Enterprise Buildings Integrator R430 Protocol Implementation Conformance Statement (PICS)

Topic:	BACnet Protocol Implementation Conformance Statement (PICS)
Date:	March 2014
Version	1
Applicable Products	Honeywell Enterprise Buildings Integrator
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Honeywell Enterprise Buildings Integrator

Annex A - Protocol Implementation Conformance Statement

Date: 28 March 2014
Vendor ID: 17
Vendor Name: Honeywell International, Inc.
Product Name: Enterprise Buildings Integrator
Product Model Number: R430
Applications Software Version:
Firmware Revision:
BACnet Protocol Revision:1.4

Product Description and Intended Use:
The Honeywell Enterprise Buildings Integrator BACnet Workstation.

BACnet Standardized Device Profile (Annex L):

❏ BACnet Operator Workstation (B-OWS)
⇒ BACnet Advanced Operator Workstation (B-AWS)
❏ BACnet Operator Display (B-OD)
❏ 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 Interoperability Building Blocks Supported (Annex K):

Data Sharing	Data Sharing - Read Property-A	DS-RP-A
	Data Sharing - Read Property-B	DS-RP-B
	Data Sharing - Read Property Multiple-A	DS-RPM-A
	Data Sharing - Write Property-A	DS-WP-A
	Data Sharing - Write Property Multiple-A	DS-WPM-A
	Data Sharing - COV-A	DS-COV-A
	Data Sharing - COVP-A	DS-COVP-A
	Data Sharing – View-A	DS-V-A
	Data Sharing – Advanced View – A	DS-AV-A
	Data Sharing – Proprietary View – A	DS-PV-A
	Data Sharing – Modify-A	DS-M-A
	Data Sharing – Advanced Modify – A	DS-AM-A
Alarm & Event Management	Alarm and Event - Notification-A	AE-N-A
	Alarm and Event - ACK-A	AE-ACK-A
	Alarm and Event - Alarm Summary View-A	AE-AS-A
	Alarm and Event – Alarm Summary-A	AE-ASUM-A
	Alarm and Event – Alarm and Event-Enrollment Sumary -A	AE-ESUM-A

	Alarm and Event – Information-A	AE-INFO-A
	Alarm and Event – Advanced View and Modify-A	AE-AVM-A
	Alarm and Event – View Notifications-A	AE-VN-A
	Alarm and Event – Advanced View Notifications-A	AE-AVN-A
	Alarm and Event - LifeSafety-A	AE-LS-A
Scheduling	Scheduling – View and Modify-A	SCHED-VM-A
	Scheduling – Advanced View and Modify-A	SCHED-AVM-A
	Scheduling – Weekly Schedule-A	SCHED-WS-A
Trending	Trending-View-A	T-V-A
	Trending – Automated Trend Retrieval-A	T-ATR-A
	Trending – Advanced View and Modify-A	T-AVM-A
Device & Network Management	Device Management - Automatic Device Mapping-A	DM-ADM-A
	Device Management - Dynamic Device Binding-A	DM-DDB-A
	Device Management - Dynamic Device Binding-B	DM-DDB-B
	Device Management - Dynamic Object Binding-A	DM-DOB-A
	Device Management - Dynamic Object Binding-B	DM-DOB-B
	Device Management - Device Communication Control-A	DM-DCC-A
	Device Management – Manual Time Synchronization-A	DM-MTS-A
	Device Management – Object Creation and Deletion-A	DM-OCD-A
	Device Management - Reinitialise Device-A	DM-RD-A
	Device Management - Restart-A	DM-R-A
	Device Management - Backup and Restore-A	DM-BR-A
	Device Management - List Manipulation-A	DM-LM-A
	Device Management - Connection Establishment-A	NM-CE-A
	Device Management - Automated Network Mapping-A	DM-ANM-A

Segmentation Capability:

Able to transmit segmented messages ⇒ yes ❏ no   Window Size __16__
Able to receive segmented messages ⇒ yes ❏ no   Window Size __16__

Standard Object Types Supported:

Device Properties:

Required Properties	Optional Properties	Proprietary Properties
Object_Identifier		
Object_Name		
Object_Type		
System_Status		
Vendor_Name		
Vendor_Identifier		
Model_Name		
Firmware_Revision		

