MODBUS PROTOCOL
CENTURIO PRO / POOL

R5-01-26

NORME CE
EC RULES(STANDARD EC)
NORMAS DE LA CE

Direttiva Bassa Tensione
Low Voltage Directive
Directiva de baja tensión
} **2014/35/UE**

Direttiva EMC Compatibilità Elettromagnetica
EMC electromagnetic compatibility directive
EMC directiva de compatibilidad electromagnética
} **2014/30/UE**

GENERAL SAFETY GUIDELINES

Danger! In emergencies the instrument should be switched off immediately! Disconnect the power cable from the power supply!

When installing always observe local regulations!

Manufacturer is not liable for any unauthorized use or misuse of this product that may cause injury, damage to persons and / or materials.

Caution! Instrument must be accessible at all times for both operating and servicing. Access must not be obstructed in any way!

Feeder should be interlocked with a no-flow protection device to automatically shut-off the pumps when there is no flow!

Pumps and accessories must be serviced and repaired by qualified and authorized personnel only!

Always discharge the liquid end before servicing the instrument!

Empty and rinse the liquid end before work on a pump which has been used with hazardous or unknown chemicals!

Always read chemical safety datasheet!

Always wear protective clothing when handling hazardous or unknown chemicals!

Instrument must be operated / serviced by trained technicians only!

All connection operations must be performed while the instrument is not connected to main supply!

MODBUS Centurio RTU and TCP / IP

With the MODBUS protocol we define the format and the mode of communication between a "master" that manages the system and one or more "slaves" that respond to the queries of the master.

MODBUS Centurio RTU

To communicate with the device, via the RS485 device, it is necessary to enable the MODBUS communication in the relative menu. Furthermore it is necessary to configure the communication parameters such as:

IDModbus: Identifier of the RS485 node

BaudRate: Baud rate between 2400bps and 115200 bps

DataBits: 8Bit or 7bit

Parity: None, Even, Odd

StopBits: 1bit, 2 bit

As mentioned above, MODBUS transactions always involve the master, which manages the line, and one slave at a time (except in the case of broadcast messages).

To identify the recipient of the message, a byte containing the numerical address of the selected slave device is transmitted as the first character.

Each of the slaves will therefore have assigned a different address number that uniquely identifies it.

The admissible addresses are those from 1 to 255, while the 0 address, which can not be assigned to a slave, placed at the top of the message transmitted by the master indicates that this is "broadcast", ie directed to all slaves at the same time.

The second character of the message identifies the function to be performed in the message transmitted by the master, to which the slave in turn responds with the same code to indicate that the function has been performed.

Used functions are those shown below:

Function Description
01 Read Coil Status
03 Read Holding Registers
06 Preset Single register

The last two characters of the message contain the cyclic redundancy check code calculated according to the CRC16 algorithm.

MODBUS FUNCTIONS

Read Output Status (01)

This function allows to request the ON or OFF status of binary logical variables.

Broadcast mode is not allowed.

question

Besides the address of the slave and the function code (01), the message contains the starting address (starting Address) expressed on two bytes and the number of bits to be read also on two bytes. The num-bering of the addresses starts at zero (bit1 = 0) for the MODBUS

Example: Request for reading from bit 17 of the bit from 04 to 015.

ADDR	FUNC	DATA start Addr HI	DATA start Addr LO	DATA bit # HI	DATA bit # LO	CRC HI	CRC LO
11	01	00	03	00	0C	CE	9F

Answer
In addition to the slave address and the function code (01), the message includes a character that contains the number of bytes of data and the characters containing the data.
The data is packaged, so that a byte contains the status of 8 bits, the least significant bit of the first byte contains the bit corresponding to the starting address, and so on.
If the number of bits to be read is not a multiple of 8, the last character is completed with zeros in the most significant bits.

Example: Reply to the above request.

ADDR	FUNC	DATA byte count	DATA bit 04..11	DATA bit 12..15	CRC HI	CRC LO
11	01	02	CD	0B	6D	68

Read Output Registers (03)

This function makes it possible to request the value of 16-bit registers (word) containing numeric variables. Besides the address of the slave and the function code (03), the message contains the starting address (starting Address) expressed on two bytes and the number of words to be read also on two bytes. The maximum number of words that can be read is 125.

Example: Request for reading from slave 25 of registers from 4069 to 40071.

ADDR	FUNC	DATA start Addr HI	DATA start Addr LO	DATA bit # HI	DATA bit # LO	CRC HI	CRC LO
19	03	00	44	00	03	46	06

Answer
In addition to the address of the slave and the function code (03), the message includes a character that contains the number of bytes of data and the characters containing the data.
The registers require two bytes each, the first of which contains the most significant part.

Example: Reply to the above request.

ADDR	FUNC	DATA byte count	DATA byte 69 HI	DATA byte 69 LO	DATA byte 70 HI	DATA byte 70 LO	DATA byte 71 HI	DATA byte 71 LO	CRC HI	CRC LO
19	03	06	02	2B	00	00	00	64	AF	7A

Preset Single Register (06)

This function allows you to set the value of a single 16-bit register.

In addition to the address of the slave and the function code (06), the message contains the address of the variable expressed in two bytes and the value to be assigned.

Example: Request to force 928 on slave 35 at address 26.

ADDR	FUNC	DATA bit HI	DATA bit LO	DATA WORD HI	DATA WORD LO	CRC HI	CRC LO
23	06	00	19	03	A0	5E	07

Answer is:

ADDR	FUNC	DATA bit HI	DATA bit LO	DATA WORD HI	DATA WORD LO	CRC HI	CRC LO
23	06	00	19	03	A0	5E	07

ERRORS MANAGEMENT

ADDR	FUNC	DATA exept. code	CRC HI	CRC LO
0A	81	02	7A	74

Codici d'eccezione

CODE	NAME	DECRIPTION
01	ILLEGAL FORMAT	Message receiving syntax
02	ILLEGAL DATA ADDRESS	The address to which the data field refers is not is an address allowed on the addressed slave.
03	ILLEGAL DATA VALUE	Wrong function
04	CRC ERROR	Checksum error CRC

MODBUS Centurio TCP / IP

In modbus TCP / IP all master / slave requests and responses are managed via the TCP communication protocol. All requests / replies are sent via TCP on port 502.

