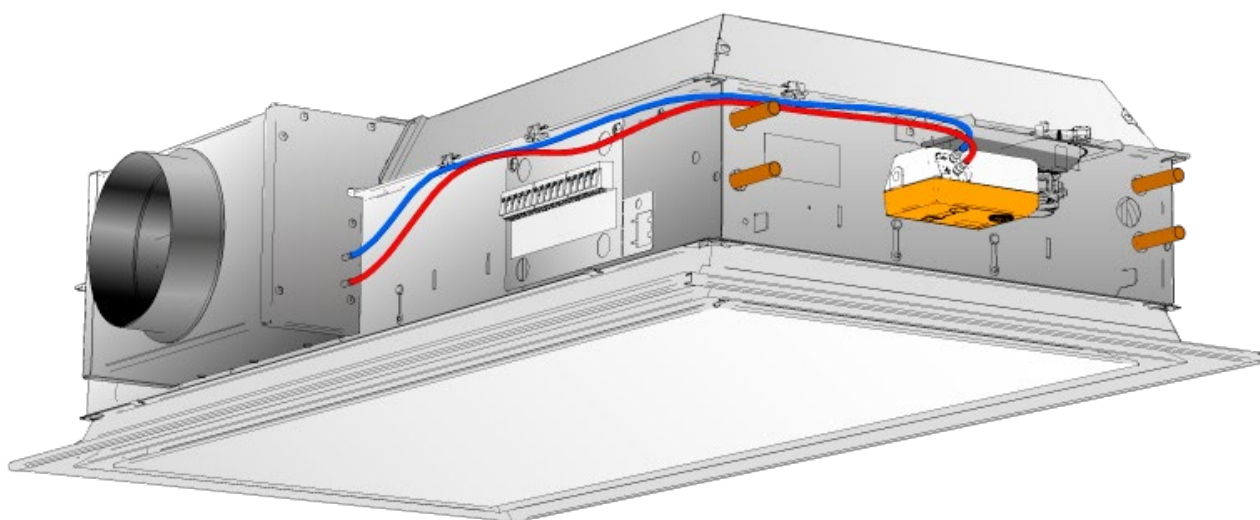


REACT Parasol Zenith

Modbus settings / Modbus-inställningar

20220810

Modbus settings for REACT Parasol Zenith with Belimo actuator
Modbus-inställningar för REACT Parasol Zenith med ställdon Belimo



Transfer protocol

Protocol:	Modbus RTU
Number of nodes	Max.32 (without repeater)
Baud rates:	9600, 19200, 38400, 76800, 115200
Bit sequence:	LSB
Transmission formats:	1-8-N-2, 1-8-N-1, 1-8-E-1, 1-8-O-1
Terminating resistor:	120 Ohm (extern)
Response time:	≤ 10 ms + delay
Standard communication parameter: Communication setting: 14	1 Start bit
	19200 baud
	8 Data bits
	1 Stop bit
	Even parity
	Delay 0 ms

The values for communication speed, parity, stop bits and delay are changeable.

Överföringsprotokoll

Protokoll:	Modbus RTU
Antal noder max.	32
Kommunikationshastighet:	9600, 19200, 38400, 76800, 115200
Bitsekvens:	LSB
Bitformat:	1-8-N-2, 1-8-N-1, 1-8-E-1, 1-8-O-1
Termineringsmotstånd:	120 Ohm (extern)
Svarstid:	≤ 10 ms + fördröjning
Standard kommunikationsparameter: Kommunikationsinställning: 14	1 startbit
	19200 baud
	8 databitar
	1 stoppbit x
	Jämn paritet
	Fördröjning 0 ms

Värdena för kommunikationshastighet, paritet, stoppbitar och fördröjning är ändringsbara.

Modbus Register Overview

Operation

No.	Address	Register	Access
1	0	Setpoint [%]	R / W
2	1	Override control	R / W
3	2	Command	R / W
4	3	Actuator type	R
5	4	Relative position [%]	R
6	5	Absolute position [°] [mm]	R
7	6	Relative volumetric flow [%]	R
8	7	Absolute volumetric flow [m³/h]	R
9	8	Sensor value 1 [mV] [-]	R
10	9	–	–
11	10	Absolute volumetric flow in unit selected	LowWord
12	11		HighWord
13	12	Setpoint analog [%]	R