Application_Software_Version		
	Location	
	Description	
	Protocol_Conformance _Class	
Protocol_Version		
Protocol_Revision		
Protocol_Services_Supported		
Protocol_Object_Types_Supported		
Object_List		
Max_APDU_Length_Accepted		
Segmentation_Supported		
	Max_Segments_Accepted	
	APDU_Segment_Timeout	
APDU_Timeout		
Number_Of_APDU_Retries		
Database Revision		
Device_Address_Binding		

Data Link Layer Options:

⇒ BACnet IP, (Annex J)
⇒ BACnet IP, (Annex J), Foreign Device
⇒ 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):
❏ 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 - 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

Character Sets Supported:

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

⇒   ANSI X3.4
❏ IBM™/Microsoft™ DBCS
❏ JIS C 6226

❏ ISO 10646 (UCS-4)
⇒ ISO 10646 (UCS-2)
⇒ ISO 8859-1

Additional Information:

The Honeywell ComfortPoint Open Manager BACnet Workstation supports devices which implement either algorithmic or intrinsic alarming methodologies.

Standard Objects and Properties Supported:

Accumulator Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Present_Value	Present_Value
Description	Description
Device_Type	Device_Type
Status_Flags	
Event_State	
Reliability	
Out_Of_Service	Out_Of_Service
Scale	
Units	Units
Prescale	Prescale
Max_Pres_Value	Max_Pres_Value
Value_Change_Time	
Value_Before_Change	
Value_Set	Value_Set
Logging_Record	
Logging_Object	Logging_Object
Pulse_Rate	Pulse_Rate
High_Limit	High_Limit
Low_Limit	Low_Limit
Limit_Monitoring_Interval	Limit_Monitoring_Interval
Notification_Class	Notification_Class
Time_Delay	Time_Delay
Limit_Enable	Limit_Enable
Event_Enable	Event_Enable
Acked_Transitions	
Notify_Type	Notify_Type
Event_Time_Stamps	

Analog Input Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Present_Value	Present_Value
Description	Description
Device_Type	Device_Type
Status_Flags	
Event_State	
Reliability	
Out_Of_Service	Out_Of_Service

Readable Properties	Writable Properties
Update_Interval	Update_Interval
Units	Units
Min_Pres_Value	Min_Pres_Value
Max_Pres_Value	Max_Pres_Value
Resolution	Resolution
COV_Increment	COV_Increment
Time_Delay	Time_Delay
Notification_Class	Notification_Class
High_Limit	High_Limit
Low_Limit	Low_Limit
Deadband	Deadband
Limit_Enable	Limit_Enable
Event_Enable	Event_Enable
Acked_Transitions	
Notify_Type	Notify_Type
Event_Time_Stamps	

Analog Output Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Present_Value	Present_Value
Description	Description
Device_Type	Device_Type
Status_Flags	
Event_State	
Reliability	
Out_Of_Service	Out_Of_Service
Units	Units
Min_Pres_Value	Min_Pres_Value
Max_Pres_Value	Max_Pres_Value
Resolution	Resolution
Priority_Array	
Relinquish_Default	Relinquish_Default
COV_Increment	COV_Increment
Time_Delay	Time_Delay
Notification_Class	Notification_Class
High_Limit	High_Limit
Low_Limit	Low_Limit
Deadband	Deadband
Limit_Enable	Limit_Enable
Event_Enable	Event_Enable
Acked_Transitions	
Notify_Type	Notify_Type
Event_Time_Stamps	

Analog Value Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Present_Value	Present_Value
Description	Description
Status_Flags	
Event_State	
Reliability	
Out_Of_Service	Out_Of_Service
Units	Units
Priority_Array	
Relinquish_Default	Relinquish_Default

COV_Increment	COV_Increment
Time_Delay	Time_Delay
Notification_Class	Notification_Class
High_Limit	High_Limit
Low_Limit	Low_Limit
Deadband	Deadband
Limit_Enable	Limit_Enable
Event_Enable	Event_Enable
Acked_Transitions	
Notify_Type	Notify_Type
Event_Time_Stamps	

Averaging Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Minimum_Value	
Minimum_Value_Timestamp	
Average_Value	
Variance_Value	Variance_Value
Maximum_Value	
Maximum_Value_Timestamp	
Description	Description
Attempted_Samples	Attempted_Samples
Valid_Samples	
Object_Property_Reference	Object_Property_Reference
Window_Interval	Window_Interval
Window_Samples	Window_Samples

