

BACnet Protocol Implementation Conformance Statement

Product

Date:	02/06/2020	Vendor Name:	Magnum Innovations
Product Name:	USR-LM	Application Software V.:	n/a
Product Model Number:	Mx-USR-LM	Firmware Revision:	x.x.x.x
Product Description:	1 Channel Relay LM	BACnet Protocol Revision:	n/a

Vendor Information

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Product Description

The Mx-USR-LM offers bi-directional, ON/OFF and 0-10V dimming control when combined with a wireless light switch or automatic shut-off when combined with a wireless occupancy sensor.
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BACnet Standardized Device Profile (Annex L):

<input type="checkbox"/> BACnet Operator Workstation (B-OWS)	<input type="checkbox"/> BACnet Advanced Application Controller (B-AAC)
<input type="checkbox"/> BACnet Advanced Operator Workstation (B-AWS)	<input type="checkbox"/> BACnet Application Specific Controller (B-ASC)
<input type="checkbox"/> BACnet Operator Display (B-OD)	<input checked="" type="checkbox"/> BACnet Smart Sensor (B-SS)
<input type="checkbox"/> BACnet Building Controller (B-BC)	<input checked="" type="checkbox"/> BACnet Smart Actuator (B-SA)

BACnet Interoperability Building Blocks Supported (Annex K):

DS-RP-B	Data Sharing, Read Property B
DS-RPM-B	Data Sharing, Read Property Multiple B
DS-WP-B	Data Sharing, Write Property B
DS-WPM-B	Data Sharing, Write Property Multiple B
DS-COV-B	Data Sharing, COV B
DS-COVP-B	Data Sharing, COVP N

Segmentation Capability:

<input checked="" type="checkbox"/> Able to transmit segmented messages	Window Size: 1515 bytes
<input checked="" type="checkbox"/> Able to receive segmented messages	Window Size: 1515 bytes

Standard Object Types Supported (Sensor):

Object	Optional Properties Supported	Writeable Properties	Property Range Restrictions
Analog Input Dim Value	Description	None	0 – 100 %
Analog Input Temperature (linear)	Description	None	10 – 90° C 50 – 194° F
Analog Input Current Power Usage	Description	None	0 – 6553.50 Watt
Analog Input Cumulative Power Usage	Description	None	0 – 4294967295 Wh
Binary Input Relay status	Description Inactive Text Active Text	None	Off On
Binary Input Temperature availability	Description Inactive Text Active Text	None	Temp not available Temp available
Binary Input Pwr reading availability	Description Inactive Text Active Text	None	PR not available PR available
MultiState Input {Manufacturer}	Description	none	EnOcean Manufacturer List
Binary Input {Signal}	Description Inactive Text Active Text Change State Time Change State Count Time State Count Reset	none	Invalid valid
Analog Input {RSSI}	Description	none	0 – 255 dB
Analog Output {HeartBeat}	Description	Present Value	0 – 255 minutes

Standard Object Types Supported (Actuator – A5-38-08):

Object	Optional Properties Supported	Writeable Properties	Property Range Restrictions
Analog Output Dimming value	Description	Present Value	0 – 100 %
Analog Output Ramping time	Description	Present Value	0 – 255 sec
Binary Output Dimming Range	Description Inactive Text Active Text	Present Value	Absolute value Relative value
Binary Output Store final value	Description Inactive Text Active Text	Present Value	No Yes
Binary Output Switching command	Description Inactive Text Active Text	Present Value	Off On
BinaryOutput {Sending}	Description Inactive Text Active Text	Present Value	Send Suppress
MultiStateInput {Manufacturer}	Description	Present Value	EnOcean Manufacturer List

Standard Object Types Supported (Actuator – A5-38-07):

Object	Optional Properties Supported	Writeable Properties	Property Range Restrictions
Analog Output Dimming value	Description	Present Value	0 – 100 %
Analog Output Ramping time	Description	Present Value	0 – 255 sec
MultiState Output Override status	Description	Present Value	Normal operation Overridden ON Overridden OFF
Binary Output Keep dimming value	Description Inactive Text Active Text	Present Value	Set new dimming value Keep dimming value
Binary Output Store final value	Description Inactive Text Active Text	Present Value	No Yes
Binary Output Switching command	Description Inactive Text Active Text	Present Value	Off On
BinaryOutput {Sending}	Description Inactive Text Active Text	Present Value	Send Suppress
MultiStateInput {Manufacturer}	Description	Present Value	EnOcean Manufacturer List

Data Link Layer Options:

<input type="checkbox"/> BACnet IP, (Annex J)	<input type="checkbox"/> MS/TP slave (Clause 9)
<input type="checkbox"/> BACnet IP, (Annex J), Foreign Device	<input type="checkbox"/> Point-To-Point, EIA 232 (Clause 10)
<input type="checkbox"/> ISO 8802-3, Ethernet (Clause 7)	<input type="checkbox"/> Point-To-Point, modem
<input type="checkbox"/> ATA 878.1, 2.5 Mb. ARCNET (Clause 8)	<input type="checkbox"/> LonTalk, (Clause 11)
<input type="checkbox"/> ATA 878.1, EIA-485 ARCNET (Clause 8)	<input type="checkbox"/> BACnet/ZigBee (ANNEX O)
<input type="checkbox"/> MS/TP master (Clause 9)	<input checked="" type="checkbox"/> Other: EnOcean wireless

Device Address Binding:

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
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Networking Options:

<input type="checkbox"/> Router, Clause 6 - List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.	
<input type="checkbox"/> Annex H, BACnet Tunneling Router over IP	
<input type="checkbox"/> BACnet/IP Broadcast Management Device (BBMD)	
Does the BBMD support registrations by Foreign Devices?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Does the BBMD support network address translation?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Network Security Options:

<input type="checkbox"/> Non-secure Device - is capable of operating without BACnet Network Security
<input type="checkbox"/> Secure Device - is capable of using BACnet Network Security (NS-SD BIBB)
<input type="checkbox"/> Multiple Application-Specific Keys:
<input type="checkbox"/> Supports encryption (NS-ED BIBB)
<input type="checkbox"/> Key Server (NS-KS BIBB)

Character Sets Supported:

<input checked="" type="checkbox"/> ISO 10646 (UTF-8)	<input type="checkbox"/> IBM™/Microsoft™ DBCS	<input type="checkbox"/> ISO 8859-1
<input type="checkbox"/> ISO 10646 (UCS-2)	<input type="checkbox"/> ISO 10646 (UCS-4)	<input type="checkbox"/> JIS X 0208