

REACT

V, M, P, P-X

Modbus

20200818

Transfer protocol

Protocol:	Modbus RTU
Number of nodes max.	128
Communication rate:	1200 / 2400 / 4800 / 9600 / 19200 / 38400
Bit sequence:	MSB / LSB
Bit format:	1 start bit, 8 data bits, 2 stop bits, no parity 1 start bit, 8 data bits, 1 stop bit, even parity 1 start bit, 8 data bits, 1 stop bit, odd parity
Termination resistance:	120 Ohm (external)
Delay:	Some master products need a specific time to switch from transfer mode to receiver mode. The delay time can be set in increments of 3 ms. Max. 765 ms (255 × 3 ms)
Response time:	≤ 10 ms + delay
Standard communication parameters: Communication setting: 14	1 start bit 19200 baud 8 data bits 1 stop bit Even parity Delay 0 ms

Values for communication rate, parity, stop bits and delay can be changed.

Function code

Function code	Name	Description
03h	Read holding address	Unit parameter / actual read value (integer/floating point)
06h	Write individual holding address	Unit parameter / single words written

Error codes

Error code	Name	Description
01h	Illegal function	The received function code is not allowed to be used in communication with the unit.
02h	Illegal data address	The requested register is not available. Alt. the register is only a read address.
03h	Illegal data value	The written value is not permitted.
06h	Slave device busy	The unit is busy.

Holding address

Name	Address	Memory	Value	r/w	Description															
Set point	0	RAM	0...10000	r/w	Set point [%] 0 = 0%, 10000 = 100% Only read value if address 122 = '0, 3'															
Forced boost	1	RAM	0...4	r/w	'0' Forced boost not active '1' Open '2' Closed '3' Min '4' Max Only read value if address 122 = '0, 3'															
Relative position	4	RAM	0...10000	r	Relative position [%] 0 = 0%, 10000 = 100%															
Absolute position	5	RAM	0...65000	r	Absolute position [°] 0...65000															
Relative value	6	RAM	0...10000	r	VAV value [%] 0 = 0%, 10000 = 100%															
Absolute value	7	RAM	0...65535	r	VAV value [m ³ /h][l/s][Pa][inH ₂ O×10 ⁻³] See address 201															
Feedback signal	10	RAM	0...10000	r/w	Feedback signal [mV] 0...10000 Only read value if address 122 = '0, 1'															
Software version	103	EEPROM	1...65535	r	Software version															
Min relative value	105	EEPROM	0...10000	r/w	Min. value in % of nominal value [%] 0 = 0%, 10000 = 100%															
Max relative value	106	EEPROM	0...10000	r/w	Max. value in % of nominal value [%] 0 = 0%, 10000 = 100%															
Position for dropped communication	108	EEPROM	0...2	r/w	Function after 120 s dropped communication '0' Not active '1' Damper closes '2' Damper opens															
Min. absolute value	120	EEPROM	0...65535	r/w	Min. value [l/s][m ³ /h][Pa][inH ₂ O×10 ⁻³] See address 201															
Max. absolute value	121	EEPROM	0...65535	r/w	Max. value [l/s][m ³ /h][Pa][inH ₂ O×10 ⁻³] See address 201															
Set point function	122	EEPROM	0...3	r/w	<table border="1"> <thead> <tr> <th>Value</th> <th>Control signal</th> <th>Feedback signal</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Analogue in 0(2)...10 V</td> <td>Absolute value 0(2)...10 V</td> </tr> <tr> <td>1</td> <td>Set point controlled via Modbus address 0) 0% = Min. value 100% = Max. value</td> <td>Absolute value 0(2)...10 V</td> </tr> <tr> <td>2</td> <td>Set point controlled via Modbus address 0) 0% = Min. value 100% = Max. value</td> <td>Feedback signal controlled via Modbus (address 10) 0% = Min. value 100% = Max. value</td> </tr> <tr> <td>3</td> <td>Analogue in 0(2)...10 V</td> <td>Feedback signal controlled via Modbus (address 10) 0% = Min. value 100% = Max. value</td> </tr> </tbody> </table>	Value	Control signal	Feedback signal	0	Analogue in 0(2)...10 V	Absolute value 0(2)...10 V	1	Set point controlled via Modbus address 0) 0% = Min. value 100% = Max. value	Absolute value 0(2)...10 V	2	Set point controlled via Modbus address 0) 0% = Min. value 100% = Max. value	Feedback signal controlled via Modbus (address 10) 0% = Min. value 100% = Max. value	3	Analogue in 0(2)...10 V	Feedback signal controlled via Modbus (address 10) 0% = Min. value 100% = Max. value
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Modbus address	130	EEPROM	1 - 247	r/w	Modbus address 1 – 247															
Unit*	201	EEPROM	0...3	r/w	'0' [l/s] '1' [m ³ /h] '2' [Pa] '3' [inH ₂ O×10 ⁻³]															

- EEPROM memory is non-volatile (max. 1 million writes)

- RAM memory is volatile

* Product dependent

Description communication settings

Display number	EEPROM value	Communication rate	Parity	Stop bits
1 ³	0	1200	None	2
2 ³	1	1200	Even	1
3 ³	2	1200	Odd	1
4	3	2400	None	2
5	4	2400	Even	1
6	5	2400	Odd	1
7	6	4800	None	2
8	7	4800	Even	1
9	8	4800	Odd	1
10	9	9600	None	2
11	10	9600	Even	1
12	11	9600	Odd	1
13	12	19200	None	2
14 ⁴	13	19200	Even	1
15	14	19200	Odd	1
16	15	38400	None	2
17	16	38400	Even	1
18	17	38400	Odd	1
19 ³	18	1200	None	1
20	19	2400	None	1
21	20	4800	None	1
22	21	9600	None	1
23	22	19200	None	1
24	23	38400	None	1

³ Limited data length per reading of max. 8 addresses

⁴ Default setting