses as a decimal number

Delay1Dec,Delay2Dec: The delay time for S0 input in Milliseconds for digital noise filtering as a decimal number

Factor1Flt,Factor2Flt: The factor to multiply the pulses for calculating a meaningful summation value as a floating point value

SET DELAY CH1	ASCII WRITE COMMAND	#SET DELAY CH1:<DELAY><CR> #SDLY1:<DELAY><CR> Result: #OK<CR>	ASCII	NO
	DELAY	30		
	TX	#SET DELAY CH1:30<CR>		
	RX	N/A		

Sets the delay time for the digital noise filter of the S0 input 1

DELAY: A time in ms for digital filtering. Every 0.1ms the module checks the status of the S0 input.

If there is a rising edge it will count the amount of high (1) and low (0) signals every 0.1ms for the configured delay time.

After this delay time the module checks if there were more high than low signals counted and that the duration of high signals is at least larger than 66% of the delay time duration.

If this is true, the pulse counter is incremented by 1 and the INFO LED flashes for a short period.

SET DELAY CH2	ASCII WRITE COMMAND	#SET DELAY CH2:<DELAY><CR> #SDLY2:<DELAY><CR> Result: #OK<CR>	ASCII	NO
	DELAY	40		
	TX	#SET DELAY CH2:40<CR>		
	RX	N/A		

Sets the delay time for the digital noise filter of the S0 input 2

DELAY: A time in ms for digital filtering. Every 0.1ms the module checks the status of the S0 input.

If there is a rising edge it will count the amount of high (1) and low (0) signals every 0.1ms for the configured delay time.

After this delay time the module checks if there were more high than low signals counted and that the duration of high signals is at least larger than 66% of the delay time duration.

If this is true, the pulse counter is incremented by 1 and the INFO LED flashes for a short period.

SET DELAYS	ASCII WRITE COMMAND	#SET DELAYS:<DELAY1>,<DELAY2><CR> #SDLYS:<DELAY1>,<DELAY2><CR> Result: #OK<CR>	ASCII	NO
	DELAY1	30		
	DELAY2	40		
	TX	#SET DELAYS:30,40<CR>		
	RX	N/A		
Sets the delay time for the digital noise filter of the S0 inputs 1 and 2 DELAY1,DELAY2: A time in ms for digital filtering. Every 0.1ms the module checks the status of the S0 input. If there is a rising edge it will count the amount of high (1) and low (0) signals every 0.1ms for the configured delay time. After this delay time the module checks if there were more high than low signals counted and that the duration of high signals is at least larger than 66% of the delay time duration. If this is true, the pulse counter is incremented by 1 and the INFO LED flashes for a short period.				
GET DELAY CH1	ASCII READ COMMAND	#GET DELAY CH1<CR> #GDLY1<CR> Result: #GDLY1:<DELAYDec>,<DELAYHex><CR>	ASCII	
	TX	#GET DELAY CH1<CR>		
	RX	#255,GDLY1:10,0xA<CR>		
		Current delay for S0 channel 1:10ms		
Returns the delay time for the digital noise filter of the S0 input 1 DELAYDec,DELAYHex: A time in ms for digital filtering. Every 0.1ms the module checks the status of the S0 input. If there is a rising edge it will count the amount of high (1) and low (0) signals every 0.1ms for the configured delay time. After this delay time the module checks if there were more high than low signals counted and that the duration of high signals is at least larger than 66% of the delay time duration. If this is true, the pulse counter is incremented by 1 and the INFO LED flashes for a short period.				
GET DELAY CH2	ASCII READ COMMAND	#GET DELAY CH2<CR> #GDLY2<CR> Result: #GDLY2:<DELAYDec>,<DELAYHex><CR>	ASCII	
	TX	#GET DELAY CH2<CR>		
	RX	#255,GDLY2:10,0xA<CR>		
		Current delay for S0 channel 2:10ms		
Returns the delay time for the digital noise filter of the S0 input 2 DELAYDec,DELAYHex: A time in ms for digital filtering. Every 0.1ms the module checks the status of the S0 input. If there is a rising edge it will count the amount of high (1) and low (0) signals every 0.1ms for the configured delay time. After this delay time the module checks if there were more high than low signals counted and that the duration of high signals is at least larger than 66% of the delay time duration. If this is true, the pulse counter is incremented by 1 and the INFO LED flashes for a short period.				
GET DELAYS	ASCII READ COMMAND	#GET DELAYS<CR> #GDLYS<CR> Result: #GDLYS:<DELAY1Dec>,<DELAY2Dec>,<DELAY1Hex>,<DELAY2Hex><CR>	ASCII	
	TX	#GET DELAYS<CR>		
	RX	#255,GDLYS:10,10,0xA,0xA<CR>		
		Current delay for S0 channel 1:10ms		
		Current delay for S0 channel 2:10ms		