The slave supports only 1 simultaneous connection, and the slave ID must be 0

Requests and responses must have 6 bytes of prefix as follows:

byte 0: Transaction identifier - default 0

byte 1: Transaction identifier - default 0

byte 2: protocol identifier = 0

byte 3 protocol identifier = 0

byte 4: frame length () = 0 if the messages are shorter than 256 bytes

byte 5: frame length (lower byte) = number of bytes to send

byte 6: Node identifier

byte 7: Function code of the modbus

byte8: Required data (depends on the function code)

below is an example of a request from the HoldingRegister 03 function, with offset 4 and node ID 01

send: 00 00 00 00 00 06 01 03 00 04 00 01

response: 00 00 00 00 00 05 01 03 02 00 05

The request functions are the same as those of the Modbus RTU

This is an example of a HoldingRegister 03 function request, with offset 4 and node ID 01

send: 00 00 00 00 00 06 01 03 00 04 00 01 response:

00 00 00 00 00 05 01 03 02 00 05

The request functions are the same as for Modbus RTU

VALUE ADDRESSES LIST:

Address	Register Number	Format	Property	Function	Description
40001	2	Int16	R	03	Reading channel1 Without decimal point
40002	2	Int16	R	03	Channel1 measure dividing factor. Values: 1, 10, 100, 1000
40003	2	Int16	R	03	mV probe Channel 1
40004	2	Int16	R	03	Temperature probe Channel1 If available
40005	2	Int16	R	03	Reading channel2 Without decimal point
40006	2	Int16	R	03	Channel2 measure dividing factor. Values: 1, 10, 100, 1000
40007	2	Int16	R	03	mV probe Channel 2
40008	2	Int16	R	03	Temperature probe Channel2 If available
40009	2	Int16	R	03	Reading channel3 Without decimal point
40010	2	Int16	R	03	Channel3 measure dividing factor. Values: 1, 10, 100, 1000
40011	2	Int16	R	03	mV probe Channel 3
40012	2	Int16	R	03	Temperature probe Channel3 If available
40013	2	Int16	R	03	Reading channel4 Without decimal point
40014	2	Int16	R	03	Channel4 measure dividing factor. Values: 1, 10, 100, 1000
40015	2	Int16	R	03	mV probe Channel 4
40016	2	Int16	R	03	Temperature probe Channel4 If available
40017	2	Int16	R	03	Reading channel5 Without decimal point
40018	2	Int16	R	03	Channel5 measure dividing factor. Values: 1, 10, 100, 1000
40019	2	Int16	R	03	mV probe Channel 5
40020	2	Int16	R	03	Temperature probe Channel5 If available
40021	2	Int16	R	03	Reading channel6 Without decimal point
40022	2	Int16	R	03	Channel6 measure dividing factor. Values: 1, 10, 100, 1000
40023	2	Int16	R	03	mV probe Channel 6
40024	2	Int16	R	03	Temperature probe Channel6 If available

40025	2	Int16	R	03	Reading Channel 7 without point decimal
40026	2	Int16	R	03	Current measur. division factor Channel 7. Values: 1, 10 ,100, 1000
40027	2	Int16	R	03	mV probe Channel 7
40028	2	Int16	R	03	temperature probe Channel 7 if present
40029	2	Int16	R	03	Reading Channel 8 without point decimal
40030	2	Int16	R	03	Current measur. division factor canale8. Values: 1, 10 ,100, 1000
40031	2	Int16	R	03	mV probe Channel 8
40032	2	Int16	R	03	temperature probe Canale8 if present
40033	2	Int16	R	03	Reading Channel 9 without point decimal
40034	2	Int16	R	03	Current measur. division factor Channel 9. Values: 1, 10 ,100, 1000
40035	2	Int16	R	03	mV probe Channel 9
40036	2	Int16	R	03	temperature probe Channel 9 if present
40037	2	Int16	R	03	Reading Channel 10 without point decimal
40038	2	Int16	R	03	Current measur. division factor Channel 10. Values: 1, 10 ,100, 1000
40039	2	Int16	R	03	mV probe Channel 10
40040	2	Int16	R	03	temperature probe Channel 10 if present
40041	2	Int16	R	03	Proportional Out number 1 – value P/M
40042	2	Int16	R	03	Proportional Out number 2 – value P/M
40043	2	Int16	R	03	Proportional Out number 3 – value P/M
40044	2	Int16	R	03	Proportional Out number 4 – value P/M
40045	2	Int16	R	03	Proportional Out number 5 – value P/M
40046	2	Int16	R	03	Proportional Out number 6 – value P/M
40047	2	Int16	R	03	Proportional Out number 7 – value P/M
40048	2	Int16	R	03	Proportional Out number 8 – value P/M
40051	2	Int16	R	03	calendar - day
40052	2	Int16	R	03	calendar – month
40053	2	Int16	R	03	calendar – year
40054	2	Int16	R	03	calendar – Hour
40055	2	Int16	R	03	calendar – minutes
40056	4	Int32	R	03	Totalizer WM 1 / 100 (m3)
40058	4	Int32	R	03	Totalizer WM 2 / 100 (m3)
40060	2	Int16	R	03	WM1 / 100 (m3/h)
40061	2	Int16	R	03	WM1 / 100 (m3/h)
Coils Register - Relay					
01	1Bit	Bit	R	01	Relay Out number 1 – 1 On 0 Off
02	1Bit	Bit	R	01	Relay Out number 2 – 1 On 0 Off
03	1Bit	Bit	R	01	Relay Out number 3 – 1 On 0 Off
04	1Bit	Bit	R	01	Relay Out number 4 – 1 On 0 Off
05	1Bit	Bit	R	01	Relay Out number 5 – 1 On 0 Off

