REACT

Gruner – Modbus settings

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Swegon

REACT V GMB

Variable flow damper.

Communication settings

Actuator type:	327VM-024-05-MB-SWEV 327VM-024-10-MB-SWEV 327VM-024-15-MB-SWEV
Protocol:	Modbus RTU (RS-485)
Max. number of nodes:	128
Communication rate:	1200 / 2400 / 4800 / 9600 / **19200** / 38400 / 76800 / 115200
Address:	1...247
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 settings: Display number: 14	Address 1 1 start bit 19200 baud 8 data bits 1 stop bit Even parity

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

Menu 6 (Com) makes it possible to set Modbus address and communication settings. The Modbus address can be set between 1 and 247. Communication settings can be set between b1 and b32, see table below.

Display number	Baud Rate - Parity - Stop bit	Display number	Baud Rate - Parity - Stop bit
1	1200-None-2	17	38400-Even-1
2	1200-Even-1	18	38400-Odd-1
3	1200-Odd-1	19	1200-None-1
4	2400-None-2	20	2400-None-1
5	2400-Even-1	21	4800-None-1
6	2400-Odd-1	22	9600-None-1
7	4800-None-2	23	19200-None-1
8	4800-Even-1	24	38400-None-1
9	4800-Odd-1	25	76800-None-1
10	9600-None-2	26	115200-None-1
11	9600-Even-1	27	76800-None-2
12	9600-Odd-1	28	76800-Even-1
13	19200-None-2	29	76800-Odd-1
14[1]	19200-Even-1	30	115200-None-2
15	19200-Odd-1	31	115200-Even-1
16	38400-None-2	32	115200-Odd-1

1. Standard setting.

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 device.
02h	Illegal data address	The requested register is not available. Alt. The register is a read-only address.
03h	Illegal data value	The written value is not permitted.
06h	Slave device busy	The device is busy.

Modbus Register

Holding address

Name	Address	Value	Unit	Read/ write	Description
Set point	0	0…10000 Standard: 0	%	r/w	Air flow demand as a percentage between Vmin and Vmax. 0 = 0% (Vmin) and 10000 = 100% (Vmax). Read-only value if address 122 = 0, 3.
Forced control	1	0: Auto mode 1: Open 2: Closed 3: Min. air flow 4: Max. air flow 5: Intermediate air flow 6: Rapid open 7: Rapid closed 8: Stop, regulation stopped Standard: 0 (Auto mode)	-	r/w	Overrides the basic functionality with predefined selections. The intermediate air flow is preset at 50% of Vnom. Read-only value if address 122 = 0, 3.
Relative position	4	0…10000	%	r	Current damper position as a percentage. 0 = 0% and 10000 = 100%.
Absolute position	5	0…65000	°	r	Current damper position in degrees. 0 = 0° and 10000 = 100°.
Relative air flow	6	0…10000	%	r	Current air flow as a percentage of Vnom. 0 = 0% and 10000 = 100%.
Absolute air flow	7	0…65535	Selected unit	r	Current air flow in selected unit, Unit selector (address 201).
Feedback signal	10	0…10000	mV	r/w	Write value if address 122 = 2.3. Writable feedback in mV. 0(2)…10 V.

All addresses above 100 are permanent and the value is saved in the event of a power failure. Permanent addresses have limitations regarding the number of writes, max. 1 million.

Name	Address	Value	Unit	Read/ write	Description
Vmin	105	0…10000 Standard: 0	%	r/w	Min. air flow as a percentage of the nominal air flow. 0 = 0%, 10000 = 100% (Vnom). Vmin must be < Vmax. Vmin > Vmax = forced to min. flow.
Vmax	106	0…10000 Standard: 10000	%	r/w	Max. air flow as a percentage of the nominal air flow. 0 = 0%, 10000 = 100% (Vnom). Vmax must be > Vmin > 20% of Vnom.
Position for loss of communication	108	0: Most recent set point 1: Damper closes 2: Damper opens 3: Damper goes to min. air flow 4: Damper goes to intermediate air flow 5: Damper goes to max. air flow Standard: 0 (Most recent set point)		r/w	Function after 120 s loss of communication. (Function is not active in analogue mode).
Time out time, loss of communication	109	0…65535	s	r/w	Time frame for communication monitoring. Set value in seconds before loss of communication is detected.
Min. air flow	120	0…65535	Selected unit	r/w	Min. air flow in selected unit, Unit selector (address 201). Vmin must be < Vmax.
Max. air flow	121	0…65535	Selected unit	r/w	Max. air flow in selected unit, Unit selector (address 201). Vmax must be > Vmin > 20% of Vnom.
Set point function	122	0: Analogue - Analogue 1: Modbus - Analogue 2: Modbus - Modbus 3: Analogue - Modbus Standard: 0 (Analogue - Analogue)		r/w	Value: 0 — Control signal: Analogue in 0(2)…10 V. — Feedback signal: Current air flow 0(2)…10 V. The actual value in mV of the nominal air flow. Value: 1 — Control signal: Set point is controlled via Modbus (address 0). — Feedback signal: Current air flow 0(2)…10 V. The actual value in mV of the nominal air flow. Value: 2 — Control signal: Set point is controlled via Modbus (address 0). — Feedback signal: Feedback signal is controlled via Modbus (address 10). Value: 3 — Control signal: Analogue in 0(2)…10 V. — Feedback signal: Feedback signal is controlled via Modbus (address 10).
Modbus address	130	1…247		r/w	Modbus address 1 to 247.
Unit selector	201	0: l/s 1: m³/h 6: cfm Standard: 0 (l/s)		r/w	Selected unit in which the air flow is presented. Absolute air flow (address 7). Min. air flow (address 120). Max. air flow (address 121).
Function	551	**Bit:** 0…15 1...5, 7…15 not used		r/w	Bit: 0 — Function: 0 = 0-10 V 1 = 2-10 V — Description: Analogue control and feedback signal (Y / U). Bit: 1...5 — Function: 0 — Description: Not used. Bit: 6 — Function: 0 = CW Normal **1 = CCW Inverted** — Description: Direction of actuator movement. **Must not be changed.** Bit: 7...15 — Function: 0 — Description: Not used.

