BACnet Protocol Implementation Conformance Statement

Date: August 1, 2025
Vendor Name: FlowCon International/Griswold Controls
Product Name: FIT Intelligent Interface
Applications Software Version: 1.05
Product Model: ACC40023
Firmware Revision: 3.0.3
BACnet Protocol Revision: 12
Product Description:
BACnet Intelligent Interface for EPIC/FIT valves are intended for pressure independent flow management control securing continuously correct Delta T for energy optimization, optimal room comfort or a SMART control combination, depending on control mode setting.

BACnet Standardized Device Profile (Annex L):
☑ BACnet Application Specific Controller (B-ASC)

List all BACnet Interoperability Building Blocks Supported (Annex K):

DS-RP-B	Data Sharing - Read Property - B
DS-WP-B	Data Sharing - Write Property - B
DM-DDB-B	Device Management - Dynamic Device Binding - B
DM-DOB-B	Device Management - Dynamic Object Binding - B
DM-DCC-B	Device Management - Device Communication Control - B
DS-RPM-B	Data Sharing - Read Property Multiple - B
DM-RD-B	Device Management - Reinitialize Device- B

Segmentation Capability: This device does not support segmentation.

Data Link Layer Options:
☑ MS/TP master (Clause 9), baud rate(s): 9600, 19200, 38400, 57600, 76800 and 115200
☑ MS/TP slave (Clause 9), baud rate(s): 9600, 19200, 38400, 57600, 76800 and 115200

Device Address Binding:
Is static device binding supported? (This is currently necessary for two-way communication with MS/TP slaves and certain other devices.)
☐ Yes ☑ No

Networking Options: This device has no special networking options.

Network Security Options:
☑ Non-secure Device - is capable of operating without BACnet Network Security

Character Sets Supported:
Indicating support for multiple character sets does not imply that they can all be supported simultaneously.
☑ ANSI X3.4

If this product is a communication gateway, describe the types of non-BACnet equipment/networks(s) that the gateway supports: This device is a gateway (for MVP/SM.0.0.#.5/6) and non gateway (for MVP/SM.0.0.#.3/4).

Standard Object Types Supported:

Object Type	Supported	Dynamically Creatable	Dynamically Deletable	Optional Properties Supported	Writable Properties
Device Priority Property	☑	☐	☐	Max_Master Max_Info_Frame Description #1000 to #1026	Object_Identifier Object_Name Max_Master Description #1000 to #1002
Analog Value (AV)	☑	☐	☐	Reliability Description	Present_Value[1]
Binary Value (BV)	☑	☐	☐	Reliability Active_Text Inactive_Text Description	Present_Value[2]
Multi-state Value (MSV)	☑	☐	☐	Description Reliability States_Text	Present_Value[3]
Characterizing Value (BV)	☑	☐	☐	Description Reliability	Present_Value[4]
Trendlog	☑	☐	☐	Description Reliability Buffer_Size Stop_When_Full	Present_Value[4]

Note 1: Present_Value writable for objects AV5-9 and AV.62 and AV.12, AV.14, AV16-17, AV62, AV.141 and object AV4, AV21-22, AV143, AV164-168 under specific conditions.
Note 2: Present_Value writable for objects BV2-4 plus BV17-55 and BV.62-63 under specific conditions.
Note 3: Present_Value writable for objects MSV.1, MSV.2, MSV.3, MSV.4, MSV.5, MSV.6, MSV.7, MSV.38, MSV.39 and object MSV.46 under specific conditions.
Note 4: Present_Value writable for object 1.

Proprietary Properties

ID	Data Type	Meaning	Writable
Proprietary property #1000	Unsigned type	Represents the physical layer MAC address. This value range from 0 to 127.	☑
Proprietary property #1001	Unsigned type	Represents the MS/TP baud rate. Available values are: 9600, 19200, 38400, 57600, 76800 and 115200.	☑

All proprietary properties of this device exist within the Device object.

