

REACT

Belimo – BACnet settings

20250603

Protocol Implementation Conformance Statement - PICS

Date	25.03.2019
Vendor Name	BELIMO Automation AG
Vendor ID	423
Product Name	VAV-Compact
Product Model Number	LMV-D3-M/B SWN, NMV-D3-M/B SWN, SMV-D3-M/B SWN
Applications Software Version	03.04-0000
Firmware Revision	08.03.0003
BACnet Protocol Revision	12
Product Description	Volumetric flow compact control device
BACnet Standard Device Profile	BACnet Application Specific Controller (B-ASC)
Segmentation Capability	No
Data Link Layer Options	MS/TP master
Device Address Binding	No static device binding supported
Networking Options	None
Character Sets Supported	ISO 10646 (UTF-8)
Gateway Options	None
Network Security Options	Non-secure device
Conformation	Listed by BTL
BACnet Interoperability Building Blocks supported BIBBs	Data sharing – ReadProperty-B (DS-RP-B) Data sharing – ReadPropertyMultiple-B (DS-RPM-B) Data sharing – WriteProperty-B (DS-WP-B) Data sharing – COV-B (DS-COV-B) Device management – DynamicDeviceBinding-B (DM-DDB-B) Device management – DynamicObjectBinding-B (DM-DOB-B) Device management – DeviceCommunicationControl-B (DM-DCC-B)

BACnet MS/TP	RS-485
Number of nodes	Max 32 (without repeater), 1 full busload
Baud rates	9600 / 19200 / 38400 / 76800 Default: 38400
Address	0...127 Default: 1
Terminating resistor	120 Ω
Parameterisation tool	ZTH EU

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Standard Object Types Supported		
Object type	Optional properties	Writeable properties
Device	Description Location Active COV Subscriptions Max Master Max Info Frames Profile Name	Object Identifier Object Name Location Description APDU Timeout (1000...60'000) Number of APDU Retries (0...10) Max Master (1...127) Max Info Frames (1...255)
Analog Input [AI]	Description COV Increment	COV Increment
Analog Output [AO]	Description COV Increment	Present Value COV Increment Relinquish Default
Analog Value [AV]	Description COV Increment	Present Value COV Increment
Binary Input [BI]	Description Active text Inactive Text	
Multi-state Input [MI]	Description State Text	
Multi-state Output [MO]	Description State Text	Present Value Relinquish Default
Multi-state Value [MV]	Description State Text	Present Value

The device does not support the services CreateObject and DeleteObject.
The specified maximum length of writable strings is based on single-byte characters.

- Object name: 32 char
- Location: 64 char
- Description: 64 char

Service processing

The device supports the DeviceCommunicationControl and ReinitializeDevice services.
No password is required.
A maximum of 6 active COV subscriptions with a lifetime of 1...28'800 sec.
(8 hours) are supported.

Quick addressing

Actuators support quick addressing via the „Address“ and „Adaption“ buttons.
For detailed information, please see product datasheet (chapter Service).



All writeable objects (W) are permanent and the value is saved in the event of a power failure. Permanent objects have limitations as regards the number of writes.

REACT Parasol Zenith

BACnet object description.