REACT P GMB

Pressure regulation damper.

Communication settings

Actuator type:	327VM-024-10-MB-SWEP 327VM-024-15-MB-SWEP
Protocol:	Modbus RTU (RS-485)
Max. number of nodes:	128
Communication rate:	1200 / 2400 / 4800 / 9600 / **19200** / 38400 / 76800 / 115200
Address:	1...247
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 settings: Display number: 14	Address 1 1 start bit 19200 baud 8 data bits 1 stop bit Even parity

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

Menu 6 (Com) makes it possible to set Modbus address and communication settings. The Modbus address can be set between 1 and 247. Communication settings can be set between b1 and b32, see table below.

Display number	Baud Rate - Parity - Stop bit	Display number	Baud Rate - Parity - Stop bit
1	1200-None-2	17	38400-Even-1
2	1200-Even-1	18	38400-Odd-1
3	1200-Odd-1	19	1200-None-1
4	2400-None-2	20	2400-None-1
5	2400-Even-1	21	4800-None-1
6	2400-Odd-1	22	9600-None-1
7	4800-None-2	23	19200-None-1
8	4800-Even-1	24	38400-None-1
9	4800-Odd-1	25	76800-None-1
10	9600-None-2	26	115200-None-1
11	9600-Even-1	27	76800-None-2
12	9600-Odd-1	28	76800-Even-1
13	19200-None-2	29	76800-Odd-1
14[1]	19200-Even-1	30	115200-None-2
15	19200-Odd-1	31	115200-Even-1
16	38400-None-2	32	115200-Odd-1

1. Standard setting.

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 device.
02h	Illegal data address	The requested register is not available. Alt. The register is a read-only address.
03h	Illegal data value	The written value is not permitted.
06h	Slave device busy	The device is busy.

Modbus Register

Holding address

Name	Address	Value	Unit	Read/ write	Description
Set point	0	0…10000 Standard: 0	%	r/w	Duct pressure demand as a percentage between Pmin and Pmax. 0 = 0% (Pmin) and 10000 = 100% (Pmax). Read-only value if address 122 = 0, 3.
Forced control	1	0: Auto mode 1: Open 2: Closed 3: Min. pressure 4: Max. pressure 5: Intermediate pressure 6: Rapid open 7: Rapid closed 8: Stop, regulation stopped Standard: 0 (Auto mode)	-	r/w	Overrides the basic functionality with predefined selections. The intermediate pressure is preset to 250 Pa / 1000 inWC/1000, (50% of ΔP). Read-only value if address 122 = 0, 3.
Relative position	4	0…10000	%	r	Current damper position as a percentage. 0 = 0% and 10000 = 100%.
Absolute position	5	0…65000	°	r	Current damper position in degrees. 0 = 0° and 10000 = 100°.
Relative pressure	6	0…10000	%	r	Current pressure as a percentage of 500 Pa / 2000 inWC/1000. 0 = 0% and 10000 = 100%.
Absolute pressure	7	0…65535	Selected unit	r	Current pressure in selected unit, Unit selector (address 201).
Feedback signal	10	0…10000	mV	r/w	Write value if address 122 = 2.3. Writable feedback in mV. 0(2)…10 V.

All addresses above 100 are permanent and the value is saved in the event of a power failure. Permanent addresses have limitations regarding the number of writes, max. 1 million.