List of Objects
Analog Input (AI):

ID	Name	Description	R/W	Present-Value Options
1	WaterTemperature1	T1, temperature sensor 1	R	-30 to 500. Unit as per MSV.3.
2	WaterTemperature2	T2, temperature sensor 2	R	-30 to 500. Unit as per MSV.3.
3	WaterTempDelta	ΔT, numerical valve of T1-T2	R	0 to 500. Unit as per MSV.3.
4	WaterTempDeltaTarget	ΔT Target	R/W	10 0 to 200. Unit as per MSV.3. *FIT system is controlled by ΔT Target if* MSV.4= 1
5	WaterTempDeltaDead-band	ΔT Target deadband	R/W	1 0.1 to 100. Units as per MSV.3, default °C.
6	RoomTemperature	Room temperature	R/W	23 -100 to 500. Units as per MSV.3, default °C.
7	RoomTargetTemp	Room temperature target	R/W	23 -100 to 500. Units as per MSV.3, default °C.
8	RoomTargetDeadband	Room temperature target deadband	R/W	1 0.1 to 100. Units as per MSV.3, default °C.
9	TargetEvalInterval	Time interval for temperature check	R/W	10 3 to 3600. Unit is seconds.
10	EnergyConsumption	Energy consumption in BTU or kW	R	0 to 1000. Unit as per MSV.4.
11	EnergyAccumulation-Cycle1	Accumulated energy consumption in BTU or kW	R	0 to 1000000. Unit as per MSV.4.

12	EnergyAccumCycle-Count1	Duration in days for the accumulated energy 1	R/W	1 0 to 1200. Unit as days
13	EnergyAccumulation-Cycle2	Accumulated energy consumption in BTU or kW	R	0 to 1000000. Unit as per MSV.4.
14	EnergyAccumCycle-Count2	Duration in days for the accumulated energy 1	R/W	30 0 to 1200. Unit as days
15	EnergyLogOldestData-Index	The oldest entry=index in the trend energy log file	R	0 to 1200.
16	Temp1Correct	Correction value for temperature sensor 1	R/W	0 -100.0 to 100.0. Unit as per MSV.3.
17	Temp2Correct	Correction value for temperature sensor 2	R	0 -100.0 to 100.0. Unit as per MSV.3.
18	Pressure1	P1, pressure sensor 1	R	0 to 1000. Unit as per MSV.7. Works in config. 1, 2 and 4.
19	Pressure2	P2, pressure sensor 2	R	0 to 1000. Unit as per MSV.7. Works in config. 1, 2 and 4.
20	PressureDelta	ΔP, numerical valve of P1-P2	R	0 to 2500. Unit as per MSV.7. Works in config. 1, 2 and 4.
21	Press1Correct	Correction value for pressure sensor 1	R/W	0 -1000 to 1000. Unit as per MSV.7. Works in config. 1, 2 and 4.
22	Press2Correct	Correction value for pressure sensor 2	R/W	0 -1000 to 1000. Unit as per MSV.7. Works in config. 1, 2 and 4.
23	SystemOnCounter	Standard counter in minutes, counting minutes the system is on	R	0 to 50.000.000. Unit is minutes.
62	MaxFlow	Maximum flow rate	R/W	0 to 277100. Unit as per MSV.39. Range adapts to selected valve in MSV.8 or MSV.38 and selected unit in MSV.39
68	FlowRate	Current flow rate	R	0 to 277100. Unit as per MSV.39. Range adapts to selected valve in MSV.8 or MSV.38 and selected unit in MSV.39 In config. 1 object is controlled by PICV actuator. In config. 2, 3 and 4 object is controlled by FIT.
98	MotorPosition	Motor position / valve opening	R	0 to 100. Unit is %. In config. 1 object is controlled by PICV actuator. In config. 2, 3 and 4 object is mirrored AV.141
138	ControlSigMin	Analog control signal minimum value	R/W	0 to 10. Unit is Volts. NO FUNCTION.
139	ControlSigMax	Analog control signal maximum value	R/W	0 to 10. Unit is Volts. NO FUNCTION.
140	BatteryCapacity	Actuator battery capacity	R	0 to 100. Unit is %. Works in config. 1.
141	AnalogControlSignal	Analog control signal value	R/W	10 to 100, for MSV.5=4 or 5. Unit is %. 0 to 100, for MSV.5=1, 2 or 3. Unit is %.
143	BACnetFallbackTimeout	BACnet control fallback timeout	R/W	1 to 60. Unit is minutes. Default= 10 for MSV.5=2. Default= 60 for MSV.5=1, 3, 4 or 5 Works in config. 1.
164	FeedbackSignal	Feedback signal value	R	2 to 10. Unit is Volts. NO FUNCTION.
165	WaterT1	FIT writes T1 back to the actuator display	R/W	-30-500. Unit is converted to C. Works in config 1. FIT overwrites this value
166	WaterT2	FIT writes T2 back to the actuator display	R/W	-30-500. Unit is converted to C. Works in config 1. FIT overwrites this value
167	WaterdT	FIT writes dT back to the actuator display	R/W	0-530. Unit is converted to C. Works in config 1. FIT overwrites this value
168	dP	FIT writes dP back to the actuator display	R/W	0-100. Unit is converted to kPaD. Works in config 1. FIT overwrites this value