06	1Bit	Bit	R	01	Relay Out number 6 – 1 On 0 Off
07	1Bit	Bit	R	01	Relay Out number 7 – 1 On 0 Off
08	1Bit	Bit	R	01	Relay Out number 8 – 1 On 0 Off
Coils Register - Input					
11	1Bit	Bit	R	01	Input number 1 – 1 On 0 Off
12	1Bit	Bit	R	01	Input number 2 – 1 On 0 Off
13	1Bit	Bit	R	01	Input number 3 – 1 On 0 Off
14	1Bit	Bit	R	01	Input number 4 – 1 On 0 Off
15	1Bit	Bit	R	01	Input number 5 – 1 On 0 Off
16	1Bit	Bit	R	01	Input number 6 – 1 On 0 Off
17	1Bit	Bit	R	01	Input number 7 – 1 On 0 Off
18	1Bit	Bit	R	01	Input number 8 – 1 On 0 Off
Coils Register - Alarm					
21	1Bit	Bit	R	01	Low Flow Meter1 Alarm – 1 On 0 Off
22	1Bit	Bit	R	01	Low Flow Meter2 Alarm – 1 On 0 Off
23	1Bit	Bit	R	01	Flow Sensor Alarm – 1 On 0 Off
31	1Bit	Bit	R	01	Channel 1 High Alarm – 1 On 0 Off
32	1Bit	Bit	R	01	Channel 2 High Alarm – 1 On 0 Off
33	1Bit	Bit	R	01	Channel 3 High Alarm – 1 On 0 Off
34	1Bit	Bit	R	01	Channel 4 High Alarm – 1 On 0 Off
35	1Bit	Bit	R	01	Channel 5 High Alarm – 1 On 0 Off
41	1Bit	Bit	R	01	Channel 1 Low Alarm – 1 On 0 Off
42	1Bit	Bit	R	01	Channel 2 Low Alarm – 1 On 0 Off
43	1Bit	Bit	R	01	Channel 3 Low Alarm – 1 On 0 Off
44	1Bit	Bit	R	01	Channel 4 Low Alarm – 1 On 0 Off
45	1Bit	Bit	R	01	Channel 5 Low Alarm – 1 On 0 Off
51	1Bit	Bit	R	01	Channel 1 Dosing Alarm – 1 On 0 Off
52	1Bit	Bit	R	01	Channel 2 Dosing Alarm – 1 On 0 Off
53	1Bit	Bit	R	01	Channel 3 Dosing Alarm – 1 On 0 Off
54	1Bit	Bit	R	01	Channel 4 Dosing Alarm – 1 On 0 Off
55	1Bit	Bit	R	01	Channel 5 Dosing Alarm – 1 On 0 Off
36	1Bit	Bit	R	01	Channel 6 High Alarm – 1 On 0 Off
46	1Bit	Bit	R	01	Channel 6 Low Alarm – 1 On 0 Off
56	1Bit	Bit	R	01	Channel 6 Dosing Alarm – 1 On 0 Off
Coils Register - Status					
61	1Bit	Bit	R	01	Channel 1 Reading Alarm – 1 On 0 Off
62	1Bit	Bit	R	01	Channel 2 Reading Alarm – 1 On 0 Off
63	1Bit	Bit	R	01	Channel 3 Reading Alarm – 1 On 0 Off
64	1Bit	Bit	R	01	Channel 4 Reading Alarm – 1 On 0 Off
65	1Bit	Bit	R	01	Channel 5 Reading Alarm – 1 On 0 Off
Channel 1 Setpoint					
40100	2	Int16	R/W	03/06	First Digital – 0:disable , 1: ON/OFF, 2 PWM
40101	2	Int16	R/W	03/06	First Digital – ValueON Channel1 in ON/OFF mode
40102	2	Int16	R/W	03/06	First Digital – ValueOFF Channel1 in ON/OFF mode
40103	2	Int16	R/W	03/06	First Digital – Value1 Channel1 in PWM mode
40104	2	Int16	R/W	03/06	First Digital – PWM Time1
40105	2	Int16	R/W	03/06	First Digital – Value2 Channel1 in PWM mode

40106	2	Int16	R/W	03/06	First Digital – PWM Time2
40110	2	Int16	R/W	03/06	Second Digital – 0:disable , 1: ON/OFF, 2 PWM
40111	2	Int16	R/W	03/06	Second Digital – ValueON Channel1 in ON/OFF mode
40112	2	Int16	R/W	03/06	Second Digital – ValueOFF Channel1 in ON/OFF mode
40113	2	Int16	R/W	03/06	Second Digital – Value1 Channel1 in PWM mode
40114	2	Int16	R/W	03/06	Second Digital – PWM Time1
40115	2	Int16	R/W	03/06	Second Digital – Value2 Channel1 in PWM mode
40116	2	Int16	R/W	03/06	Second Digital – PWM Time2
40120	2	Int16	R/W	03/06	First Proportional – 0:disable , 1: Enable
40121	2	Int16	R/W	03/06	First Proportional – Value1 ph
40122	2	Int16	R/W	03/06	First Proportional – Pulse/Minute
40123	2	Int16	R/W	03/06	First Proportional – Value2 ph
40124	2	Int16	R/W	03/06	First Proportional – Pulse/Minute
40125	2	Int16	R/W	03/06	Second Proportional – 0:disable , 1: Enable
40126	2	Int16	R/W	03/06	Second Proportional – Value1 ph
40127	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
40128	2	Int16	R/W	03/06	Second Proportional – Value2 ph
40129	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
40130	2	Int16	R/W	03/06	Temperature Setpoint – 0:disable , 1: Enable
40131	2	Int16	R/W	03/06	Temperature Digital – ValueON Temperature in ON/OFF mode
40132	2	Int16	R/W	03/06	Temperature Digital – ValueOFF Temperature in ON/OFF mode
40135	2	Int16	R/W	03/06	Alarm Low – 0:disable , 1: Enable
40136	2	Int16	R/W	03/06	Alarm Low – value Channel1
40137	2	Int16	R/W	03/06	Alarm Low – Delay Hour
40138	2	Int16	R/W	03/06	Alarm Low – Delay Minutes
40139	2	Int16	R/W	03/06	Alarm High – 0:disable , 1: Enable
40140	2	Int16	R/W	03/06	Alarm High – value Channel1
40141	2	Int16	R/W	03/06	Alarm High – Delay Hour
40142	2	Int16	R/W	03/06	Alarm High – Delay Minutes
40143	2	Int16	R/W	03/06	Alarm Dosing – 0:disable , 1: Enable
40144	2	Int16	R/W	03/06	Alarm Dosing – Delay Hour
40145	2	Int16	R/W	03/06	Alarm Dosing – Delay Minutes
40146	2	Int16	R/W	03/06	Alarm Reading – 0:disable , 1: Enable
40147	2	Int16	R/W	03/06	Alarm Reading – Delay Hour
40148	2	Int16	R/W	03/06	Alarm Reading – Delay Minutes
Channel 2 Setpoint					
40200	2	Int16	R/W	03/06	First Digital – 0:disable , 1: ON/OFF, 2 PWM
40201	2	Int16	R/W	03/06	First Digital – ValueON Channel1 in ON/OFF