Name	Address	Value	Unit	Read/ write	Description
Pmin	105	0…10000 Standard: 0	%	r/w	Min. pressure as a percentage of the nominal duct pressure. 0 = 0%, 10000 = 100% (Nom). Pmin must be < Pmax. Pmin > Pmax = forced to min. pressure.
Pmax	106	0…10000 Standard: 10000	%	r/w	Max. pressure as a percentage of the nominal duct pressure. 0 = 0%, 10,000 = 100% (Nom). Pmax must be > Pmin > 20% of Nom.
Position for loss of communication	108	0: Most recent set point 1: Damper closes 2: Damper opens 3: Damper goes to min. pressure 4: Damper goes to intermediate pressure 5: Damper goes to max. pressure Standard: 0 (Most recent set point)		r/w	Function after 120 s loss of communication. (Function is not active in analogue mode).
Time out time, loss of communication	109	0…65535	s	r/w	Time frame for communication monitoring. Set value in seconds before loss of communication is detected.
Min. pressure	120	0…65535	Selected unit	r/w	Min. pressure in selected unit, Unit selector (address 201). Pmin must be < Pmax.
Max. pressure	121	0…65535	Selected unit	r/w	Max. pressure in selected unit, Unit selector (address 201). Pmax must be > Pmin > 20% of Pnom.
Set point and feedback function	122	0: Analogue - Analogue 1: Modbus - Analogue 2: Modbus - Modbus 3: Analogue - Modbus Standard: 0 (Analogue - Analogue)		r/w	Value / Control signal / Analogue feedback signal (U) 0 / Analogue in 0(2)…10 V. / Current pressure 0(2)…10 V. The actual value in mV of the nominal duct pressure. 1 / Set point is controlled via Modbus (address 0). / Current pressure 0(2)…10 V. The actual value in mV of the nominal duct pressure. 2 / Set point is controlled via Modbus (address 0). / Feedback signal 0(2)…10 V is controlled via Modbus (address 10). 3 / Analogue in 0(2)…10 V. / Feedback signal 0(2)…10 V is controlled via Modbus (address 10).
Modbus address	130	1…247		r/w	Modbus address 1 to 247.
Unit selector	201	2: Pa 3: inWC/1000 Standard: 2 (Pa)		r/w	Selected unit in which the duct pressure is presented. Absolute pressure (address 7). Min. pressure (address 120). Max. pressure (address 121).
Function	551	**Bit:** 0…15 1...5, 7…15 not used		r/w	Bit / Function / Description 0 / 0 = 0-10 V 1 = 2-10 V / Analogue control and feedback signal (Y / U). 1...5 / 0 / Not used. 6 / 0 = CW Normal **1 = CCW Inverted** / Direction of actuator movement. **Must not be changed.** 7...15 / 0 / Not used.

REACT ALS GMB

Commissioning box with variable flow regulation for air diffusers.

Communication settings

Actuator type:	309VM-024-150-MB
Protocol:	Modbus RTU (RS-485)
Max. number of nodes:	128
Communication rate:	1200 / 2400 / 4800 / 9600 / **19200** / 38400 / 76800 / 115200
Address:	1...247
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 settings: Display number: 14	Address 1 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.

The function Adr makes it possible to set Modbus address and communication settings. Modbus address can be set between 1 and 247.
In the second level, communication settings can be set, see table below. See Instructions for Use for further information.

Display number	Baud Rate - Parity - Stop bit	Display number	Baud Rate - Parity - Stop bit
1	1200-None-2	13	19200-None-2
2	1200-Even-1	14[1]	19200-Even-1
3	1200-Odd-1	15	19200-Odd-1
4	2400-None-2	16	38400-None-2
5	2400-Even-1	17	38400-Even-1
6	2400-Odd-1	18	38400-Odd-1
7	4800-None-2	19	1200-None-1
8	4800-Even-1	20	2400-None-1
9	4800-Odd-1	21	4800-None-1
10	9600-None-2	22	9600-None-1
11	9600-Even-1	23	19200-None-1
12	9600-Odd-1	24	38400-None-1

1. Standard setting.

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 device.
02h	Illegal data address	The requested register is not available. Alt. The register is a read-only address.
03h	Illegal data value	The written value is not permitted.
06h	Slave device busy	The device is busy.