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Binary Value (BV):

ID	Name	Description	R/W	Present-Value Options
1	PressureDeltaAlarm		R	0= OFF 1= ON Works in config. 1, 2 and 4.
2	RestartUnit	Restart unit	R/W	0= Not activate 1= Activated
3	ActuatorCommsReset	Restart communication port to the attached actuator	R/W	0=Disabled 1=Enabled
4	EnergyAccumulation-Reset	Reset accumulated energy log	R/W	0=Disabled 1=Enabled
17	RotationDirection	Motor rotation direction	R/W	0= NO 1= NC Works in config. 1.
18	FailsafeDirection	Failsafe rotation direction	R/W	0= Open 1= Close Works in config. 1.
53	FlushMode	Flush mode enable	R/W	0= Disabled 1= Enabled Works in config. 1.
54	Password	Password enable	R/W	0= Disabled 1= Enabled Works in config. 1.
55	OvertorquedAlarm	Overtorqued alarm	R	0= Off 1= On Works in config. 1.
56	OvertorquedInPastAlarm	Overtorqued in past alarm	R/W	0= Off 1= On Works in config. 1.
57	OverTemperatureAlarm	Critical over temperature alarm	R	0= Off 1= On Works in config. 1.
58	HighTemperatureAlarm	Uncritical high temperature alarm	R	0= Off 1= On Works in config. 1.
59	PowerFailAlarm	Power failure / out of range alarm	R	0= Off 1= On Works in config. 1.
60	NoCtrlSignalAlarm	No control signal alarm	R	0= Off 1= On Works in config. 1.
61	BattErrorAlarm	Battery error alarm	R	0= Off 1= On Works in config. 1.
62	BACnetFallback-Alarm	BACnet fallback alarm	R/W	0= Off 1= On Works in config. 1.
63	Autostroke	Activate auto-stroke. After auto-cycle FIT will proceed to normal operation and reset to 0=disabled	R/W	0= Disabled 1= Enabled Works in config. 1.

Multi-State Value (MSV):

