



## IoT Product Range

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**Protocol Implementation Conformance Statement - PICS**

<b>General information</b>	<b>Date:</b>	02.10.2017
	<b>Vendor Name:</b>	BELIMO Automation AG
	<b>Vendor ID:</b>	423
	<b>Product Name:</b>	IoT Product
	<b>Product Model Number:</b>	VLM24A-LP1 / VLR24A-LP1 VNM24A-LP1 / VNR24A-LP1 VSM24A-LP1 / VSR24A-LP1 VGM24A-LP1 / VGR24A-LP1
	<b>Applications Software Version:</b>	3.01-0000
	<b>Firmware Revision:</b>	12.25
	<b>BACnet Protocol Revision:</b>	1.12
	<b>Product Description:</b>	
	<b>BACnet Standard Device Profile:</b>	BACnet Application Specific Controller (B-ASC)
	<b>BACnet Interoperability Building Blocks supported:</b>	
		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)
	<b>Segmentation Capability:</b>	No
	<b>Data Link Layer Options:</b>	BACnet IP, (Annex J) BACnet IP, (Annex J), Foreign Device
<b>Device Address Binding:</b>	No static device binding supported	
<b>Networking Options:</b>	None	
<b>Character Sets Supported:</b>	ISO 10646 (UTF-8)	

## Object processing

Object type	Optional properties	Writeable properties
Analog Input [AI]	Description COV Increment	
Analog Output [AO]	Description COV Increment	Present Value Relinquish Default
Binary Input [BI]	Description Active Text Inactive Text	
Device	Description Location Active COV Subscriptions Max Master Max Info Frames Profile Name	Object Identifier Object Name Location Description APDU Timeout (0..60000) Number Of APDU Retries (0..10) Max Master (1..127) Max Info Frames (1..255)
Multi-state Input [MI]	Description State Text	
Multi-state Output [MO]	Description State Text Relinquish Default	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
- The application checks the ranges of the Present Value and the COV Increment of the Analog Objects. For this reason, there is the following behavior:
  - No error message, if the limits have been exceeded
  - Too high values are set to the range maximum
  - Too small values are set to the range minimum
- For Analog Value objects that are classified as read only, there is the following behavior:
  - Application overwrites the present value that has been written with the Write Property Service.
  - In this case no error message will be sent

## Service processing

- The device supports DeviceCommunicationControl service. No password is required.
- Max. 5 active COV subscriptions with lifetime up to 8 h supported

## BACnet object description

Object Name	Object Type / Instance	Description	Values	Relinquish Default	Access
<i>Device_Name</i>	Device[x]				
SpRel	AO [1]	Setpoint Relative in % The set point is related to the position	0...100	0	C
Override	MO [1]	Override Control	None Open Close MotStop	None	C
RelPos	AI [1]	Relative Position in %	0 ... 100	-	R
AbsPos	AI [2]	Absolute Position in °	0 ... 95	-	R
SpAnalog	AI [6]	Setpoint Analog in %	0 ... 100	-	R
S1	AI [20]	Sensor 1 in "no unit" Depending on the Sensortype 1: Switch = 0 / 1 Passive = Ohm Active = mV		-	R
S2	AI [21]	Sensor 2 in "no unit" Depending on the Sensortype 2: Switch = 0 / 1 Passive = Ohm Active / Setpoint analog = mV		-	R
SummaryStatus	BI [101]	Summary Status Summarizes all status of MI 103 / 106	OK Not OK	-	R
StatusSensor	MI [103]	Status Sensor Indicates only passive sensors status.	OK S1 not OK S2 not OK	-	R
StatusActuator	MI [106]	Status Actuator Mechanical overload due to blocked valve, etc. Gear disengaged button pressed	OK Actuator cannot move Gear disengaged	-	R
SpSource	MV [122]	Setpoint Source The actuator has the possibility to be controlled from an analog input and at the same time being integrated on BACnet (Monitoring). Depending on this setting the setpoint by bus or analog input is valid. Analog: Setpoint from analog signal (0)2..10V on S1 Analog signal setting can be made on the webserver <b>!Only if Sensortype 1 = Active! Needs to be confirmed on the Webserver!</b> Bus: Setpoint from BACnet → AO [1]	Analog Bus	-	W
Sensortype 1	MV [220]	Sensortype 1 <b>!This setting needs to be confirmed on the webserver!</b>	None Switch Passive Active	-	W
Sensortype 2	MV [221]	Sensortype 2 <b>!This setting needs to be confirmed on the webserver!</b>	None Switch Passive Active	-	W