Modbus Register

Holding address

Name	Address	Value	Unit	Read/ write	Description
Set point	0	0…10000 Standard: 0	%	r/w	Air flow demand as a percentage between Vmin and Vmax. 0 = 0% (Vmin) and 10000 = 100% (Vmax). Read-only value if address 122 = 0, 3.
Forced control	1	0: Auto mode 1: Open 2: Closed 3: Min. air flow 4: Max. air flow Standard: 0 (Auto mode)	-	r/w	Overrides the basic functionality with predefined selections. Read-only value if address 122 = 0, 3.
Relative position	4	0…10000	%	r	Current damper position as a percentage. 0 = 0% and 10000 = 100%.
Absolute position	5	0…65000	°	r	Current damper position in degrees. 0 = 0° and 10000 = 100°.
Relative air flow	6	0…10000	%	r	Current air flow as a percentage of Vnom. 0 = 0% and 10000 = 100%.
Absolute air flow	7	0…65535	Selected unit	r	Current airflow in selected unit, Unit selector (address 201).
Feedback signal	10	0…10000	mV	r/w	Write value if address 122 = 2.3. Writable feedback in mV. 0(2)…10 V.

All addresses above 100 are permanent and the value is saved in the event of a power failure. Permanent addresses have limitations regarding the number of writes, max. 1 million.

Name	Address	Value	Unit	Read/ write	Description
Vmin	105	0…10000 Standard: 0	%	r/w	Min. air flow as a percentage of the nominal air flow. 0 = 0%, 10000 = 100% (Vnom). Vmin > Vmax = forced control to min. flow. In case of demand control, Vmin must be < Vmax.
Vmax	106	0…10000 Standard: 10000	%	r/w	Max. air flow as a percentage of the nominal air flow. 0 = 0%, 10000 = 100% (Vnom). In case of demand control, Vmax must be > 20% of Vnom > Vmin.
Position for loss of communication	108	0: Most recent set point 1: Closed 2: Open 3: Min. air flow 4: Not used 5: Max. air flow Standard: 0 (Most recent set point)		r/w	Function after 120 s loss of communication. (Function is not active in analogue mode).
Min. Airflow	120	0…65535	Selected unit	r/w	Min. air flow in selected unit, Unit selector (address 201). In case of demand control, Vmin must be < Vmax.
Max. airflow	121	0…65535	Selected unit	r/w	Max. air flow in selected unit, Unit selector (address 201). In case of demand control, Vmax must be > 20% of Vnom > Vmin.
Set point function	122	0: Analogue - Analogue 1: Modbus - Analogue 2: Modbus - Modbus 3: Analogue - Modbus Standard: 0 (Analogue - Analogue)		r/w	Value / Control signal / Feedback signal 0 / Analogue in 0(2)…10 V / Current air flow 0(2)…10 V. The actual value in mV of the nominal air flow. 1 / Set point is controlled via Modbus (address 0). / Current air flow 0(2)…10 V. The actual value in mV of the nominal air flow. 2 / Set point is controlled via Modbus (address 0). / Feedback signal is controlled via Modbus (address 10). 3 / Analogue in 0(2)…10 V / Feedback signal is controlled via Modbus (address 10).
Modbus address	130	1…247		r/w	Modbus address 1 to 247.
Unit selector	201	0: l/s 1: m^3/h Standard: 0 (l/s)		r/w	Selected unit in which the air flow is presented. Absolute air flow (address 7). Min. air flow (address 120). Max. air flow (address 121).
Function	551	**Bit:** 0…15 1…5, 7…15 not used		r/w	Bit / Function / Description 0 / 0 = 0-10 V 1 = 2-10 V / Analogue control and feedback signal (Y / U). 1…5 / 0 / Not used. 6 / 0 = CW Normal **1 = CCW Inverted** / Direction of actuator movement. **Must not be changed.** 7…15 / 0 / Not used.

REACT M GMB

Measurement unit.

Communication settings

Actuator type:	GT-VM-DD3-MB
Protocol:	Modbus RTU (RS-485)
Max. number of nodes:	128
Communication rate:	1200 / 2400 / 4800 / 9600 / **19200** / 38400
Address:	1...247
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 settings: Display number: 14	Address 1 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.

The function Adr makes it possible to set Modbus address and communication settings. Modbus address can be set between 1 and 247.
In the second level, communication settings can be set, see table below. See Instructions for Use for further information.

Display number	Baud Rate - Parity - Stop bit	Display number	Baud Rate - Parity - Stop bit
1	1200-None-2	13	19200-None-2
2	1200-Even-1	14[1]	19200-Even-1
3	1200-Odd-1	15	19200-Odd-1
4	2400-None-2	16	38400-None-2
5	2400-Even-1	17	38400-Even-1
6	2400-Odd-1	18	38400-Odd-1
7	4800-None-2	19	1200-None-1
8	4800-Even-1	20	2400-None-1
9	4800-Odd-1	21	4800-None-1
10	9600-None-2	22	9600-None-1
11	9600-Even-1	23	19200-None-1
12	9600-Odd-1	24	38400-None-1

1. Standard setting.

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 device.
02h	Illegal data address	The requested register is not available. Alt. The register is a read-only address.
03h	Illegal data value	The written value is not permitted.
06h	Slave device busy	The device is busy.