					mode
40202	2	Int16	R/W	03/06	First Digital – ValueOFF Channel1 in ON/OFF mode
40203	2	Int16	R/W	03/06	First Digital – Value1 Channel1 in PWM mode
40204	2	Int16	R/W	03/06	First Digital – PWM Time1
40205	2	Int16	R/W	03/06	First Digital – Value2 Channel1 in PWM mode
40206	2	Int16	R/W	03/06	First Digital – PWM Time2
40210	2	Int16	R/W	03/06	Second Digital – 0:disable , 1: ON/OFF, 2 PWM
40211	2	Int16	R/W	03/06	Second Digital – ValueON Channel1 in ON/OFF mode
40212	2	Int16	R/W	03/06	Second Digital – ValueOFF Channel1 in ON/OFF mode
40213	2	Int16	R/W	03/06	Second Digital – Value1 Channel1 in PWM mode
40214	2	Int16	R/W	03/06	Second Digital – PWM Time1
40215	2	Int16	R/W	03/06	Second Digital – Value2 Channel1 in PWM mode
40216	2	Int16	R/W	03/06	Second Digital – PWM Time2
40220	2	Int16	R/W	03/06	First Proportional – 0:disable , 1: Enable
40221	2	Int16	R/W	03/06	First Proportional – Value1 ph
40222	2	Int16	R/W	03/06	First Proportional – Pulse/Minute
40223	2	Int16	R/W	03/06	First Proportional – Value2 ph
40224	2	Int16	R/W	03/06	First Proportional – Pulse/Minute
40225	2	Int16	R/W	03/06	Second Proportional – 0:disable , 1: Enable
40226	2	Int16	R/W	03/06	Second Proportional – Value1 ph
40227	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
40228	2	Int16	R/W	03/06	Second Proportional – Value2 ph
40229	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
40230	2	Int16	R/W	03/06	Temperature Setpoint – 0:disable , 1: Enable
40231	2	Int16	R/W	03/06	Temperature Digital – ValueON Temperature in ON/OFF mode
40232	2	Int16	R/W	03/06	Temperature Digital – ValueOFF Temperature in ON/OFF mode
40235	2	Int16	R/W	03/06	Alarm Low – 0:disable , 1: Enable
40236	2	Int16	R/W	03/06	Alarm Low – value Channel1
40237	2	Int16	R/W	03/06	Alarm Low – Delay Hour
40238	2	Int16	R/W	03/06	Alarm Low – Delay Minutes
40239	2	Int16	R/W	03/06	Alarm High – 0:disable , 1: Enable
40240	2	Int16	R/W	03/06	Alarm High – value Channel1
40241	2	Int16	R/W	03/06	Alarm High – Delay Hour
40242	2	Int16	R/W	03/06	Alarm High – Delay Minutes
40243	2	Int16	R/W	03/06	Alarm Dosing – 0:disable , 1: Enable
40244	2	Int16	R/W	03/06	Alarm Dosing – Delay Hour
40245	2	Int16	R/W	03/06	Alarm Dosing – Delay Minutes

40246	2	Int16	R/W	03/06	Alarm Reading – 0:disable , 1: Enable
40247	2	Int16	R/W	03/06	Alarm Reading – Delay Hour
40248	2	Int16	R/W	03/06	Alarm Reading – Delay Minutes
Channel 3 Setpoint					
40300	2	Int16	R/W	03/06	First Digital – 0:disable , 1: ON/OFF, 2 PWM
40301	2	Int16	R/W	03/06	First Digital – ValueON Channel1 in ON/OFF mode
40302	2	Int16	R/W	03/06	First Digital – ValueOFF Channel1 in ON/OFF mode
40303	2	Int16	R/W	03/06	First Digital – Value1 Channel1 in PWM mode
40304	2	Int16	R/W	03/06	First Digital – PWM Time1
40305	2	Int16	R/W	03/06	First Digital – Value2 Channel1 in PWM mode
40306	2	Int16	R/W	03/06	First Digital – PWM Time2
40310	2	Int16	R/W	03/06	Second Digital – 0:disable , 1: ON/OFF, 2 PWM
40311	2	Int16	R/W	03/06	Second Digital – ValueON Channel1 in ON/OFF mode
40312	2	Int16	R/W	03/06	Second Digital – ValueOFF Channel1 in ON/OFF mode
40313	2	Int16	R/W	03/06	Second Digital – Value1 Channel1 in PWM mode
40314	2	Int16	R/W	03/06	Second Digital – PWM Time1
40315	2	Int16	R/W	03/06	Second Digital – Value2 Channel1 in PWM mode
40316	2	Int16	R/W	03/06	Second Digital – PWM Time2
40320	2	Int16	R/W	03/06	First Proportional – 0:disable , 1: Enable
40321	2	Int16	R/W	03/06	First Proportional – Value1 ph
40322	2	Int16	R/W	03/06	First Proportional – Pulse/Minute
40323	2	Int16	R/W	03/06	First Proportional – Value2 ph
40324	2	Int16	R/W	03/06	First Proportional – Pulse/Minute
40325	2	Int16	R/W	03/06	Second Proportional – 0:disable , 1: Enable
40326	2	Int16	R/W	03/06	Second Proportional – Value1 ph
40327	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
40328	2	Int16	R/W	03/06	Second Proportional – Value2 ph
40329	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
40330	2	Int16	R/W	03/06	Temperature Setpoint – 0:disable , 1: Enable
40331	2	Int16	R/W	03/06	Temperature Digital – ValueON Temperature in ON/OFF mode
40332	2	Int16	R/W	03/06	Temperature Digital – ValueOFF Temperature in ON/OFF mode
40335	2	Int16	R/W	03/06	Alarm Low – 0:disable , 1: Enable
40336	2	Int16	R/W	03/06	Alarm Low – value Channel1
40337	2	Int16	R/W	03/06	Alarm Low – Delay Hour
40338	2	Int16	R/W	03/06	Alarm Low – Delay Minutes
40339	2	Int16	R/W	03/06	Alarm High – 0:disable , 1: Enable
40340	2	Int16	R/W	03/06	Alarm High – value Channel1
40341	2	Int16	R/W	03/06	Alarm High – Delay Hour

40342	2	Int16	R/W	03/06	Alarm High – Delay Minutes
40343	2	Int16	R/W	03/06	Alarm Dosing – 0:disable , 1: Enable
40344	2	Int16	R/W	03/06	Alarm Dosing – Delay Hour
40345	2	Int16	R/W	03/06	Alarm Dosing – Delay Minutes
40346	2	Int16	R/W	03/06	Alarm Reading – 0:disable , 1: Enable
40347	2	Int16	R/W	03/06	Alarm Reading – Delay Hour
40348	2	Int16	R/W	03/06	Alarm Reading – Delay Minutes
Channel 4 Setpoint					
40400	2	Int16	R/W	03/06	First Digital – 0:disable , 1: ON/OFF, 2 PWM
40401	2	Int16	R/W	03/06	First Digital – ValueON Channel1 in ON/OFF mode
40402	2	Int16	R/W	03/06	First Digital – ValueOFF Channel1 in ON/OFF mode
40403	2	Int16	R/W	03/06	First Digital – Value1 Channel1 in PWM mode
40404	2	Int16	R/W	03/06	First Digital – PWM Time1
40405	2	Int16	R/W	03/06	First Digital – Value2 Channel1 in PWM mode
40406	2	Int16	R/W	03/06	First Digital – PWM Time2
40410	2	Int16	R/W	03/06	Second Digital – 0:disable , 1: ON/OFF, 2 PWM
40411	2	Int16	R/W	03/06	Second Digital – ValueON Channel1 in ON/OFF mode
40412	2	Int16	R/W	03/06	Second Digital – ValueOFF Channel1 in ON/OFF mode
40413	2	Int16	R/W	03/06	Second Digital – Value1 Channel1 in PWM mode
40414	2	Int16	R/W	03/06	Second Digital – PWM Time1
40415	2	Int16	R/W	03/06	Second Digital – Value2 Channel1 in PWM mode
40416	2	Int16	R/W	03/06	Second Digital – PWM Time2
40420	2	Int16	R/W	03/06	First Proportional – 0:disable , 1: Enable
40421	2	Int16	R/W	03/06	First Proportional – Value1 ph
40422	2	Int16	R/W	03/06	First Proportional – Pulse/Minute
40423	2	Int16	R/W	03/06	First Proportional – Value2 ph
40424	2	Int16	R/W	03/06	First Proportional – Pulse/Minute
40425	2	Int16	R/W	03/06	Second Proportional – 0:disable , 1: Enable
40426	2	Int16	R/W	03/06	Second Proportional – Value1 ph
40427	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
40428	2	Int16	R/W	03/06	Second Proportional – Value2 ph
40429	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
40430	2	Int16	R/W	03/06	Temperature Setpoint – 0:disable , 1: Enable
40431	2	Int16	R/W	03/06	Temperature Digital – ValueON Temperature in ON/OFF mode
40432	2	Int16	R/W	03/06	Temperature Digital – ValueOFF Temperature in ON/OFF mode
40435	2	Int16	R/W	03/06	Alarm Low – 0:disable , 1: Enable