Name	Object name	Object type [instance]	Value	Unit	COV Change of value	Function	Description
Identification number	Device	Device [Inst.Nr]	0...4194302 Standard: 1			W	Unique identification number.
Relative position	RelPos	AI[1]	0...100	%	0.01...100 Standard: 1	R	Current damper position as a percentage. 0 = 0% and 100 = 100%.
Absolute position	AbsPos	AI[2]	0... Max. angle	°	0.01... 65535 Standard: 1	R	Current damper position in degrees. 0 = 0° and 90 = 90°.
Analogue set point	SpAnalog	AI[6]	0...100	%	0.01...100 Standard: 1	R	The air flow demand as a percentage if the actuator is controlled analogously (MV[122] = 1). 0 = 0% (Vmin) and 100 = 100% (Vmax).
Relative air flow	RelFlow	AI[10]	0...100	%	0.01...100 Standard: 1	R	Current air flow as a percentage of Vnom. 0 = 0% and 100 = 100%.
Absolute air flow	AbsFlow_UnitSel	AI[19]	0...Vnom	Selected unit	0.01...1000 Standard: 1	R	Current air flow in selected unit, Unit selector (MV[121]).
Relative set point	SpRel	AO[1]	0...100 Standard: 0	%	0.01...100 Standard: 1	C	Air flow demand as a percentage between Vmin and Vmax if the actuator is regulated via bus (MV[122] = 2). 0 = 0% (Vmin) and 100 = 100% (Vmax).
Vmin	Min	AV[97]	0...Vmax	%	0.01...100 Standard: 1	W	Min. air flow as a percentage of the nominal air flow. 0 = 0%, 10000 = 100% (Vnom). Vmin must be ≤ Vmax.
Vmax	Max	AV[98]	Vmin...100	%	0.01...100 Standard: 1	W	Max. air flow as a percentage of the nominal air flow. 0 = 0%, 10000 = 100% (Vnom). Vmax must be ≥ Vmin > 20% of Vnom.
Vnom	Vnom_UnitSel	AV[104]		Selected unit	0.01...100 Standard: 1	R	Set nominal air flow in selected unit, Unit selector (MV[121]).
Timeout time loss of communication (Bus Watchdog)	Bus Watchdog	AV[130]	0...3600 Standard: 0	s	0.01...1000 Standard: 1	W	Time frame for communication monitoring. Set value in seconds before a loss of communication is detected. Timeout time = 0 (function deactivated). Timeout time = 1...3600 and MV[122] = 2 (Bus). Follows the events in AO[1] and MO[1]. If the current value is updated in AO[1] or MO[1], the timeout timer is reset. In case of timeout, the priority matrix in AO[1] and MO[1] will be reset and the current value in MO[1] will be followed. Timeout time = 1...3600 and MV[122] = 1 (analogue). Follows the written events in MO[1]. If the current value is updated in MO[1], the timeout timer is reset. In case of timeout, the priority matrix in MO[1] will be reset and the current value in MO[1] will be followed.
Bus termination	BusTermination	BI[99]	'0: Inactive' '1: Active'			R	Setting bus termination (120 Ω). Bus termination can be set with ZTH EU or PC-Tool.
Summary of status	SummaryStatus	BI[101]	'OK' 'Not OK'			R	Summary of Status actuator (MI[106]) and Status unit (MI[110]).
Internal activity	InternalActivity	MI[100]	1: Auto mode 2: Test 3: Adaption			R	The actuator performs an internal test run or end position calibration. Activated via MV[120]. Test: Internal test run. Adaption: End position calibration.
Status, actuator	StatusActuator	MI[106]	1: OK 2: Actuator blocked* 3: Release button pressed 4: Working range exceeded*			R	Actuator blocked: The actuator is mechanically overloaded. Release button pressed: The actuator is released, can be operated manually. Working range exceeded: The actuator has moved outside its set working range.
Status, unit	StatusDevice	MI[110]	1: OK 2: Loss of communication			R	Shows general status of the unit. Loss of communication: Communication fault detected when the timeout time has expired without the values having been updated.
Forced control	Override	MO[1]	0: Auto mode 1: Open 2: Closed 3: Min. flow rate 4: Intermediate value 5: Max. flow rate Standard: 0 (auto mode)			C	Overrides the basic function with predefined choices. The intermediate flow rate is factory-preset to 50% of Vnom. Can be changed via the hand-held terminal ZTH EU or PC-Tool.

Function:

R = Readable

W = Writeable

C = Controllable with priority matrix

* Status information must be reset with Command MV [120] -> Reset (4).

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Name	Object name	Object type [instance]	Value	Unit	COV Change of value	Function	Description
Command	Command	MV[120]	1: Auto mode 2: Adaption 3: Test 4: Reset			W	Initiates end position calibration or internal test run of actuator. After the command has been sent, the value reverts to Auto mode (1). Activity read in MI[100]. Information in StatusActuator MI[106] can be reset with Reset (4).
Unit selector	UnitSelFlow	MV[121]	1: m³/s 2: m³/h 3: l/s 4: l/min 5: l/h 6: gpm 7: cfm Standard: 2 (m³/h)			W	Selected unit in which the air flow is reported. Absolute air flow (AI[19]). Vnom (AV[104]).
Set point source	SpSource	MV[122]	1: Analogue 2: Bus Standard: 1 (analogue)			W	Analogue: Set point from analogue control signal 0...10 V (no. 3, input Y). Bus: The set point is written via communication, Set point (address 0).
Control mode	ControlMode	MV[123]	1: Position 2: Air flow Standard: 2 (air flow)			W	The control mode must be set to air flow for correct function. Position: Regulated by position Air flow: Regulated by air flow.

Function:

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