FX Server BACNET OWS Protocol Implementation Conformance Statement

Johnson Controls

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Document Introduction

This document contains the Protocol Implementation Conformance Statement (PICS) and BACnet® Interoperability Building Blocks (BIBBs) for the FX Server BACNET OWS as required by the American National Standards Institute/American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ANSI/ASHRAE) Standard 135-2004, BACnet protocol.

The PICS is a written document created by the manufacturer of a device to identify the particular options specified in the BACnet standard and implemented in the device.

BACnet interoperability building blocks are collections of one or more BACnet services. This document includes a listing of the BIBBs currently supported by the FX Server BACNET OWS.

Annex A – Protocol Implementation Conformance Statement (Normative)

Table 1: BACnet Protocol Implementation Conformance Statement

Date	November 12, 2012
Vendor Name	Johnson Controls, Inc
Product Name	Server BACNET OWS
Product Model Numbers	LP-FXWSBACOW-0
Applications Software Version	FX Supervisory Software 4.1 (Niagara 3.6.35) or higher
Firmware Version	FX Supervisory Software 4.1 (Niagara 3.6.35) or higher
BACnet Protocol Revision	7

Product Description

The Facility Explorer Server is a flexible network server that provides real-time graphical information displays to standard web-browser clients. The BACnet OWS provides the FX Server with the ability to view, monitor, and control BACnet devices or objects over IP or Ethernet, or through a BACnet router to any BACnet media. Facility Explorer provides the ability to learn and manage devices, points, schedules, alarms, and logs.

BACnet Standardized Device Profile (Annex L)

- ☒ **BACnet Operator Workstation (B-OWS)**
- ☐ **BACnet Building Controller (B-BC)**
- ☐ **BACnet Advanced Application Controller (B-AAC)**
- ☐ **BACnet Application Specific Controller (B-ASC)**

Note: For a complete listing of the additional BIBBs supported (Annex K), see the Annex K – BACnet Interoperability Building Blocks (BIBBs) (Normative) section of this document.

Segmentation Capability

Table 2: BACnet Operator Workstation BIBBs Support

Feature	Supported	Window Size
Transmit Segmented Messages	☒	10
Receive Segmented Messages	☒	Any

Standard Object Types Supported

The following is a list of the standard object types as defined by ASHRAE. The objects checked are currently supported in the FX Server BACNET OWS. See the section of this document for details on the supported object type.

[X] **Device**

Device

Table 3: Device

Dynamically Creatable	Dynamically Deleteable	Optional Properties Supported	Writable Properties
☐	☐	Location	Location
		Description	Description
		Time_Synchronization_Recipients	Time_Synchronization_Recipients
		Backup_Failure_Timeout	Backup_Failure_Timeout
		UTC_Time_Synchronization_Recipients	UTC_Time_Synchronization_Recipients
		Max_Segments_Accepted	
		Local_Time	
		Local_Date	
		UTC_Offset	
		Daylight_Savings_Status	
		APDU_Segment_Timeout	
		Max_Master	
		Max_Info_Frames	
		Configuration_Files	
		Last_Restore_Time	
		Active_COV_Subscriptions	
		Time_Synchronization_Interval	
		Align_Intervals	
		Interval_Offset	
		Backup_Preparation_Time_proprietary	
		Restore_Completion_Time_proprietary	
		Restore_Preparation_Time_proprietary	
		Backup_And_Restore_State_proprietary	

The Backup and Restore properties from Addendum 135-2008n are included as proprietary properties with proprietary property identifiers.

Data Link Layer Option

- ☒ BACnet Internet Protocol (IP) (Annex J)
- ☒ BACnet IP (Annex J), Foreign Device
- ☒ ISO 8802-3, Ethernet (Clause 7)
- ☐ ANSI/ATA 878.1, 2.5 MB ARCNET®network (Clause 8)
- ☐ ANSI/ATA 878.1, RS-485 ARCNET®network (Clause 8), baud rates
- ☐ MS/TP master (clause 9) , baud rates:
- ☐ MS/TP slave (Clause 9), baud rates:
- ☐ Point-To-Point, EIA 232 (Clause 10), baud rates:
- ☐ Point-To-Point, modem (Clause 10), baud rates:
- ☐ LonTalk® protocol (Clause 11), medium:
- ☐ Other:

Device Address Binding

☒ Yes ☐ No **Is statice Device binding supported ?** (required for two-way communication between Master-Slave/Token-Passing [MS/TP] slaves and other devices)

Networking Options

- ☒ Router, Clause 6: Router Configurations: Ethernet-IP
- ☐ Annex H, BACnet Tunneling Router over IP
- ☒ BACnet/IP Broadcast Management Device (BBMD)

  Does the BBMD support registrations by Foreign Devices ? ☒ Yes ☐ No

Character Sets Supported

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

☒ ANSI X3.4	☐ ISO 10646 (UCS-4)	☒ ISO 8859-1
☒ ISO 10646 Universal Character Set-2 (UCS-2)	☐ IBM®/Microsoft®Double-Byte Character Set (DBCS)	☐ Japanese Industrial Standard (JIS) C 6226

If this product is a communication gateway, describe the types of non BACnet equipment/network(s) that the gateway supports:

This product supports communication between BACnet and any third-party system to which Facility Explorer can connect. Contact Johnson Controls for a list of supported protocols.

Annex K- BACnet Interoperability Building Blocks (BIBBs) (Normative)

Table 4: BACnet Operator Workstation BIBBs Support (Part 1 of 2)

Applcation Service (B-OWS)	Designation	Supported
Data Sharing - Read Property -A	DS-RP-A	X
Data Sharing - Read Property - B	DS-RP-B	X
Data Sharing - Read Property Multiple - A	DS-RPM-A	X
Data Sharing - Read Property Multiple - B	DS-RPM-B	X
Data Sharing - Write Property - A	DS-WP-A	X
Data Sharing - Write Property - B	DS-WP-B	X
Data Sharing - Write Property Multiple - A	DS-WPM-A	X
Data Sharing - Write Property Multiple - B	DS-WPM-B	X
Data Sharing - COV - A	DS-COV-A	X
Data Sharing - View - A	DS-V-A	X
Data Sharing - Modify - A	DS-M-A	X
Device Management - Dynamic Device Binding - A	DM-DDB-A	X
Device Management - Dynamic Device Binding - B	DM-DDB-B	X
Device Management - Dynamic Object Binding - A	DM-DOB-A	X
Device Management - Dynamic Object Binding - B	DM-DOB-B	X
Device Management - Device Communication Control - B	DM-DDC-B	X
Device Management - Reinitialize Device - B	DM-RD-B	X
Device Management - Time Synchronization - A	DM-TS-A	X
Device Management - Time Synchronization - B	DM-TS-B	X
Device Management - UTC Time Synchronization - A	DM-UTC-A	X
Device Management - UTC Time Synchronization - B	DM-UTC-B	X
Device Management - List Manipulation - A	DM-LM-A	X
Device Management - List Manipulation - B	DM-LM-B	X
Device Management - Automatic Network Mapping - A	DM-ANM-A	X
Device Management - Automatic Device Mapping - A	DM-ADM-A	X
Device Management - Automatic Time Synchronization - A	DM-ATS-A	X
Device Management - Manual Time Synchronization - A	DM-MTS-A	X

Table 4: BACnet Operator Workstation BIBBs Support (Part 2 of 2)

Applcation Service (B-OWS)	Designation	Supported
Alarm and Event - Notification - A	AE-N-A	X
Alarm and Event - ACK - A	AE-ACK-A	X
Alarm and Event - View Notifications - A	AE-VN-A	X
Alarm and Event - Advanced View Notifications - A	AE-AVN-A	X
Alarm and Event - View and Modify - A	A-VM-A	X
Alarm and Event - Alarm Summary View - A	AE-AS-A	X
Alarm and Event - Alarm and Event Info - A	AE-INFO-A	X
Scheduling - View and Modify - A	SCHED-VM-A	X
Trending - Automated Trend Retrieval - A	T-ATR-A	X
Trending - View - A	T-V-A	X
Alarm and Event - Advanced View Notifications - A	AE-AVN-A	X

Building Efficiency

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