40436	2	Int16	R/W	03/06	Alarm Low – value Channel1
40437	2	Int16	R/W	03/06	Alarm Low – Delay Hour
40438	2	Int16	R/W	03/06	Alarm Low – Delay Minutes
40439	2	Int16	R/W	03/06	Alarm High – 0:disable , 1: Enable
40440	2	Int16	R/W	03/06	Alarm High – value Channel1
40441	2	Int16	R/W	03/06	Alarm High – Delay Hour
40442	2	Int16	R/W	03/06	Alarm High – Delay Minutes
40443	2	Int16	R/W	03/06	Alarm Dosing – 0:disable , 1: Enable
40444	2	Int16	R/W	03/06	Alarm Dosing – Delay Hour
40445	2	Int16	R/W	03/06	Alarm Dosing – Delay Minutes
40446	2	Int16	R/W	03/06	Alarm Reading – 0:disable , 1: Enable
40447	2	Int16	R/W	03/06	Alarm Reading – Delay Hour
40448	2	Int16	R/W	03/06	Alarm Reading – Delay Minutes
Channel 5 Setpoint					
40500	2	Int16	R/W	03/06	First Digital – 0:disable , 1: ON/OFF, 2 PWM
40501	2	Int16	R/W	03/06	First Digital – ValueON Channel1 in ON/OFF mode
40502	2	Int16	R/W	03/06	First Digital – ValueOFF Channel1 in ON/OFF mode
40503	2	Int16	R/W	03/06	First Digital – Value1 Channel1 in PWM mode
40504	2	Int16	R/W	03/06	First Digital – PWM Time1
40505	2	Int16	R/W	03/06	First Digital – Value2 Channel1 in PWM mode
40506	2	Int16	R/W	03/06	First Digital – PWM Time2
40510	2	Int16	R/W	03/06	Second Digital – 0:disable , 1: ON/OFF, 2 PWM
40511	2	Int16	R/W	03/06	Second Digital – ValueON Channel1 in ON/OFF mode
40512	2	Int16	R/W	03/06	Second Digital – ValueOFF Channel1 in ON/OFF mode
40513	2	Int16	R/W	03/06	Second Digital – Value1 Channel1 in PWM mode
40514	2	Int16	R/W	03/06	Second Digital – PWM Time1
40515	2	Int16	R/W	03/06	Second Digital – Value2 Channel1 in PWM mode
40516	2	Int16	R/W	03/06	Second Digital – PWM Time2
40520	2	Int16	R/W	03/06	First Proportional – 0:disable , 1: Enable
40521	2	Int16	R/W	03/06	First Proportional – Value1 ph
40522	2	Int16	R/W	03/06	First Proportional – Pulse/Minute
40523	2	Int16	R/W	03/06	First Proportional – Value2 ph
40524	2	Int16	R/W	03/06	First Proportional – Pulse/Minute
40525	2	Int16	R/W	03/06	Second Proportional – 0:disable , 1: Enable
40526	2	Int16	R/W	03/06	Second Proportional – Value1 ph
40527	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
40528	2	Int16	R/W	03/06	Second Proportional – Value2 ph
40529	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
40530	2	Int16	R/W	03/06	Temperature Setpoint – 0:disable , 1: Enable

40531	2	Int16	R/W	03/06	Temperature Digital – ValueON Temperature in ON/OFF mode
40532	2	Int16	R/W	03/06	Temperature Digital – ValueOFF Temperature in ON/OFF mode
40535	2	Int16	R/W	03/06	Alarm Low – 0:disable , 1: Enable
40536	2	Int16	R/W	03/06	Alarm Low – value Channel1
40537	2	Int16	R/W	03/06	Alarm Low – Delay Hour
40538	2	Int16	R/W	03/06	Alarm Low – Delay Minutes
40539	2	Int16	R/W	03/06	Alarm High – 0:disable , 1: Enable
40540	2	Int16	R/W	03/06	Alarm High – value Channel1
40541	2	Int16	R/W	03/06	Alarm High – Delay Hour
40542	2	Int16	R/W	03/06	Alarm High – Delay Minutes
40543	2	Int16	R/W	03/06	Alarm Dosing – 0:disable , 1: Enable
40544	2	Int16	R/W	03/06	Alarm Dosing – Delay Hour
40545	2	Int16	R/W	03/06	Alarm Dosing – Delay Minutes
40546	2	Int16	R/W	03/06	Alarm Reading – 0:disable , 1: Enable
40547	2	Int16	R/W	03/06	Alarm Reading – Delay Hour
40548	2	Int16	R/W	03/06	Alarm Reading – Delay Minutes
Channel 6 Setpoint					
40600	2	Int16	R/W	03/06	First Digital – 0:disable , 1: ON/OFF, 2 PWM
40601	2	Int16	R/W	03/06	First Digital – ValueON Channel1 in ON/OFF mode
40602	2	Int16	R/W	03/06	First Digital – ValueOFF Channel1 in ON/OFF mode
40603	2	Int16	R/W	03/06	First Digital – Value1 Channel1 in PWM mode
40604	2	Int16	R/W	03/06	First Digital – PWM Time1
40605	2	Int16	R/W	03/06	First Digital – Value2 Channel1 in PWM mode
40606	2	Int16	R/W	03/06	First Digital – PWM Time2
40610	2	Int16	R/W	03/06	Second Digital – 0:disable , 1: ON/OFF, 2 PWM
40611	2	Int16	R/W	03/06	Second Digital – ValueON Channel1 in ON/OFF mode
40612	2	Int16	R/W	03/06	Second Digital – ValueOFF Channel1 in ON/OFF mode
40613	2	Int16	R/W	03/06	Second Digital – Value1 Channel1 in PWM mode
40614	2	Int16	R/W	03/06	Second Digital – PWM Time1
40615	2	Int16	R/W	03/06	Second Digital – Value2 Channel1 in PWM mode
40616	2	Int16	R/W	03/06	Second Digital – PWM Time2
40620	2	Int16	R/W	03/06	First Proportional – 0:disable , 1: Enable
40621	2	Int16	R/W	03/06	First Proportional – Value1 ph
40622	2	Int16	R/W	03/06	First Proportional – Pulse/Minute
40623	2	Int16	R/W	03/06	First Proportional – Value2 ph
40624	2	Int16	R/W	03/06	First Proportional – Pulse/Minute

