

75F-RENATUS

BACnet Protocol Implementation Conformance Statement

Date	14-March-2023
Vendor Name	75F
Vendor ID	1181
Product Name	75F-RENATUS
Product Model Number	100
Applications Software Version	1.632.4
Firmware Revision	4.11
BACnet Protocol Revision	19

Product Description:

- The 75F system is integrated with an existing BMS using the standard BACnet specification and supports protocol version 1 rev 19.
- In addition to monitoring and controlling the site using 75F Facilisight portal, this integration allows the facility manager to:
 - Monitor Sensor points like Temperature, Humidity, Discharge Air Temperature, CO₂, VOC, Illuminance, Sound, Occupancy on per Zone basis including trend data.
 - Send a command from the BMS to set parameters like desired temperature set points, system modes, etc. for the 75F system
 - Generate Alarms per BACnet standard based on 75F alerts.



BACnet Standardized Device Profile (Annex L):

- BACnet Cross-Domain Advanced Operator Workstation (B-XAWS)
- BACnet Advanced Operator Workstation (B-AWS)
- BACnet Operator Workstation (B-OWS)
- BACnet Operator Display (B-OD)
- BACnet Advanced Life Safety Workstation (B-ALWS)
- BACnet Life Safety Workstation (B-LSWS)
- BACnet Life Safety Annunciator Panel (B-LSAP)
- BACnet Advanced Access Control Workstation (B-AACWS)
- BACnet Access Control Workstation (B-ACWS)
- BACnet Access Control Security Display (B-ACSD)
- BACnet Building Controller (B-BC)
- BACnet Advanced Application Controller (B-AAC)
- BACnet Application Specific Controller (B-ASC)
- BACnet Smart Sensor (B-SS)
- BACnet Smart Actuator (B-SA)
- BACnet Smart Sensor (B-SS)
- BACnet Advanced Life Safety Controller (B-ALSC)
- BACnet Life Safety Controller (B-LSC)
- BACnet Advanced Access Control Controller (B-AACC)
- BACnet Access Control Controller (B-ACC)
- BACnet Router (B-RTR)
- BACnet Gateway (B-GW)
- BACnet Broadcast Management Device (B-BBMD)
- BACnet Access Control Door Controller (B-ACDC)
- BACnet Access Control Credential Reader (B-ACCR)
- BACnet General (B-GENERAL)

BACnet Interoperability Building Blocks Supported (Annex K):

Data Sharing	Read Property-B	DS-RP-B
	Read Property Multiple-B	DS-RPM-B
	Write Property-B	DS-WP-B
	Write Property Multiple-B	DS-WPM-B
	Change Of Value-B	DS-COV-B
Alarm & Event Management	Notification Internal-B	AE-N-I-B
	Acknowledgement-B	AE-ACK-B
	Event Information –B	AE-INFO-B
	Configurable Recipient Lists-B	AE-CRL-B
Scheduling	Scheduling Internal-B	SCHED-I-B
Trending	Viewing and Modifying Trends Internal-B	T-VMT-I-B
	Automated Trend Retrieval-B	T-ATR-B
Device & Network Management	Dynamic Device Binding-A	DM-DDB-A
	Dynamic Device Binding-B	DM-DDB-B
	Dynamic Object Binding-B	DM-DOB-B
	Device Communication Control	DM-DCC-B
	Time Synchronization	DM-TS-B
	UTC Time Synchronization	DM-UTC-B
	Reinitialize Device	DM-RD-B
Restart-B	DM-R-B	

Segmentation Capability

Able to transmit segmented messages yes no Window Size _
Able to receive segmented messages yes no Window Size __

Standard Object Types Supported:

- The **CreateObject** and **DeleteObject** service are **not supported**, therefore no objects are dynamically creatable or deletable.
- All potentially available properties are listed for each supported object type.