Modbus Register

Holding address

Name	Address	Value	Unit	Read/ write	Description
Relative air flow	6	0…10000	%	r	Current air flow as a percentage of Vnom. 0 = 0% and 10000 = 100%.
Absolute air flow	7	0…65535	Selected unit	r	Current airflow in selected unit, Unit selector (address 201).
Feedback signal	10	0…10000	mV	r/w	Write value if address 122 = 2.3. Writable feedback in mV. 0(2)…10 V.

All addresses above 100 are permanent and the value is saved in the event of a power failure. Permanent addresses have limitations regarding the number of writes, max. 1 million.

Name	Address	Value	Unit	Read/ write	Description
Vmin	105	0…10000 Standard: 0	%	r/w	Starting point for analogue output signal (U = 0(2) V) as a percentage of the nominal air flow. 0 = 0%, 10000 = 100% (Vnom). Vmin must be < Vmax.
Vmax	106	0…10000 Standard: 10000	%	r/w	Stopping point for analogue output signal (U = 10 V) as a percentage of the nominal air flow. 0 = 0%, 10000 = 100% (Vnom). Vmax must be > Vmin > 20% of Vnom.
Min. Airflow	120	0…65535	Selected unit	r/w	Starting point for analogue output signal (U = 0(2) V) in selected unit, Unit selector (address 201). Vmin must be < Vmax.
Max. airflow	121	0…65535	Selected unit	r/w	Max. air flow in selected unit, Unit selector (address 201). Vmax must be > Vmin > 20% of Vnom.
Set point function	122	0: Analogue - Analogue 1: Modbus - Analogue 2: Modbus - Modbus 3: Analogue - Modbus Standard: 0 (Analogue - Analogue)		r/w	Value: 0 — Control signal: — — Feedback signal: Current air flow 0(2)…10 V. The actual value in mV of the nominal air flow. Value: 1 — Control signal: — — Feedback signal: Current air flow 0(2)…10 V. The actual value in mV of the nominal air flow. Value: 2 — Control signal: — — Feedback signal: Feedback signal is controlled via Modbus (address 10). Value: 3 — Control signal: — — Feedback signal: Feedback signal is controlled via Modbus (address 10).
Modbus address	130	1…247		r/w	Modbus address 1 to 247.
Unit selector	201	0: l/s 1: m^3/h Standard: 0 (l/s)		r/w	Selected unit in which the air flow is presented. Absolute air flow (address 7). Min. air flow (address 120). Max. air flow (address 121).
Function	551	**Bit:** 0…15 1…15 not used		r/w	Bit: 0 — Function: 0 = 0-10 V 1 = 2-10 V — Description: Analogue feedback signal (U). Bit: 1…15 — Function: 0 — Description: Not used.

REACT V-SR GMB

Variable flow damper with spring return.

Communication settings

Actuator type:	GUAC-DM3-MB
Protocol:	Modbus RTU (RS-485)
Max. number of nodes:	128
Communication rate:	1200 / 2400 / 4800 / 9600 / **19200** / 38400
Address:	1...247
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 settings: Display number: 14	Address 1 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.

The function Adr makes it possible to set Modbus address and communication settings. Modbus address can be set between 1 and 247.
In the second level, communication settings can be set, see table below. See Instructions for Use for further information.

Display number	Baud Rate - Parity - Stop bit	Display number	Baud Rate - Parity - Stop bit
1	1200-None-2	13	19200-None-2
2	1200-Even-1	14[1]	19200-Even-1
3	1200-Odd-1	15	19200-Odd-1
4	2400-None-2	16	38400-None-2
5	2400-Even-1	17	38400-Even-1
6	2400-Odd-1	18	38400-Odd-1
7	4800-None-2	19	1200-None-1
8	4800-Even-1	20	2400-None-1
9	4800-Odd-1	21	4800-None-1
10	9600-None-2	22	9600-None-1
11	9600-Even-1	23	19200-None-1
12	9600-Odd-1	24	38400-None-1

1. Standard setting.

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 device.
02h	Illegal data address	The requested register is not available. Alt. The register is a read-only address.
03h	Illegal data value	The written value is not permitted.
06h	Slave device busy	The device is busy.

Modbus Register

Holding address

Name	Address	Value	Unit	Read/ write	Description
Set point	0	0…10000 Standard: 0	%	r/w	Air flow demand as a percentage between Vmin and Vmax. 0 = 0% (Vmin) and 10000 = 100% (Vmax). Read-only value if address 122 = 0, 3.
Forced control	1	0: Auto mode 1: Open 2: Closed 3: Min. air flow 4: Max. air flow Standard: 0 (Auto mode)	-	r/w	Overrides the basic functionality with predefined selections. Read-only value if address 122 = 0, 3.
Relative position	4	0…10000	%	r	Current damper position as a percentage. 0 = 0% and 10000 = 100%.
Absolute position	5	0…65000	°	r	Current damper position in degrees. 0 = 0° and 100 = 100°.
Relative air flow	6	0…10000	%	r	Current air flow as a percentage of Vnom. 0 = 0% and 10000 = 100%.
Absolute air flow	7	0…65535	Selected unit	r	Current airflow in selected unit, Unit selector (address 201).
Feedback signal	10	0…10000	mV	r	Write value if address 122 = 2.3. Writable feedback in mV. 0(2)…10 V.

