

PICS - Protocol Implementation Conformance Statement

1.1. Product Description

The Supervisor is a SCADA Software that can act as a BACnet Operator Workstation (B-OWS). It supports communication with BACnet devices via BACnet-IP.

BACnet Protocol Revision: ANSI/ASHRAE Standard 135-2010

1.2. BACnet Standardized Device Profile

X BACnet Operator Workstation (B-OWS)

o BACnet Advanced Operator Workstation (B-AWS)

o BACnet Operator Display (B-OD)

o BACnet Building Controller (B-BC)

o BACnet Advanced Application Controller (B-AAC)

o BACnet Application Specific Controller (B-ASC)

o BACnet Smart Sensor (B-SS)

o BACnet Smart Actuator (B-SA)

1.3. BACnet Interoperability Building Blocks Supported

Data Sharing	ReadProperty-A	DS-RP-A
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	ReadProperty-B	DS-RP-B
	ReadPropertyMultiple-A	DS-RPM-A
	WriteProperty-A	DS-WP-A
	View-A	DS-V-A
	Modify-A	DS-M-A
	COV-A	DS-COV-A
	COVP-A	DS-COVP-A
Device & Network Management	Dynamic Device Binding-A	DM-DDB-A
	Dynamic Device Binding-B	DM-DDB-B
	Dynamic Object Binding-B	DM-DOB-B
	Automatic Network Mapping-A	DM-ANM-A
	Automatic Device Mapping-A	DM-ADM-A
	TimeSynchronization-A	DM-TS-A
	UTCTimeSynchronization-A	DM-UTC-A
Event & Alarm	Notification-A	AE-N-A
	Information-A	AE-INFO-A ¹
	View and Modify-A	AE-VM-A
Scheduling	Scheduling -A	SCHEM-VM-A
Trending		

¹BIBBS as defined in revision 135-2004.

1.4. Segmentation Capability

X Segmented requests supported Window Size: Configurable

X Segmented responses supported Window Size: Configurable

1.5. Standard Object Types Supported

- The Supervisor as BACnet server

Object Type	Object Type Supported	Dynamically Creatable and Deletable	Optional Properties Supported	Proprietary Properties
Device	Yes	No	Location Description Max_Segments_Accepted Local_Time Local_Date UTC_Offset Daylight_Savings_Status APDU_Segment_Timeout Time_Synchronization_Recipients	-

			Configuration_Files Last_Restore_Time Backup_Failure_Timeout Active_COV_Subscriptions Profile_Name	
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- The Supervisor as BACnet client

The following table describes all objects that the Supervisor is able to read as a BACnet client. That doesn't mean these objects are necessarily used in a particular project.

Object Type	Object Type Supported	Dynamically Creatable and Deletable	Optional Properties Supported	Proprietary Properties ²
Accumulator	Yes	No	Description Device Type Reliability Prescale Value_Change_Time Value_Before_Change Value_Set Logging_Record Logging_Object	Yes

			Pulse_Rate High_Limit Low_Limit Limit_Monitoring_Interval Notification_Class Time_Delay Limit_Enable Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Message_Texts Profile_Name	
Analog-input	Yes	No	Description Device Type Reliability Update_Interval Min_Pres_Value Max_Pres_Value Resolution COV_Increment Time_Delay Notification_Class	Yes

			High_Limit Low_Limit Deadband Limit_Enable Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Message_Texts Profile_Name	
Analog-output	Yes	No	Description Device Type Reliability Min_Pres_Value Max_Pres_Value Resolution COV_Increment Time_Delay Notification_Class High_Limit Low_Limit Deadband Limit_Enable	Yes

			Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Message_Texts Profile_Name	
Analog-value	Yes	No	Description Reliability Priority_Array Relinquish_Default COV_Increment Time_Delay Notification_Class High_Limit Low_Limit Deadband Limit_Enable Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Message_Texts Profile_Name	Yes

Averaging	Yes	No	Minimum_Value_Timestamp Variance_Value Maximum_Value_Timestamp Description Profile_Name	Yes
Binary-input	Yes	No	Description Device_Type Reliability Inactive_Text Active_Text Change_Of_State_Time Change_Of_State_Count Time_Of_State_Count_Reset Elapsed_Active_Time Time_Of_Active_Time_Reset Time_Delay Notification_Class Alarm_Value Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Message_Texts	Yes

			Profile_Name	
Binary-output	Yes	No	Description Device_Type Reliability Inactive_Text Active_Text Change_Of_State_Time Change_Of_State_Count Time_Of_State_Count_Reset Elapsed_Active_Time Time_Of_Active_Time_Reset Minimum_Off_Time Minimum_On_Time Time_Delay Notification_Class Feedback_Value Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Message_Texts Profile_Name	Yes
Binary-value	Yes	No	Description	Yes

			Reliability Inactive_Text Active_Text Change_Of_State_Time Change_Of_State_Count Time_Of_State_Count_Reset Elapsed_Active_Time Time_Of_Active_Time_Reset Minimum_Off_Time Minimum_On_Time Priority_Array Relinquish_Default Time_Delay Notification_Class Alarm_Value Event_Enable Aked_Transitions Notify_Type Event_Time_Stamps Event_Message_Texts Profile_Name	
Calendar	Yes	No	Description Profile_Name	Yes