Modbus Register Översikt

Operation

Nr.	Adress	Register	R/W
1	0	Börvärde [%]	R / W
2	1	Tvångsstyrning	R / W
3	2	Kontroll	R / W
4	3	Ställdonstyp	R
5	4	Relativ position [%]	R
6	5	Absolut position [°] [mm]	R
7	6	Relativt volumetriskt flöde [%]	R
8	7	Absolut volumetriskt flöde [m³/h]	R
9	8	Sensor värde 1 [mV] [-]	R
10	9	–	–
11	10	Absolut flöde i vald enhet	LowWord
12	11		HighWord
13	12	Börvärde analogt [%]	R

Service

No.	Address	Register	Access
100	99	Bus termination	R
101	100	Series number 1st part	R
102	101	Series number 2nd part	
103	102	Series number 4th part	
104	103	Firmware version	R
105	104	Malfunction and service information	R
106	105	Min [%]	R / W
107	106	Max [%]	R / W
108	107	Sensor type 1	R / W
109	108	Bus fail position	R / W
110	109	Communication Watchdog	R / W
111	110	Nominal volumetric flow [m³/h]	R
112	111	–	–
113	112	Nominal volumetric flow in unit selected	LowWord
114	113		HighWord
115	114	–	–
116	115	–	–
117	116	Control Mode	R / W
118	117	Unit Selection Flow	R / W
119	118	Setpoint source	R / W

Service

Nr.	Adress	Register	R/W
100	99	Busterminering	R
101	100	Serienummer 1:a delen	R
102	101	Serienummer 2:a delen	
103	102	Serienummer 4:e delen	
104	103	Firmware version	R
105	104	Fel och serviceinfo	R
106	105	Min [%]	R / W
107	106	Max [%]	R / W
108	107	Sensor typ 1	R / W
109	108	Bus fel position	R / W
110	109	Kommunikationsövervakning	R / W
111	110	Nominellt flöde [m³/h]	R
112	111	–	–
113	112	Nominellt flöde i vald enhet	LowWord
114	113		HighWord
115	114	–	–
116	115	–	–
117	116	Styrsignal läge	R / W
118	117	Enhetsval flöde	R / W
119	118	Börvärdeskälla	R / W

Modbus Register Description

No.	Address	Description Comment	Beskrivning (SE)	Range Enumeration	Unit	Scaling	Access
1	0	Setpoint Setpoint for actuator between Min (Register No. 106) and Max (No. 107)	Börvärde Börvärde för ställdonet mellan min och max	0...10'000 Default: 0	%	0.01	R / W
2	1	Override Control Override setpoint with defined values	Tvångsstyrning Tvångsstyr börvärdet med fördefinierade värden	0: None 1: Open 2: Close 3: Min 4: Mid 5: Max Default: None(0)	–	–	R / W
3	2	Command Initiation of actuator functions for service and test After command is sent, register returns to None(0) With Reset(4) all Malfunction and Service Information (Register No. 105) Information can be reset.	Kontroll Initiering av ställdonets funktion	0: None 1: Adaption 2: Test 3: Sync 4: Reset Default: None(0)	–	–	R / W
4	3	Actuator Type	Ställdonstyp	0: Actuator not connected 1: Air / Water 2: VAV / EPIV 3: Fire 4: Energy Valve 5: 6way EPIV	–	–	R
5	4	Relative Position	Relativ position	0...10'000	%	0.01	R
6	5	Absolute Position The unit depends on the device: [°] for actuators with rotary movement [mm] for actuators with linear movement	Absolut position	0...max angle / stroke	° mm	1 1	R
7	6	Relative volumetric flow Relative volumetric flow of Vnom	Relativt flöde	0...10'000	%	0.01	R
8	7	Absolut volumetric flow	Absolut flöde	0...Vnom	m³/h Pa	1	R
9	8	Sensor 1 Value Current value of sensor 1, depending on the setting of the Sensor 1 Type (Register No. 108) [mV] if Sensor 1 Type (Register No. 108) is Active(1) [0 / 1] if Sensor 1 Type (Register No. 108) is Switch(4)	Sensor 1 värde Strömvärde från sensor 1, beroende på sensor-inställning	0...65'535	mV 0 / 1	1	R
10	9	–	–	–	–	–	–
11	10	Absolute volumetric flow Absolute flow in unit selected (Register No. 118) LowWord Lower 16 bit of 32 bit value	Absolut flöde, lågt byte	–	UnitSel	0.001	R
12	11	Absolute volumetric flow Absolute flow in unit selected (Register No. 118) HighWord Upper 16 bit of 32 bit value	Absolut flöde, högt byte				
13	12	Setpoint Analog Shows the setpoint in % if actuator is control by analog signal	Börvärde analogt	0...10'000	%	0.01	R

