BACnet Protocol Implementation Conformance Statement

Product

Date:	02/06/2020	**Vendor Name:**	Magnum Innovations
Product Name:	MTB	**Application Software V.:**	n/a
Product Model Number:	Mx-MTB	**Firmware Revision:**	x.x.x.x
Product Description:	TStat Control Board	**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 MTB is a unit mounted HVAC controller. It accepts inputs from a variety of wired and wireless room monitoring components to form a complete room subsystem.

BACnet Standardized Device Profile (Annex L):

☐ BACnet Operator Workstation (B-OWS)	☐ BACnet Advanced Application Controller (B-AAC)
☐ BACnet Advanced Operator Workstation (B-AWS)	☐ BACnet Application Specific Controller (B-ASC)
☐ BACnet Operator Display (B-OD)	☒ BACnet Smart Sensor (B-SS)
☐ BACnet Building Controller (B-BC)	☒ 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:

☒ Able to transmit segmented messages	Window Size: 1515 bytes
☒ 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 Room Temperature (linear)	Description	None	0 – 40° C 32 – 104° F
Analog Input Temperature 2 (linear)	Description	None	0 – 40° C 32 – 104° F
Analog Input Temperature 3 (linear)	Description	None	0 – 40° C 32 – 104° F
Analog Input Relative Humidity (linear)	Description	None	0 – 40° C 32 – 104° F
Binary Input VIP mode	Description Inactive Text Active Text	None	Normal operation VIP mode
Binary Input Patio Door status	Description Inactive Text Active Text	None	Closed Open
Binary Input Window status	Description Inactive Text Active Text	None	Closed Open
Binary Input Mode	Description Inactive Text Active Text	None	Normal ECO mode
Binary Input Occupancy status	Description Inactive Text Active Text	None	Occupied Unoccupied
Binary Input Reset status	Description Inactive Text Active Text	None	Normal operation Reset
Analog Input Supply air temperature (linear)	Description	None	0 – 40° C 32 – 104° F
Binary Input Cool 1	Description Inactive Text Active Text	None	Inactive Active
Binary Input Cool 2	Description Inactive Text Active Text	None	Inactive Active

Binary Input Heat 1	Description Inactive Text Active Text	None	Inactive Active
Binary Input Heat 2	Description Inactive Text Active Text	None	Inactive Active
Binary Input Heat 3	Description Inactive Text Active Text	None	Inactive Active
Binary Input Fan 1	Description Inactive Text Active Text	None	Off On
Binary Input Fan 2	Description Inactive Text Active Text	None	Off On
Binary Input Fan 3	Description Inactive Text Active Text	None	Off On
Analog Input 0-10V Output 1	Description	None	0 – 10 V
Analog Input 0-10V Output 2	Description	None	0 – 10 V
Analog Input 0-10V Output 3	Description	None	0 – 10 V
Analog Input Changeover delta (linear)	Description	None	0 – 40° C 32 – 104° F
Analog Input Unoccupied delay	Description	None	0 – 255 min
Analog Input Window open delay	Description	None	0 – 255 min
MultiState Input Mode status	Description	None	Auto Heating Cooling Off
MultiState Input Fan status	Description	None	Auto Continuous Stage 1 Continuous Stage 2 Continuous Stage 3
Analog Input User limit min	Description	None	0 – 40° C 32 – 104° F
Analog Input User limit max	Description	None	0 – 40° C 32 – 104° F
Analog Input Unoccupied set point (heating)	Description	None	0 – 40° C 32 – 104° F
Analog Input Unoccupied set point (cooling)	Description	None	0 – 40° C 32 – 104° F
Analog Input ECO set point (heating)	Description	None	0 – 40° C 32 – 104° F

Analog Input ECO set point (cooling)	Description	None	0 – 40° C 32 – 104° F
Analog Input Window open set point (heating)	Description	None	0 – 40° C 32 – 104° F
Analog Input Window open set point (cooling)	Description	None	0 – 40° C 32 – 104° F
Analog Input Comfort set point	Description	None	0 – 40° C 32 – 104° F
Analog Input Freeze Protection	Description	None	0 – 40° C 32 – 104° F
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
MultiState Output Request status	Description	Present Value	No request Request all Request status Request settings Request set points
Analog Output Set point (linear)	Description	Present Value	0 – 40° C 32 – 104° F
MultiState Output Fan	Description	Present Value	Auto Continuous Stage 1 Continuous Stage 2 Continuous Stage 3
MultiState Output Room status	Description	Present Value	Normal operation Window open Door open Unoccupied ECO mode VIP mode Room temp override
MultiState Output Mode	Description	Present Value	Off Auto Heating Cooling
Analog Output 0-10V Output 1	Description	Present Value	0 – 10 V
Analog Output 0-10V Output 2	Description	Present Value	0 – 10 V
Analog Output 0-10V Output 3	Description	Present Value	0 – 10 V
Analog Output Temperature override	Description	Present Value	0 – 40° C 32 – 104° F
Analog Output User limit min	Description	Present Value	0 – 40° C 32 – 104° F
Analog Output User limit max	Description	Present Value	0 – 40° C 32 – 104° F
Analog Output Unoccupied Set point (heating)	Description	Present Value	0 – 40° C 32 – 104° F
Analog Output Unoccupied Set point (cooling)	Description	Present Value	0 – 40° C 32 – 104° F
Analog Output ECO set point (heating)	Description	Present Value	0 – 40° C 32 – 104° F
Analog Output ECO set point (cooling)	Description	Present Value	0 – 40° C 32 – 104° F
Analog Output Window open set point (heating)	Description	Present Value	0 – 40° C 32 – 104° F

Analog Output Window open set point (cooling)	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 Freeze Protection	Description	Present Value	0 – 40° C 32 – 104° F
Analog Output Changeover delta (linear)	Description	Present Value	0 – 40° C 32 – 104° F
Analog Output Unoccupied delay	Description	Present Value	0 – 255 min
Analog Output Window open delay	Description	Present Value	0 – 255 min
Binary Output Reset request	Description Inactive Text Active Text	Present Value	Normal operation Request reset
Analog Output Display brightness	Description	Present Value	0 – 6
Analog Output Set year	Description	Present Value	2000 – 2255
Analog Output Set month	Description	Present Value	1 – 12
Analog Output Set day	Description	Present Value	0 – 23
Analog Output Set minute	Description	Present Value	0 – 59
MultiStateOutput {Msg.Selector}	Description	Present Value	1 – 26
BinaryOutput {Sending}	Description Inactive Text Active Text	Present Value	Send Suppress
MultiStateInput {Manufacturer}	Description	Present Value	EnOcean Manufacturer List

Data Link Layer Options:

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

Device Address Binding:

☐ Yes	☒ No

Networking Options:

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

Network Security Options:

☐ Non-secure Device - is capable of operating without BACnet Network Security
☐ Secure Device - is capable of using BACnet Network Security (NS-SD BIBB) ☐ Multiple Application-Specific Keys: ☐ Supports encryption (NS-ED BIBB) ☐ Key Server (NS-KS BIBB)

Character Sets Supported:

☒ ISO 10646 (UTF-8)	☐ IBM™/Microsoft™ DBCS	☐ ISO 8859-1
☐ ISO 10646 (UCS-2)	☐ ISO 10646 (UCS-4)	☐ JIS X 0208