ID	Name	Description	R/W	Present-Value Options
1	Baud Rate	FIT baud rate	R/W	1= 9600 2= 19200 3= 38400 4= 57600 5= 76800 6= 115200
2	MS/TP MAC Address	FIT MS/TP MAC address	R/W	0 to 127
3	Temperature	FIT workable temperature units	R/W	1= °C 2= °F
4	Energy Units	FIT workable energy units	R/W	1=BTU and BTU/h 2= kW and kW/h
5	Flow Control	FIT direct control mode When set to **direct ΔT Control,** FlowCon FIT will work as an energy valve based on a system defined target ΔT. When set to **direct Comfort Control,** FlowCon FIT will work as a PICV for room comfort control. When set to **Smart Control,** FlowCon FIT will prioritize room temperature setting and within designated range optimize the ΔT. When set to any **90% close-mode,** FlowCon FIT will as minimum be opened 10% to avoid dead end leg.	R/W	1= ΔT Control (Delta T Target) 2= Comfort Control (Set Flow) 3= Smart Control (Room temp. in combi with ΔT) 4= ΔT Control 90% close 5= Smart Control 90% close Comfort Control is also recommended under commissioning or during system verification.
6	Configuration	**!! FIT configuration !!**	R/W	1= SM.0.0.#.5/6 2= SM.0.0.#.3/4 3= FN/FH w/o pressure sensors

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				4= FN/FH w pressure sensors
7	Pressure Units	FIT workable pressure unit	R/W	*1= kPa* 2= psi
8	ValveModelG	FIT valve model number based on FlowCon Green	R/W	1= Green.0 2= Green.1 3= Green.2 4= Green.3 *Works in config. 3 and 4*
38	ValveModel	FIT valve model number based on FlowCon SM	R/W	1= SM.0.0 2= SM.1.1 3= SM.2.1 4= SM.3.0 5= SM.3.1 6= SM.3.2 7= SM.4.1 8= SM.4.2 9= SM.4.3 10= SM.5.1 11= SM.5.2 12=SM.6.2 *Works in config. 1 and 2* *Controlled by PICV actuator in config. 1;* *Default= 1* *Controlled by FIT in config. 2;* *Default= 2 (1 not available)*
39	FlowScaleUnit	Flow scale unit	R/W	1= l/sec 2=GPM 3=l/hr Controlled by PICV actuator in config. 1 Controlled by FIT in config. 2, 3 and 4
40	ControlSignalMode	Control signal mode	R	1= 2-10VDC 2= 4-20mA 3= Digital 4= BACnet **Only BACnet is valid**, 1/2/3 have no function *Works in config. 1. Controlled by FIT.*
41	FeedbackSignalMode	Feedback signal mode	R	1= 2-10VDC 2= 0-10VDC 3= 4-20mA 4= Auto *NO FUNCTION.*
43	BACnetFallbackAction	BACnet control fallback action	R	1= Close 2= Stop 3= Open 4= Midway *Works in config. 1. Controlled by PICV actuator.*
44	PressureRange_kPaD	PICV pressure range as per MSV.38	R	1= NA (SM.0.0) 2= 32-320 (SM.1.1) 3= 40-320 (SM.2.1) 4= 30-800 (SM.3.0) 5= 30-800 (SM.3.1) 6= 35-800 (SM.3.2) 7= 30-800 (SM.4.1) 8= 35-800 (SM.4.2) 9= 50-800 (SM.4.3) 10= 30-800 (SM.5.1) 11= 35-800 SM.5.2 12= 35-800 (SM.6.2) *Works in config. 1. Controlled by PICV actuator.*
45	ActuatorState	Actuator operation state	R	1= Normal 2= Calibration 3= Flush 4= Auto-stroke 5= Alarm 6= Failsafe *Works in config. 1. Controlled by PICV actuator.*
46	ControlCurveMode	Actuator control mode	R/W	1= Linear flow 2= Equal% 3= Linear rotation 4= Linear signal **Only Linear flow is valid,** 2/3/4 have no function *Works in config. 1. Controlled by PICV actuator.*

Characterizing Value:

ID	Name	Description	R/W	Present-Value Options
1	Bluetooth Ad Name	Placeholder for the advertised name for the Bluetooth connection	R/W	FlowCon FIT

Trendlog:

ID	Name	Description	R/W	Present-Value Options
1	Energy data	Accumulate energy overtime in trend log	R	0 (log empty) BUFFER SIZE = 1200 STOP_WHEN_FULL = disabled (Rollover) One Entry is full day

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