All addresses above 100 are permanent and the value is saved in the event of a power failure. Permanent addresses have limitations regarding the number of writes, max. 1 million.

Name	Address	Value	Unit	Read/ write	Description
Vmin	105	0…10000 Standard: 0	%	r/w	Min. air flow as a percentage of the nominal air flow. 0 = 0%, 10000 = 100% (Vnom). Vmin must be < Vmax. Vmin > Vmax = forced to min. flow.
Vmax	106	0…10000 Standard: 10000	%	r/w	Max. air flow as a percentage of the nominal air flow. 0 = 0%, 10000 = 100% (Vnom). Vmax must be > Vmin > 20% of Vnom.
Position for loss of communication	108	0: Most recent set point 1: Damper closes 2: Damper opens Standard: 0 (Most recent set point)		r/w	Function after 120 s loss of communication. (Function is not active in analogue mode).
Min. Airflow	120	0…65535	Selected unit	r/w	Min. air flow in selected unit, Unit selector (address 201). Vmin must be < Vmax.
Max. airflow	121	0…65535	Selected unit	r/w	Max. air flow in selected unit, Unit selector (address 201). Vmax must be > Vmin > 20% of Vnom.
Set point function	122	0: Analogue - Analogue 1: Modbus - Analogue 2: Modbus - Modbus 3: Analogue - Modbus Standard: 0 (Analogue - Analogue)		r/w	Value: 0 — Control signal: Analogue in 0(2)…10 V — Feedback signal: Current air flow 0(2)…10 V. The actual value in mV of the nominal air flow. Value: 1 — Control signal: Set point is controlled via Modbus (address 0). — Feedback signal: Current air flow 0(2)…10 V. The actual value in mV of the nominal air flow. Value: 2 — Control signal: Set point is controlled via Modbus (address 0). — Feedback signal: Feedback signal is controlled via Modbus (address 10). Value: 3 — Control signal: Analogue in 0(2)…10 V — Feedback signal: Feedback signal is controlled via Modbus (address 10).
Modbus address	130	1…247		r/w	Modbus address 1 to 247.
Unit selector	201	0: l/s 1: m³/h Standard: 0 (l/s)		r/w	Selected unit in which the air flow is presented. Absolute air flow (address 7). Min. air flow (address 120). Max. air flow (address 121).
Mode	551	**Bit:** 0…15 1...5, 7…15 not used		r/w	Bit: 0 — Function: 0 = 0-10 V 1 = 2-10 V — Description: Analogue control and feedback signal (Y / U). Bit: 1...5 — Function: 0 — Description: Not used. Bit: 6 — Function: **0 = CW Normal** 1 = CCW Inverted — Description: Direction of actuator movement. Normal = NC Inverted = NO Bit: 7...15 — Function: 0 — Description: Not used.

REACT PX GMB

Pressure regulation damper.

Communication settings

Actuator type:	GUAC-PM-DD3-MB
Protocol:	Modbus RTU (RS-485)
Max. number of nodes:	128
Communication rate:	1200 / 2400 / 4800 / 9600 / **19200** / 38400
Address:	1...247
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 settings: Display number: 14	Address 1 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.

The function Adr makes it possible to set Modbus address and communication settings. Modbus address can be set between 1 and 247.
In the second level, communication settings can be set, see table below. See Instructions for Use for further information.

Display number	Baud Rate - Parity - Stop bit	Display number	Baud Rate - Parity - Stop bit
1	1200-None-2	13	19200-None-2
2	1200-Even-1	14[1]	19200-Even-1
3	1200-Odd-1	15	19200-Odd-1
4	2400-None-2	16	38400-None-2
5	2400-Even-1	17	38400-Even-1
6	2400-Odd-1	18	38400-Odd-1
7	4800-None-2	19	1200-None-1
8	4800-Even-1	20	2400-None-1
9	4800-Odd-1	21	4800-None-1
10	9600-None-2	22	9600-None-1
11	9600-Even-1	23	19200-None-1
12	9600-Odd-1	24	38400-None-1

1. Standard setting.

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 device.
02h	Illegal data address	The requested register is not available. Alt. The register is a read-only address.
03h	Illegal data value	The written value is not permitted.
06h	Slave device busy	The device is busy.

