

BACnet Protocol Implementation Conformance Statement

Product

Date:	01/22/2019	Vendor Name:	Magnum Innovations
Product Name:	Room thermostat	Application Software V.:	n/a
Product Model Number:	Mx-TS1	Firmware Revision:	x.x.x.x
Product Description:	Thermostat	BACnet Protocol Revision:	n/a

Vendor Information

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

Product Description

The Magnum Thermostat uses wireless communication to provide quick and easy implementation of the energy-saving HVAC controls. Includes a customizable 4.3" LCD display.
--

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 Set point (linear)	Description	None	0 – 40° C 32 – 104° F
Analog Input Temperature (linear)	Description	None	0 – 40° C 32 – 104° F
MultiState Input Turn-switch for fan	Description	None	Stage 0 Stage 1 Stage 2 Stage 3 Auto
Analog Input Rel. Humidity (linear)	Description	None	0 – 100 %
Analog Input Unoccupied Heating Limit	Description	None	0 – 40° C 32 – 104° F
Analog Input Unoccupied Cooling Limit	Description	None	0 – 40° C 32 – 104° F
Analog Input Occupied set point limit high	Description	None	0 – 40° C 32 – 104° F
Analog Input Occupied set point limit low	Description	None	0 – 40° C 32 – 104° F
Analog Input Comfort set point	Description	None	0 – 40° C 32 – 104° F
Binary Input VIP mode	Description Inactive Text Active Text	None	Normal operation VIP mode
Binary Input Door status	Description Inactive Text Active Text	None	Door closed Door open
Binary Input Window status	Description Inactive Text Active Text	None	Window closed Window open
Binary Input ECO mode	Description Inactive Text Active Text	None	Normal operation ECO mode
Binary Input Reset status	Description Inactive Text Active Text	None	Normal operation Reset

Binary Input Relay 1	Description Inactive Text Active Text	None	Off On
Binary Input Relay 2	Description Inactive Text Active Text	None	Off On
Binary Input Relay 3	Description Inactive Text Active Text	None	Off On
Binary Input Relay 4	Description Inactive Text Active Text	None	Off On
Binary Input Relay 5	Description Inactive Text Active Text	None	Off On
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):

Object	Optional Properties Supported	Writeable Properties	Property Range Restrictions
Analog Output Set point (linear)	Description	Present Value	0 – 40° C 32 – 104° F
MultiState Output Fan stage	Description	Present Value	Off Auto Fan only Stage 1 Fan only Stage 2 Fan only Stage 3 Fan auto Stage 1 Fan auto Stage 2 Fan auto Stage 3
MultiState Output Room status	Description	Present Value	Normal operation Window open Front door open Balcony door open Unoccupied ECO mode VIP mode
MultiState Output Layout message	Description	Present Value	No message Layout 1 - 4
Analog Output 0-10V output	Description	Present Value	0 – 10V
Analog Output Unoccupied Heating Limit	Description	Present Value	0 – 40° C 32 – 104° F
Analog Output Unoccupied Cooling Limit	Description	Present Value	0 – 40° C 32 – 104° F
Analog Output Occupied Limit Low	Description	Present Value	0 – 40° C 32 – 104° F
Analog Output Occupied Limit High	Description	Present Value	0 – 40° C 32 – 104° F
Analog Output Comfort set point	Description	Present Value	0 – 40° C 32 – 104° F
Analog Output Sync year	Description	Present Value	2000 – 2255
Analog Output Sync month	Description	Present Value	1 – 12
Analog Output Sync day	Description	Present Value	0 – 23
Analog Output Sync minute	Description	Present Value	0 – 59
Analog Output Sync second	Description	Present Value	0 – 59
MultiState Output Mode	Description	Present Value	Auto Heating Cooling Off

MultiState Output Return set point	Description	Present Value	Comfort set point Previous set point
Analog Output Unoccupied delay	Description	Present Value	0 -255
MultiStateOutput {Msg.Selector}	Description	Present Value	1 – 10
BinaryOutput {Sending}	Description Inactive Text Active Text	Present Value	Send Suppress
MultiStateInput {Manufacturer}	Description	none	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
------------------------------	--

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