Analog Value Objects

AV-<nodeAddress01> zoneName_currentTemp		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	°F
description	R	
AV-<nodeAddress03> zoneName_heatingDesiredTemp		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	°F
description	R	
AV-<nodeAddress05> zoneName_reheatCoil_reheatTypeConfigured		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	%
description	R	
AV-<nodeAddress07> zoneName_humidity		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	%
description	R	

AV-<nodeAddress02> zoneName_coolingDesiredTemp		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	°F
description	R	
AV-<nodeAddress04> zoneName_damperPos		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	%
description	R	
AV-<nodeAddress06> zoneName_supplyAirTemperature		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	°F
description	R	
AV-<nodeAddress08> zoneName_co2		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	PPM
description	R	



Analog Value Objects

AV-<nodeAddress09> zoneName_co		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	PPM
description	R	
AV-<nodeAddress11> zoneName_voc		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	PPB
description	R	
AV-<nodeAddress13> zoneName_occupancy		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	
description	R	
AV-<nodeAddress17> zoneName_co2Equivalent		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	PPM
description	R	

AV-<nodeAddress10> zoneName_no		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	PPM
description	R	
AV-<nodeAddress12> zoneName_pressure		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	inch wc
description	R	
AV-<nodeAddress16> zoneName_sound		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	decibels
description	R	
AV-<nodeAddress18> zoneName_illumiance		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	lux
description	R	

Analog Value Objects

AV-<nodeAddress19> zoneName_uvi		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	
description	R	

AV-21 Building Schedule Occupied Heating		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	°F
description	R	

AV-22 Building Schedule Occupied Cooling		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	°F
description	R	

AV-<pairingAddress08> ccuName_analogue1		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	Volts
description	R	

AV-<pairingAddress09> ccuName_analogue2		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	Volts
description	R	

AV-<pairingAddress10> ccuName_analogue3		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	Volts
description	R	

AV-<pairingAddress11> ccuName_analogue4		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	Volts
description	R	

Binary Value

BV-20 Building Schedule Occupancy		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
description	R	

Trendlog Objects

Trendlog-<nodeAddress01> zoneName_currentTemp_trend			Trendlog-<nodeAddress02> zoneName_coolingDesiredTemp_trend		
present-value	R		present-value	R	
status-flags	R		status-flags	R	
event-state	R		event-state	R	
out-of-service	W		out-of-service	W	
units	R	°F	units	R	°F
Trendlog-<nodeAddress03> zoneName_heatingDesiredTemp_trend			Trendlog-<nodeAddress04> zoneName_damperPos_trend		
present-value	R		present-value	R	
status-flags	R		status-flags	R	
event-state	R		event-state	R	
out-of-service	W		out-of-service	W	
units	R	°F	units	R	%
Trendlog-<nodeAddress05> zoneName_reheatCoil_reheatTypeConfigured_trend			Trendlog-<nodeAddress06> zoneName_supplyAirTemperature_trend		
present-value	R		present-value	R	
status-flags	R		status-flags	R	
event-state	R		event-state	R	
out-of-service	W		out-of-service	W	
units	R	%	units	R	°F
Trendlog-<nodeAddress07> zoneName_humidity_trend			Trendlog-<nodeAddress08> zoneName_co2_trend		
present-value	R		present-value	R	
status-flags	R		status-flags	R	
event-state	R		event-state	R	
out-of-service	W		out-of-service	W	
units	R	%	units	R	PPM

Trendlog Objects

Trendlog-<nodeAddress09> zoneName_co_trend		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	PPM
Trendlog-<nodeAddress11> zoneName_voc_trend		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	PPB
Trendlog-<nodeAddress13> zoneName_occupancy_trend		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	
Trendlog-<nodeAddress17> zoneName_co2Equivalent_trend		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	PPM

Trendlog-<nodeAddress10> zoneName_no_trend		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	PPM
Trendlog -<nodeAddress12> zoneName_pressure_trend		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	inch wc
Trendlog-<nodeAddress16> zoneName_sound_trend		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	decibels
Trendlog-<nodeAddress18> zoneName_illuminance_trend		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	lux

Trendlog Objects

Trendlog-<nodeAddress19> zoneName_uvi_trend		
present-value	R	
status-flags	R	
event-state	R	
out-of-service	W	
units	R	

Schedule Object

Schedule-16 Building Schedule Object		
present-value	R	
status-flags	R	
out-of-service	W	
description	R	

Calendar Object

Calendar-18 Holiday Calendar		
present-value	R	
date-list	R	
description	R	

Notification Class Objects

NC-1001 SEVERE_ALARM			NC-1002 MODERATE_ALARM		
ack-required	R		ack-required	R	
recipient-list	R		recipient-list	R	
description	R		description	R	
NC-1003 WARN_ALARM			NC-1004 PRIORITY_ALARM		
ack-required	R		ack-required	R	
recipient-list	R		recipient-list	R	
description	R		description	R	