40625	2	Int16	R/W	03/06	Second Proportional – 0:disable , 1: Enable
40626	2	Int16	R/W	03/06	Second Proportional – Value1 ph
40627	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
40628	2	Int16	R/W	03/06	Second Proportional – Value2 ph
40629	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
40630	2	Int16	R/W	03/06	Temperature Setpoint – 0:disable , 1: Enable
40631	2	Int16	R/W	03/06	Temperature Digital – ValueON Temperature in ON/OFF mode
40632	2	Int16	R/W	03/06	Temperature Digital – ValueOFF Temperature in ON/OFF mode
40635	2	Int16	R/W	03/06	Alarm Low – 0:disable , 1: Enable
40636	2	Int16	R/W	03/06	Alarm Low – value Channel1
40637	2	Int16	R/W	03/06	Alarm Low – Delay Hour
40638	2	Int16	R/W	03/06	Alarm Low – Delay Minutes
40639	2	Int16	R/W	03/06	Alarm High – 0:disable , 1: Enable
40640	2	Int16	R/W	03/06	Alarm High – value Channel1
40641	2	Int16	R/W	03/06	Alarm High – Delay Hour
40642	2	Int16	R/W	03/06	Alarm High – Delay Minutes
40643	2	Int16	R/W	03/06	Alarm Dosing – 0:disable , 1: Enable
40644	2	Int16	R/W	03/06	Alarm Dosing – Delay Hour
40645	2	Int16	R/W	03/06	Alarm Dosing – Delay Minutes
40646	2	Int16	R/W	03/06	Alarm Reading – 0:disable , 1: Enable
40647	2	Int16	R/W	03/06	Alarm Reading – Delay Hour
40648	2	Int16	R/W	03/06	Alarm Reading – Delay Minutes
Channel 7 Setpoint					
40700	2	Int16	R/W	03/06	First Digital – 0:disable , 1: ON/OFF, 2 PWM
40701	2	Int16	R/W	03/06	First Digital – ValueON Channel1 in ON/OFF mode
40702	2	Int16	R/W	03/06	First Digital – ValueOFF Channel1 in ON/OFF mode
40703	2	Int16	R/W	03/06	First Digital – Value1 Channel1 in PWM mode
40704	2	Int16	R/W	03/06	First Digital – PWM Time1
40705	2	Int16	R/W	03/06	First Digital – Value2 Channel1 in PWM mode
40706	2	Int16	R/W	03/06	First Digital – PWM Time2
40710	2	Int16	R/W	03/06	Second Digital – 0:disable , 1: ON/OFF, 2 PWM
40711	2	Int16	R/W	03/06	Second Digital – ValueON Channel1 in ON/OFF mode
40712	2	Int16	R/W	03/06	Second Digital – ValueOFF Channel1 in ON/OFF mode
40713	2	Int16	R/W	03/06	Second Digital – Value1 Channel1 in PWM mode
40714	2	Int16	R/W	03/06	Second Digital – PWM Time1
40715	2	Int16	R/W	03/06	Second Digital – Value2 Channel1 in PWM mode

40716	2	Int16	R/W	03/06	Second Digital – PWM Time2
40720	2	Int16	R/W	03/06	First Proportional – 0:disable , 1: Enable
40721	2	Int16	R/W	03/06	First Proportional – Value1 ph
40722	2	Int16	R/W	03/06	First Proportional – Pulse/Minute
40723	2	Int16	R/W	03/06	First Proportional – Value2 ph
40724	2	Int16	R/W	03/06	First Proportional – Pulse/Minute
40725	2	Int16	R/W	03/06	Second Proportional – 0:disable , 1: Enable
40726	2	Int16	R/W	03/06	Second Proportional – Value1 ph
40727	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
40728	2	Int16	R/W	03/06	Second Proportional – Value2 ph
40729	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
40730	2	Int16	R/W	03/06	Temperature Setpoint – 0:disable , 1: Enable
40731	2	Int16	R/W	03/06	Temperature Digital – ValueON Temperature in ON/OFF mode
40732	2	Int16	R/W	03/06	Temperature Digital – ValueOFF Temperature in ON/OFF mode
40735	2	Int16	R/W	03/06	Alarm Low – 0:disable , 1: Enable
40736	2	Int16	R/W	03/06	Alarm Low – value Channel1
40737	2	Int16	R/W	03/06	Alarm Low – Delay Hour
40738	2	Int16	R/W	03/06	Alarm Low – Delay Minutes
40739	2	Int16	R/W	03/06	Alarm High – 0:disable , 1: Enable
40740	2	Int16	R/W	03/06	Alarm High – value Channel1
40741	2	Int16	R/W	03/06	Alarm High – Delay Hour
40742	2	Int16	R/W	03/06	Alarm High – Delay Minutes
40743	2	Int16	R/W	03/06	Alarm Dosing – 0:disable , 1: Enable
40744	2	Int16	R/W	03/06	Alarm Dosing – Delay Hour
40745	2	Int16	R/W	03/06	Alarm Dosing – Delay Minutes
40746	2	Int16	R/W	03/06	Alarm Reading – 0:disable , 1: Enable
40747	2	Int16	R/W	03/06	Alarm Reading – Delay Hour
40748	2	Int16	R/W	03/06	Alarm Reading – Delay Minutes
Channel 8 Setpoint					
40800	2	Int16	R/W	03/06	First Digital – 0:disable , 1: ON/OFF, 2 PWM
40801	2	Int16	R/W	03/06	First Digital – ValueON Channel1 in ON/OFF mode
40802	2	Int16	R/W	03/06	First Digital – ValueOFF Channel1 in ON/OFF mode
40803	2	Int16	R/W	03/06	First Digital – Value1 Channel1 in PWM mode
40804	2	Int16	R/W	03/06	First Digital – PWM Time1
40805	2	Int16	R/W	03/06	First Digital – Value2 Channel1 in PWM mode
40806	2	Int16	R/W	03/06	First Digital – PWM Time2
40810	2	Int16	R/W	03/06	Second Digital – 0:disable , 1: ON/OFF, 2 PWM
40811	2	Int16	R/W	03/06	Second Digital – ValueON Channel1 in ON/OFF mode