Modbus Register

Holding address

Name	Address	Value	Unit	Read/ write	Description
Set point	0	0…10000 Standard: 0	%	r/w	The duct pressure demand as a percentage between Pmin and Pmax. 0 = 0% (Pmin) and 10000 = 100% (Pmax). Read-only value if address 122 = 0, 3.
Forced control	1	0: Auto mode 1: Open 2: Closed 3: Min. pressure 4: Max. pressure Standard: 0 (Auto mode)	-	r/w	Overrides the basic functionality with predefined selections. Read-only value if address 122 = 0, 3.
Relative position	4	0…10000	%	r	Current damper position as a percentage. 0 = 0% and 10000 = 100%.
Absolute position	5	0…65000	°	r	Current damper position in degrees. 0 = 0° and 10000 = 100°.
Relative pressure	6	0…10000	%	r	Current duct pressure as a percentage of 300 Pa / 1200 in H_20x10^{-3}. 0 = 0% and 10000 = 100%.
Absolute pressure	7	0…65535	Selected unit	r	Current duct pressure in selected unit, Unit selector (address 201).
Feedback signal	10	0…10000	mV	r/w	Write value if address 122 = 2.3. Writable feedback in mV. 0(2)…10 V.

All addresses above 100 are permanent and the value is saved in the event of a power failure. Permanent addresses have limitations regarding the number of writes, max. 1 million.

Name	Address	Value	Unit	Read/ write	Description
Pmin	105	0…10000 Standard: 0	%	r/w	Min. pressure as a percentage of the nominal duct pressure. 0 = 0%, 10,000 = 100% (Nom). Pmin must be < Pmax. Pmin > Pmax = forced to min. pressure.
Pmax	106	0…10000 Standard: 10000	%	r/w	Max. pressure as a percentage of the nominal duct pressure. 0 = 0%, 10,000 = 100% (Nom). Pmax must be > Pmin > 20% of Nom.
Position for loss of communication	108	0: Most recent set point 1: Damper closes 2: Damper opens Standard: 0 (Most recent set point)		r/w	Function after 120 s loss of communication. (Function is not active in analogue mode).
Min. pressure	120	0…65535	Selected unit	r/w	Min. pressure in selected unit, Unit selector (address 201). Pmin must be < Pmax.
Max. pressure	121	0…65535	Selected unit	r/w	Max. pressure in selected unit, Unit selector (address 201). Pmax must be > Pmin > 20% of 300 Pa / 1200 in H_20x10^{-3}.
Set point and feedback function	122	0: Analogue - Analogue 1: Modbus - Analogue 2: Modbus - Modbus 3: Analogue - Modbus Standard: 0 (Analogue - Analogue)		r/w	Value: 0 — Control signal: Analogue in 0(2)…10 V — Analogue feedback signal (U): Current pressure 0(2)…10 V. The actual value in mV of the nominal duct pressure. Value: 1 — Control signal: Set point is controlled via Modbus (address 0). — Analogue feedback signal (U): Current pressure 0(2)…10 V. The actual value in mV of the nominal duct pressure. Value: 2 — Control signal: Set point is controlled via Modbus (address 0). — Analogue feedback signal (U): Feedback signal 0(2)…10 V is controlled via Modbus (address 10). Value: 3 — Control signal: Analogue in 0(2)…10 V — Analogue feedback signal (U): Feedback signal 0(2)…10 V is controlled via Modbus (address 10).
Modbus address	130	1…247		r/w	Modbus address 1 to 247.
Unit selector	201	2: Pa 3: in H_20 Standard: 2 (Pa)		r/w	Selected unit in which the duct pressure is presented. Absolute pressure (address 7). Min. pressure (address 120). Max. pressure (address 121).
Function	551	**Bit:** 0…15 1…5, 7…15 not used		r/w	Bit: 0 — Function: 0 = 0-10 V 1 = 2-10 V — Description: Analogue control and feedback signal (Y / U). Bit: 1…5 — Function: 0 — Description: Not used. Bit: 6 — Function: 0 = CW Normal **1 = CCW Inverted** — Description: Direction of actuator movement. **Must not be changed.** Bit: 7…15 — Function: 0 — Description: Not used.

REACT PX-SR GMB

Pressure regulation damper with spring return.

Communication settings

Actuator type:	GUAC-PM-DD3-MB
Protocol:	Modbus RTU (RS-485)
Max. number of nodes:	128
Communication rate:	1200 / 2400 / 4800 / 9600 / **19200** / 38400
Address:	1...247
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 settings: Display number: 14	Address 1 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.

The function Adr makes it possible to set Modbus address and communication settings. Modbus address can be set between 1 and 247.
In the second level, communication settings can be set, see table below. See Instructions for Use for further information.