MSV Objects States Text:

number-of-states	R	17
state-text 1	R	COOLING STAGE 1
state-text 2	R	COOLING STAGE 2
state-text 3	R	COOLING STAGE 3
state-text 4	R	COOLING STAGE 4
state-text 5	R	COOLING STAGE 5
state-text 6	R	HEATING STAGE 1
state-text 7	R	HEATING STAGE 2
state-text 8	R	HEATING STAGE 3
state-text 9	R	HEATING STAGE 4
state-text 10	R	HEATING STAGE 5
state-text 11	R	FAN STAGE 1
state-text 12	R	FAN STAGE 2
state-text 13	R	FAN STAGE 3
state-text 14	R	FAN STAGE 4
state-text 15	R	FAN STAGE 5
state-text 16	R	HUMIDIFIER
state-text 17	R	DEHUMIDIFIER

Multi State Value Objects

MSV-<pairingAddress01> ccuName_relay1			MSV-<pairingAddress02> ccuName_relay2		
present-value	R		present-value	R	
status-flags	R		status-flags	R	
event-state	R		event-state	R	
out-of-service	W		out-of-service	W	
state-text	R	17	state-text	R	17
description	R		description	R	
MSV-<pairingAddress03> ccuName_relay3			MSV-<pairingAddress04> ccuName_relay4		
present-value	R		present-value	R	
status-flags	R		status-flags	R	
event-state	R		event-state	R	
out-of-service	W		out-of-service	W	
state-text	R	17	state-text	R	17
description	R		description	R	
MSV-<pairingAddress05> ccuName_relay5			MSV-<pairingAddress06> ccuName_relay6		
present-value	R		present-value	R	
status-flags	R		status-flags	R	
event-state	R		event-state	R	
out-of-service	W		out-of-service	W	
state-text	R	17	state-text	R	17
description	R		description	R	
MSV-<pairingAddress07> ccuName_relay7			MSV-100 CCU Battery		
present-value	R		present-value	R	
status-flags	R		status-flags	R	
event-state	R		event-state	R	
out-of-service	W		out-of-service	W	
state-text	R	17	state-text	R	3
description	R		description	R	
			state-text 1	R	HEALTHY – 75%
			state-text 2	R	ERROR – 50%
			state-text 3	R	FATAL – 25%

Data Link Layer Options:

- ARCNET (ATA 878.1), 2.5 Mb. (Clause 8)
- ARCNET (ATA 878.1), EIA-485 (Clause 8), baud rate(s) _____
- BACnet IP, (Annex J)
- BACnet IP, (Annex J), BACnet Broadcast Management Device (BBMD)
- BACnet IP, (Annex J), Network Address Translation (NAT Traversal)
- BACnet IPv6, (Annex U)
- BACnet IPv6, (Annex U), BACnet Broadcast Management Device (BBMD)
- BACnet/ZigBee (Annex O) _____
- ISO 8802-3, Ethernet (Clause 7)
- ANSI/ATA 878.1, 2.5 Mb. ARCNET (Clause 8)
- ANSI/ATA 878.1, RS-485 ARCNET (Clause 8), baud rate(s) _____
- MS/TP master (Clause 9), baud rate(s): 9600, 19200, 38400, 76800, 115200
- MS/TP slave (Clause 9), baud rate(s): _____
- Point-To-Point, EIA 232 (Clause 10), baud rate(s): _____
- Point-To-Point, modem, (Clause 10), baud rate(s): _____
- LonTalk, (Clause 11), medium: _____
- Other:

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:

- Router, Clause 6 – Routing configurations: Ethernet-IP, Ethernet-MS/TP, IP-MS/TP
- Annex H, BACnet Tunneling Router over IP

Character Sets Supported

Indicating support for multiple character sets does not imply that they can all be supported simultaneously.

- | | | |
|---|---|-------------------------------------|
| <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-4) | <input type="checkbox"/> ISO 10646 (UCS-2) | <input type="checkbox"/> JIS X 0208 |

Gateway Options:

Nil

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)