40812	2	Int16	R/W	03/06	Second Digital – ValueOFF Channel1 in ON/OFF mode
40813	2	Int16	R/W	03/06	Second Digital – Value1 Channel1 in PWM mode
40814	2	Int16	R/W	03/06	Second Digital – PWM Time1
40815	2	Int16	R/W	03/06	Second Digital – Value2 Channel1 in PWM mode
40816	2	Int16	R/W	03/06	Second Digital – PWM Time2
40820	2	Int16	R/W	03/06	First Proportional – 0:disable , 1: Enable
40821	2	Int16	R/W	03/06	First Proportional – Value1 ph
40822	2	Int16	R/W	03/06	First Proportional – Pulse/Minute
40823	2	Int16	R/W	03/06	First Proportional – Value2 ph
40824	2	Int16	R/W	03/06	First Proportional – Pulse/Minute
40825	2	Int16	R/W	03/06	Second Proportional – 0:disable , 1: Enable
40826	2	Int16	R/W	03/06	Second Proportional – Value1 ph
40827	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
40828	2	Int16	R/W	03/06	Second Proportional – Value2 ph
40829	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
40830	2	Int16	R/W	03/06	Temperature Setpoint – 0:disable , 1: Enable
40831	2	Int16	R/W	03/06	Temperature Digital – ValueON Temperature in ON/OFF mode
40832	2	Int16	R/W	03/06	Temperature Digital – ValueOFF Temperature in ON/OFF mode
40835	2	Int16	R/W	03/06	Alarm Low – 0:disable , 1: Enable
40836	2	Int16	R/W	03/06	Alarm Low – value Channel1
40837	2	Int16	R/W	03/06	Alarm Low – Delay Hour
40838	2	Int16	R/W	03/06	Alarm Low – Delay Minutes
40839	2	Int16	R/W	03/06	Alarm High – 0:disable , 1: Enable
40840	2	Int16	R/W	03/06	Alarm High – value Channel1
40841	2	Int16	R/W	03/06	Alarm High – Delay Hour
40842	2	Int16	R/W	03/06	Alarm High – Delay Minutes
40843	2	Int16	R/W	03/06	Alarm Dosing – 0:disable , 1: Enable
40844	2	Int16	R/W	03/06	Alarm Dosing – Delay Hour
40845	2	Int16	R/W	03/06	Alarm Dosing – Delay Minutes
40846	2	Int16	R/W	03/06	Alarm Reading – 0:disable , 1: Enable
40847	2	Int16	R/W	03/06	Alarm Reading – Delay Hour
40848	2	Int16	R/W	03/06	Alarm Reading – Delay Minutes
Channel 9 Setpoint					
40900	2	Int16	R/W	03/06	First Digital – 0:disable , 1: ON/OFF, 2 PWM
40901	2	Int16	R/W	03/06	First Digital – ValueON Channel1 in ON/OFF mode
40902	2	Int16	R/W	03/06	First Digital – ValueOFF Channel1 in ON/OFF mode
40903	2	Int16	R/W	03/06	First Digital – Value1 Channel1 in PWM mode
40904	2	Int16	R/W	03/06	First Digital – PWM Time1

40905	2	Int16	R/W	03/06	First Digital – Value2 Channel1 in PWM mode
40906	2	Int16	R/W	03/06	First Digital – PWM Time2
40910	2	Int16	R/W	03/06	Second Digital – 0:disable , 1: ON/OFF, 2 PWM
40911	2	Int16	R/W	03/06	Second Digital – ValueON Channel1 in ON/OFF mode
40912	2	Int16	R/W	03/06	Second Digital – ValueOFF Channel1 in ON/OFF mode
40913	2	Int16	R/W	03/06	Second Digital – Value1 Channel1 in PWM mode
40914	2	Int16	R/W	03/06	Second Digital – PWM Time1
40915	2	Int16	R/W	03/06	Second Digital – Value2 Channel1 in PWM mode
40916	2	Int16	R/W	03/06	Second Digital – PWM Time2
40920	2	Int16	R/W	03/06	First Proportional – 0:disable , 1: Enable
40921	2	Int16	R/W	03/06	First Proportional – Value1 ph
40922	2	Int16	R/W	03/06	First Proportional – Pulse/Minute
40923	2	Int16	R/W	03/06	First Proportional – Value2 ph
40924	2	Int16	R/W	03/06	First Proportional – Pulse/Minute
40925	2	Int16	R/W	03/06	Second Proportional – 0:disable , 1: Enable
40926	2	Int16	R/W	03/06	Second Proportional – Value1 ph
40927	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
40928	2	Int16	R/W	03/06	Second Proportional – Value2 ph
40929	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
40930	2	Int16	R/W	03/06	Temperature Setpoint – 0:disable , 1: Enable
40931	2	Int16	R/W	03/06	Temperature Digital – ValueON Temperature in ON/OFF mode
40932	2	Int16	R/W	03/06	Temperature Digital – ValueOFF Temperature in ON/OFF mode
40935	2	Int16	R/W	03/06	Alarm Low – 0:disable , 1: Enable
40936	2	Int16	R/W	03/06	Alarm Low – value Channel1
40937	2	Int16	R/W	03/06	Alarm Low – Delay Hour
40938	2	Int16	R/W	03/06	Alarm Low – Delay Minutes
40939	2	Int16	R/W	03/06	Alarm High – 0:disable , 1: Enable
40940	2	Int16	R/W	03/06	Alarm High – value Channel1
40941	2	Int16	R/W	03/06	Alarm High – Delay Hour
40942	2	Int16	R/W	03/06	Alarm High – Delay Minutes
40943	2	Int16	R/W	03/06	Alarm Dosing – 0:disable , 1: Enable
40944	2	Int16	R/W	03/06	Alarm Dosing – Delay Hour
40945	2	Int16	R/W	03/06	Alarm Dosing – Delay Minutes
40946	2	Int16	R/W	03/06	Alarm Reading – 0:disable , 1: Enable
40947	2	Int16	R/W	03/06	Alarm Reading – Delay Hour
40948	2	Int16	R/W	03/06	Alarm Reading – Delay Minutes
Channel 10 Setpoint					