Display number	Baud Rate - Parity - Stop bit	Display number	Baud Rate - Parity - Stop bit
1	1200-None-2	13	19200-None-2
2	1200-Even-1	14[1]	19200-Even-1
3	1200-Odd-1	15	19200-Odd-1
4	2400-None-2	16	38400-None-2
5	2400-Even-1	17	38400-Even-1
6	2400-Odd-1	18	38400-Odd-1
7	4800-None-2	19	1200-None-1
8	4800-Even-1	20	2400-None-1
9	4800-Odd-1	21	4800-None-1
10	9600-None-2	22	9600-None-1
11	9600-Even-1	23	19200-None-1
12	9600-Odd-1	24	38400-None-1

1. Standard setting.

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 device.
02h	Illegal data address	The requested register is not available. Alt. The register is a read-only address.
03h	Illegal data value	The written value is not permitted.
06h	Slave device busy	The device is busy.

Modbus Register

Holding address

Name	Address	Value	Unit	Read/ write	Description
Set point	0	0…10000 Standard: 0	%	r/w	The duct pressure demand as a percentage between Pmin and Pmax. 0 = 0% (Pmin) and 10000 = 100% (Pmax). Read-only value if address 122 = 0, 3.
Forced control	1	0: Auto mode 1: Open 2: Closed 3: Min. pressure 4: Max. pressure Standard: 0 (Auto mode)	-	r/w	Overrides the basic functionality with predefined selections. Read-only value if address 122 = 0, 3.
Relative position	4	0…10000	%	r	Current damper position as a percentage. 0 = 0% and 10000 = 100%.
Absolute position	5	0…65000	°	r	Current damper position in degrees. 0 = 0° and 10000 = 100°.
Relative pressure	6	0…10000	%	r	Current duct pressure as a percentage of 300 Pa / 1200 in H_20^{-3}. 0 = 0% and 10000 = 100%.
Absolute pressure	7	0…65535	Selected unit	r	Current duct pressure in selected unit, Unit selector (address 201).
Feedback signal	10	0…10000	mV	r/w	Write value if address 122 = 2.3. Writable feedback in mV. 0(2)…10 V.

All addresses above 100 are permanent and the value is saved in the event of a power failure. Permanent addresses have limitations regarding the number of writes, max. 1 million.

Name	Address	Value	Unit	Read/ write	Description
Pmin	105	0…10000 Standard: 0	%	r/w	Min. pressure as a percentage of the nominal duct pressure. 0 = 0%, 10,000 = 100% (Nom). Pmin must be < Pmax. Pmin > Pmax = forced to min. pressure.
Pmax	106	0…10000 Standard: 10000	%	r/w	Max. pressure as a percentage of the nominal duct pressure. 0 = 0%, 10,000 = 100% (Nom). Pmax must be > Pmin > 20% of Nom.
Position for loss of communication	108	0: Most recent set point 1: Damper closes 2: Damper opens Standard: 0 (Most recent set point)		r/w	Function after 120 s loss of communication. (Function is not active in analogue mode).
Min. pressure	120	0…65535	Selected unit	r/w	Min. pressure in selected unit, Unit selector (address 201). Pmin must be < Pmax.
Max. pressure	121	0…65535	Selected unit	r/w	Max. pressure in selected unit, Unit selector (address 201). Pmax must be > Pmin > 20% of 300 Pa / 1200 in H_2Ox10^{-3}.
Set point and feedback function	122	0: Analogue - Analogue 1: Modbus - Analogue 2: Modbus - Modbus 3: Analogue - Modbus Standard: 0 (Analogue - Analogue)		r/w	**Value** / **Control signal** / **Analogue feedback signal (U)** 0 / Analogue in 0(2)…10 V / Current pressure 0(2)…10 V. The actual value in mV of the nominal duct pressure. 1 / Set point is controlled via Modbus (address 0). / Current pressure 0(2)…10 V. The actual value in mV of the nominal duct pressure. 2 / Set point is controlled via Modbus (address 0). / Feedback signal 0(2)…10 V is controlled via Modbus (address 10). 3 / Analogue in 0(2)…10 V / Feedback signal 0(2)…10 V is controlled via Modbus (address 10).
Modbus address	130	1…247		r/w	Modbus address 1 to 247.
Unit selector	201	2: Pa 3: in H_20 Standard: 2 (Pa)		r/w	Selected unit in which the duct pressure is presented. Absolute pressure (address 7). Min. pressure (address 120). Max. pressure (address 121).
Function	551	**Bit:** 0…15 1…5, 7…15 not used		r/w	**Bit** / **Function** / **Description** 0 / 0 = 0-10 V 1 = 2-10 V / Analogue control and feedback signal (Y / U). 1…5 / 0 / Not used. 6 / **0 = CW Normal** 1 = CCW Inverted / Direction of actuator movement. Normal = NC Inverted = NO 7…15 / 0 / Not used.