

BACnet Protocol Implementation Conformance Statement

Product

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|------------------------------|---------------------|----------------------------------|--------------------|
| Date: | 02/06/2020 | Vendor Name: | Magnum Innovations |
| Product Name: | USR-L3-PWM | Application Software V.: | n/a |
| Product Model Number: | Mx-USR-L3-PWM | Firmware Revision: | x.x.x.x |
| Product Description: | 1 Channel Relay PWM | BACnet Protocol Revision: | n/a |

Vendor Information

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| Magnum Innovations LLC 5675 Hudson Industrial Parkway #3 Hudson, OH 44236 USA www.magnum-innovations.com |
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Product Description

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| The Mx-USR-L3-PWM 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 occ sensor. |
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BACnet Standardized Device Profile (Annex L):

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|---|---|
| <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):

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|-----------|---|
| 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:

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|---|-------------------------|
| <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 Illumination (linear) | Description | None | 0 – 1023 lx |
| Binary Input Channel 1 status | Description Inactive Text Active Text | None | Off On |
| Binary Input Channel 2 status | Description Inactive Text Active Text | None | Off On |
| Binary Input Channel 2 availability | Description Inactive Text Active Text | None | Ch 2 not available Ch 2 available |
| Binary Input Occ/Lux availability | Description Inactive Text Active Text | None | O/L not available O/L available |
| Binary Input Occupancy status | Description Inactive Text Active Text | None | Occupied Unoccupied |
| Analog Input Channel 1 Dim Value | Description | None | 0 – 100 % |
| Analog Input Channel 2 Dim Value | Description | None | 0 – 100 % |
| 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:

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| <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:

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

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| <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:

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| <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:

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|---|---|-------------------------------------|
| <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 |