Command	Yes	No	Description Action_Text Profile_Name	Yes
Device	Yes	No	Location Description Max_Segments_Accepted Local_Time Local_Date UTC_Offset Daylight_Savings_Status APDU_Segment_Timeout Time_Synchronization_Recipients Configuration_Files Last_Restore_Time Backup_Failure_Timeout Active_COV_Subscriptions Profile_Name	Yes
Event-enrollment	Yes	No	Description Profile_Name	Yes
File	Yes	No	Description Profile_Name	Yes
Group	Yes	No	Description Profile_Name	Yes
Life-safety-point	Yes	No	Tracking_Value	Yes

			Description Device_Type Time_Delay Notification_Class Life_Safety_Alarm_Values Alarm_Values Fault_Values Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Maintenance_required Setting Direct_Reading Units Member_Of Profile_Name Event_Message_Texts	
Life-safety-zone	Yes	No	Tracking_Value Description Device_Type Time_Delay Notification_Class	Yes

			Life_Safety_Alarm_Values Alarm_Values Fault_Values Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Maintenance_required Member_Of Profile_Name Event_Message_Texts	
Loop	Yes	No	Reliability Update_Interval Proportional_Constant Proportional_Constant_Units Integral_Constant Integral_Constant_Units Derivative_Constant Derivative_Constant_Units Bias Maximum_Output Minimum_Output	Yes

			COV_Increment Time_Delay Notification_Class Error_Limit Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Message_Texts Profile_Name	
Multi-state-input	Yes	No	Description Device_Type Reliability State_Text Time_Delay Notification_Class Alarm_Values Fault_Values Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Message_Texts	Yes

			Profile_Name	
Multi-state-output	Yes	No	Description Device_Type Reliability State_Text Time_Delay Notification_Class Feedback_Value Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Message_Texts Profile_Name	Yes
Multi-state-value	Yes	No	Description Reliability State_Text Priority_Array Relinquish_Default Time_Delay Notification_Class Alarm_Values Fault_Values	Yes

			Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Message_Texts Profile_Name	
Notification-class	Yes	No	Description Profile_Name	Yes
Program	Yes	No	Reason_For_Halt Description_Of_Halt Program_Location Description Instance_Of Reliability Profile_Name	Yes
Pulse-converter	Yes	No	Description Input_Reference Reliability COV_Increment COV_Period Notification_Class Time_Delay High_Limit Low_Limit	Yes

			Deadband Limit_Enable Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Message_Texts Profile_Name	
Schedule	Yes	No	Description Weekly_Schedule Exception_Schedule Profile_Name	Yes
Trend-log	Yes	No	Description Start_Time Stop_Time Log_DeviceObjectProperty Log_Interval COV_Resubscription_Interval Client_COV_Increment Notification_Threshold Records_Since_Notification Last_Notify_Record Notification_Class	Yes

			Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Profile_Name	
Access-door	Yes	No	Description Door_Status Lock_Status Secured_Status Door_Unlock_Delay_Time Door_Alarm_State Masked_Alarm_Values Maintenance_Required Time_Delay Notification_Class Alarm_Values Fault_Values Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Message_Texts Profile_Name	Yes

Load_control	Yes	No	Description State_Description Reliability Full_Duty_Baseline Time_Delay Notification_Class Event_Enable Acked_Transitions Notify_Type Event_Time_Stamps Event_Message_Texts Profile_Name	Yes
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² This indicates support of proprietary properties based on primitive and base types as defined in the ASHRAE BACnet standard.

1.6. Data Link layer Options

X BACnet IP, (Annex J)

o BACnet IP, (Annex J), Foreign Device

o ISO 8802-3, Ethernet (Clause 7)

o ANSI/ATA 878.1, 2.5 Mb. ARCNET (Clause 8)

o ANSI/ATA 878.1, RS-485 ARCNET (Clause 8), baud rate(s) _____

- o MS/TP master (Clause 9), baud rate(s):
- o MS/TP slave (Clause 9), baud rate(s):
- o Point-To-Point, EIA 232 (Clause 10), baud rate(s):
- o Point-To-Point, modem, (Clause 10), baud rate(s):
- o LonTalk, (Clause 11), medium: _____
- o BACnet/Zigbee (Annex O): _____
- o Other:

1.7. 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**

1.8. Networking Options

o Router, Clause 6 - List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.

o Annex H, BACnet Tunneling Router over IP

X BACnet/IP Broadcast Management Device (BBMD)

- Does the BBMD support registrations by Foreign Devices? **Yes**
- Does the BBMD support network address translation? **No**

1.9. Character Sets Supported

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

X ANSI X3.4

X IBM / Microsoft DBCS

X ISO 8859-1

X ISO 10646 (UCS-2)

X ISO 10646 (UCS-4)

X JIS X 0208

X (JIS C 6226)

X ISO 10646 (UTF-8)

1.10. Network Security Options

X Non-secure Device - is capable of operating without BACnet Network Security

o Secure Device - is capable of using BACnet Network Security (NS-SD BIBB)

- o Multiple Application-Specific Keys
- o Supports encryption (NS-ED BIBB)
- o Key Server (NS-KS BIBB)