Modbus Register Description

No.	Address	Description Comment	Beskrivning (SE)	Range Enumeration	Unit	Scaling	Access
100	99	Bus Termination Indicates if bus termination (120 Ω) is enabled Bus termination can be set with the configuration tools	Bus-terminering	0: inactive 1: active Default: inactive(0)	–	–	R / W
101	100	Series Number 1st part Each device has an unambiguous series number, which is either impressed on or glued to the housing The series number consists of 4 segments, although only parts 1, 2 and 4 are displayed on Modus Example: 00839-31324-064-008 1st part: 00839 2nd part: 31324 4th part: 008	Indikerar om Bus-terminering är aktiv	–	–	–	R
102	101	Series Number 2nd part	Serienummer	–	–	–	R
103	102	Series Number 4th part	Serienummer	–	–	–	R
104	103	Firmware Version Firmware version of communication module Example: 302, Version 3.02	Firmware version	–	–	–	R
105	104	Malfunction and Service Information Value is bit-coded. More than one bit can be set to 1 All bits not mentioned in the enumeration are not used for this actuator range Mechanical travel increased: The actuator has been moved outside the adapted working range Actuator cannot move: Mechanical overload e.g. blocked actuator, etc. Internal activity: Actuator performs a test run, adaption, etc. Gear disengaged: The gear disengaged button is pressed Bus Watchdog triggered: Timeout for the Bus Watchdog expired	Fel och service-information, Bitkodat värde	Bit1: Mech travel increased Bit2: Actuator cannot move Bit8: Internal activity Bit9: Gear disengaged Bit10: Bus Watchdog triggered	–	–	R
106	105	Vmin Min has to be ≤ Max	Vmin	0...Vmax Default: 0	%	0.01	R / W
107	106	Vmax Max has to be ≥ Min and > 20%	Vmax	Vmin...10'000 Default: 10'000	%	0.01	R / W
108	107	Sensor 1 Type If Setpoint Source (Register 119) is analog (Hybrid mode) the sensor type 1 can be set to Active(1) in order to see the Setpoint Analog in mV	Sensor 1 typ	0: None 1: Active / Hybrid 2: – 3: – 4: Switch Default: None(0)	–	–	R / W
109	108	Bus Fail Position Modbus communication is not monitored as standard. In the event of a breakdown in communication, the actuator retains the current setpoint The bus implementation tracks the Modbus communication. If neither the Setpoint (Register No. 1) nor the Override Control (Register No. 2) is renewed before the Timeout for Bus Watchdog (Register No. 110) expires, the actuator controls to the Bus Fail Position Triggered bus watchdog is indicated in the Malfunction and Service Information (Register No. 105)	Bus fel position	0: None / Last setpoint 1: Fast close 2: Fast open 3: Mid position (parameterized) Default: None(0)	–	–	R / W
110	109	Timeout for Bus Watchdog in s Time until Bus Fail will be detected. If Bus Watchdog = 0 then deactivated If Bus Fail Position (Register No. 110) different from 0, the Bus Fail Position becomes active after the Timeout for Bus Watchdog is expired	Timeout för Bus-övervakning i s	0...3'600 Default: 0 If Bus Fail Position (Register No. 110) not None(0), then Default: 120	s	1	R / W

Modbus Register Description

No.	Address	Description Comment	Beskrivning (SE)	Range Enumeration	Unit	Scaling	Access
111	110	Nominal volumetric flow	Nominellt volumetriskt flöde	–	m³/h	1	R
112	111	–	Nominellt volumetriskt flöde LW	–	–	–	–
113	112	Nominal volumetric flow Vnom in unit selected (Register 118) LowWord Lower 16 bit of 32 bit value	Nominellt volumetriskt flöde HW	–	UnitSel	0.001	R
114	113	Nominal volumetric flow Vnom in unit selected (Register 118) HighWord Upper 16 bit of 32 bit value					
115	114	–		–	–	–	–
116	115	–		–	–	–	–
117	116	Control Mode	Läge styrning	0: Position control 1: Flow control	–	–	R / W
118	117	Unit Selection Flow	Enhetsinställning flöde	0: m³/s 1: m³/h 2: l/s 3: l/min 4: l/h 5: gpm 6: cfm Default: m³/h(1)	–	–	R / W
119	118	Setpoint Source Analog: Setpoint from analog signal 0 ... 10 V on wire 3 Bus: Setpoint from Modbus (Register 1)	Börvärdeskälla Analog: Börvärde från analogsignal 0-10V Bus: Börvärde från Modbus	0: Analog 1: Bus Default: Bus(1)	–	–	R / W