41000	2	Int16	R/W	03/06	First Digital – 0:disable , 1: ON/OFF, 2 PWM
41001	2	Int16	R/W	03/06	First Digital – ValueON Channel1 in ON/OFF mode
41002	2	Int16	R/W	03/06	First Digital – ValueOFF Channel1 in ON/OFF mode
41003	2	Int16	R/W	03/06	First Digital – Value1 Channel1 in PWM mode
41004	2	Int16	R/W	03/06	First Digital – PWM Time1
41005	2	Int16	R/W	03/06	First Digital – Value2 Channel1 in PWM mode
41006	2	Int16	R/W	03/06	First Digital – PWM Time2
41010	2	Int16	R/W	03/06	Second Digital – 0:disable , 1: ON/OFF, 2 PWM
41011	2	Int16	R/W	03/06	Second Digital – ValueON Channel1 in ON/OFF mode
41012	2	Int16	R/W	03/06	Second Digital – ValueOFF Channel1 in ON/OFF mode
41013	2	Int16	R/W	03/06	Second Digital – Value1 Channel1 in PWM mode
41014	2	Int16	R/W	03/06	Second Digital – PWM Time1
41015	2	Int16	R/W	03/06	Second Digital – Value2 Channel1 in PWM mode
41016	2	Int16	R/W	03/06	Second Digital – PWM Time2
41020	2	Int16	R/W	03/06	First Proportional – 0:disable , 1: Enable
41021	2	Int16	R/W	03/06	First Proportional – Value1 ph
41022	2	Int16	R/W	03/06	First Proportional – Pulse/Minute
41023	2	Int16	R/W	03/06	First Proportional – Value2 ph
41024	2	Int16	R/W	03/06	First Proportional – Pulse/Minute
41025	2	Int16	R/W	03/06	Second Proportional – 0:disable , 1: Enable
41026	2	Int16	R/W	03/06	Second Proportional – Value1 ph
41027	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
41028	2	Int16	R/W	03/06	Second Proportional – Value2 ph
41029	2	Int16	R/W	03/06	Second Proportional – Pulse/Minute
41030	2	Int16	R/W	03/06	Temperature Setpoint – 0:disable , 1: Enable
41031	2	Int16	R/W	03/06	Temperature Digital – ValueON Temperature in ON/OFF mode
41032	2	Int16	R/W	03/06	Temperature Digital – ValueOFF Temperature in ON/OFF mode
41035	2	Int16	R/W	03/06	Alarm Low – 0:disable , 1: Enable
41036	2	Int16	R/W	03/06	Alarm Low – value Channel1
41037	2	Int16	R/W	03/06	Alarm Low – Delay Hour
41038	2	Int16	R/W	03/06	Alarm Low – Delay Minutes
41039	2	Int16	R/W	03/06	Alarm High – 0:disable , 1: Enable
41040	2	Int16	R/W	03/06	Alarm High – value Channel1
41041	2	Int16	R/W	03/06	Alarm High – Delay Hour
41042	2	Int16	R/W	03/06	Alarm High – Delay Minutes
41043	2	Int16	R/W	03/06	Alarm Dosing – 0:disable , 1: Enable
41044	2	Int16	R/W	03/06	Alarm Dosing – Delay Hour

41045	2	Int16	R/W	03/06	Alarm Dosing – Delay Minutes
41046	2	Int16	R/W	03/06	Alarm Reading – 0:disable , 1: Enable
41047	2	Int16	R/W	03/06	Alarm Reading – Delay Hour
41048	2	Int16	R/W	03/06	Alarm Reading – Delay Minutes
Log setup					
40150	2	Int16	R/W	03/06	Log Setup – 0:disable , 1: Enable
40151	2	Int16	R/W	03/06	Schedule Time Hour
40152	2	Int16	R/W	03/06	Schedule Time minutes
40550	2	Int16	W	06	Channel Calibration 1 point zero (value without dec. point decimal)
40551	2	Int16	W	06	Channel Calibration 1 second point (value without dec. point decimal)
40552	2	Int16	W	06	Channel Calibration 1 Recovery (0:last calibration, 1: factory default)
40553	2	Int16	W	06	Channel Calibration 2 point zero (value without dec. point decimal)
40554	2	Int16	W	06	Channel Calibration 2 second point (value without dec. point decimal)
40555	2	Int16	W	06	Channel Calibration 2 Recovery (0:last calibration, 1: factory default)
40556	2	Int16	W	06	Channel Calibration 3 point zero (value without dec. point decimal)
40557	2	Int16	W	06	Channel Calibration 3 second point (value without dec. point decimal)
40558	2	Int16	W	06	Channel Calibration 3 Recovery (0:last calibration, 1: factory default)
40559	2	Int16	W	06	Channel Calibration 4 point zero (value without dec. point decimal)
40560	2	Int16	W	06	Channel Calibration 4 second point (value without dec. point decimal)
40561	2	Int16	W	06	Channel Calibration 4 Recovery (0:last calibration, 1: factory default)
40562	2	Int16	W	06	Channel Calibration 5 point zero (value without dec. point decimal)
40563	2	Int16	W	06	Channel Calibration 5 de (value without dec. point decimal)
40564	2	Int16	W	06	Channel Calibration 5 Recovery (0:last calibration, 1: factory default)
40580	2	Int16	R	03	Status current channel calibration 0: calibration None 1: calibration Start 2:calibration Wait

					3:calibration OK 4/5: calibration Error
40580	2	Int16	R/W	06	Flow sensor mode 0:Direct 1:inverse 2:disabled
40581	2	Int16	R/W	06	Flow sensor delay 0-99 min
40582	2	Int16	R/W	06	Flow Sensor Stop 0:No 1:Yes
40583	2	Int16	R/W	06	Flow sensor Message 0:No 1:Yes
40584	2	Int16	R/W	06	Flow sensor log 0:No 1:Yes
40585	2	Int16	R/w	06	Flow sensor Out Alarm 0:No 1:Yes
40586	2	Int16	R/W	06	Flow sensor Message Delay 0-99 min

Modbus Calibration

• Write the integer calibration value (without decimal point) into the corresponding register.
Example: if you want to calibrate 7.20 pH, the value 720 must be written into the corresponding register, then wait for the response.
• It is important to verify the full scale of the quantity to be calibrated and the decimal point position:
• Quantity with decimal format X.XXX
Example: to calibrate 1.25, write 1250 into the corresponding register.
• Quantity with decimal format XX.XX
Example: to calibrate 1.25, write 125 into the corresponding register.
• Quantity with decimal format XXX.X
Example: to calibrate 1.2, write 12 into the corresponding register.
• Quantity with integer format XXXX
Example: to calibrate 1250, write 1250 into the corresponding register.
• Read register 40580 (Current channel calibration status).

The returned value indicates the calibration status:

- 1 = Calibration started
- 2 = Calibration in progress
- 3 = Calibration completed successfully
- 4 or 5 = Calibration error

When dismantling this instrument please separate material types and send them according to local recycling disposal requirements.
We appreciate your efforts in supporting your local Recycle Environmental Program.
Working together we'll form an active union to assure the world's invaluable resources are conserved.