Returns the delay time for the digital noise filter of the S0 input 1 and 2

DELAY1Dec,DELAY1Hex

DELAY2Dec,DELAY2Hex: A time in ms for digital filtering. Every 0.1ms the module checks the status of the S0 input.

If there is a rising edge it will count the amount of high (1) and low (0) signals every 0.1ms for the configured delay time.

After this delay time the module checks if there were more high than low signals counted and that the duration of high signals is at least larger than 66% of the delay time duration.

If this is true, the pulse counter is incremented by 1 and the INFO LED flashes for a short period.

SET FACTOR CH1	ASCII WRITE COMMAND	#SET FACTOR CH1:<FACTOR><CR> #SFCT1:<FACTOR><CR> Result: #OK<CR>	ASCII	NO
	FACTOR	1,500		
	TX	#SET FACTOR CH1:1.5<CR>		
	RX	N/A		

Sets the multiplying factor to calculate a meaningful summation value out of the counted pulses for the S0 input 1

FACTOR: The new multiplying factor for the counted pulses as floating point value

SET FACTOR CH2	ASCII WRITE COMMAND	#SET FACTOR CH2:<FACTOR><CR> #SFCT2:<FACTOR><CR> Result: #OK<CR>	ASCII	NO
	FACTOR	2,200		
	TX	#SET FACTOR CH2:2.2<CR>		
	RX	N/A		

Sets the multiplying factor to calculate a meaningful summation value out of the counted pulses for the S0 input 2

FACTOR: The new multiplying factor for the counted pulses as floating point value

SET FACTORS	ASCII WRITE COMMAND	#SET FACTORS:<FACTOR1>,<FACTOR2><CR> #SFCTS:<FACTOR1>,<FACTOR2><CR> Result: #OK<CR>	ASCII	NO
	FACTOR1	1,500		
	FACTOR2	2,200		
	TX	#SET FACTORS:1.5,2.2<CR>		
	RX	N/A		

Sets the multiplying factors to calculate a meaningful summation value out of the counted pulses for the S0 inputs 1 and 2

FACTOR1,FACTOR2: The new multiplying factor for the counted pulses as floating point value

GET FACTOR CH1	ASCII READ COMMAND	#GET FACTOR CH1<CR> #GFCT1<CR> Result: #GFCT1:<FACTORDec>,<FACTORHex><CR>	ASCII	
	TX	#GET FACTOR CH1<CR>		
	RX	#255,GFCT1:1.000000<CR>		
		Current factor for S0 channel 1:1.000000		

Returns the current configured multiplying factor to calculate a meaningful summation value out of the counted pulses for the S0 input 1

FACTORDec,FACTORHex: The current configured multiplying factor for the counted pulses as floating point value

GET FACTOR CH2	ASCII READ COMMAND	#GET FACTOR CH2<CR> #GFCT2<CR> Result: #GFCT2:<FACTORDec>,<FACTORHex><CR>	ASCII	
----------------	-----------------------------------	--	-------	--

	TX	#GET FACTOR CH2<CR>		
	RX	#255,GFCT2:1.000000<CR>		
		Current factor for S0 channel 2:1.000000		
Returns the current configured multiplying factor to calculate a meaningful summation value out of the counted pulses for the S0 input 2 FACTORDec,FACTORHex: The current configured multiplying factor for the counted pulses as floating point value				
GET FACTORS	ASCII READ COMMAND	#GET FACTORS<CR> #GFCTS<CR> Result: #GFCTS:<FACTOR1Dec>,<FACTOR2Dec>,<FACTOR1Hex>,<FACTOR2Hex><CR>	ASCII	
	TX	#GET FACTORS<CR>		
	RX	#255,GFCTS:1.000000,1.000000<CR>		
		Current factor for S0 channel 1:1.000000		
		Current factor for S0 channel 2:1.000000		