Binary Input Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Present_Value	Present_Value
Description	Description
Device_Type	Device_Type
Status_Flags	
Event_State	
Reliability	
Out_Of_Service	Out_Of_Service
Polarity	Polarity
Inavtive_Text	Inavtive_Text
Active_Text	Active_Text
Change_Of_State_Time	
Change_Of_State_Count	Change_Of_State_Count
Time_Of_State_Count_Reset	
Elapsed_Active_Time	
Time_Of_Active_Time_Reset	
Time_Delay	Time_Delay
Notification_Class	Notification_Class
Alarm_Value	Alarm_Value
Event_Enable	Event_Enable
Acked_Transitions	
Notify_Type	Notify_Type
Event_Time_Stamps	

Binary Output Object:

Readable Properties	Writable Properties

Object_Identifier	
Object_Name	
Object_Type	
Present_Value	Present_Value
Description	Description
Device_Type	Device_Type
Status_Flags	
Event_State	
Reliability	
Out_Of_Service	Out_Of_Service
Polarity	Polarity
Inavtive_Text	Inavtive_Text
Active_Text	Active_Text
Change_Of_State_Time	
Change_Of_State_Count	Change_Of_State_Count
Time_Of_State_Count_Reset	
Elapsed_Active_Time	
Time_Of_Active_Time_Reset	
Minimum_Off_Time	Minimum_Off_Time
Minimum_On_Time	Minimum_On_Time
Priority_Array	
Relinquish_Default	Relinquish_Default
Time_Delay	Time_Delay
Notification_Class	Notification_Class
Feedback_Value	Feedback_Value
Event_Enable	Event_Enable
Acked_Transitions	
Notify_Type	Notify_Type
Event_Time_Stamps	

Binary Value Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Present_Value	Present_Value
Description	Description
Device_Type	Device_Type
Status_Flags	
Event_State	
Reliability	
Out_Of_Service	Out_Of_Service
Inavtive_Text	Inavtive_Text
Active_Text	Active_Text
Change_Of_State_Time	
Change_Of_State_Count	Change_Of_State_Count
Time_Of_State_Count_Reset	
Elapsed_Active_Time	
Time_Of_Active_Time_Reset	
Minimum_Off_Time	Minimum_Off_Time
Minimum_On_Time	Minimum_On_Time
Priority_Array	
Relinquish_Default	Relinquish_Default
Time_Delay	Time_Delay
Notification_Class	Notification_Class
Alarm_Value	Alarm_Value
Event_Enable	Event_Enable
Acked_Transitions	
Notify_Type	Notify_Type
Event_Time_Stamps	

Calendar Object:

Readable Properties	Writable Properties

Object_Identifier	
Object_Name	
Object_Type	
Description	Description
Present_Value	
Date_List	Date_List

Command Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Description	Description
Present_Value	Present_Value
In_Process	
All_Writes_Successful	
Action	
Action_Text	Action_Text

Device Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
System_Status	
Vendor_Name	
Vendor_Identifier	
Model_Name	
Firmware_Revision	
Application_Software_Version	
Location	Location
Description	Description
Protocol_Version	
Protocol_Revision	
Protocol_Services_Supported	
Protocol_Object_Types_Supported	
Configuration_Files	Configuration_Files
Active_COV_Subscriptions	
Active_VT_Sessions	
APDU_Timeout	APDU_Timeout
Auto_Slave_Discovery	Auto_Slave_Discovery
Backup_Failure_Timeout	Backup_Failure_Timeout
Database_Revision	
Device_Addres_Binding	
Last_Restore_Time	
Manual_Slave_Address_Binding	Manual_Slave_Address_Binding
Max_Info_Frames	Max_Info_Frames
Max_Master	Max_Master
Max_Segments_Accepted	
Slave_Address_Binding	Slave_Address_Binding
Slave_Proxy_Enable	Slave_Proxy_Enable
Time_Synchronization_Recipients	Time_Synchronization_Recipients
VT_Classes_Supported	
Object_List	
Max_APDU_Length_Accepted	
Segmentation_Supported	
Local_Time	Local_Time
Local_Date	Local_Date
UTC_Offset	UTC_Offset
Daylight_Saving_Status	Daylight_Saving_Status
APDU_Segment_Timeout	APDU_Segment_Timeout
Number_Of_APDU_Retries	Number_Of_APDU_Retries

Event Enrollment Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Description	Description
Event_Type	Event_Type
Notify_Type	Notify_Type
Object_Property_Reference	Object_Property_Reference
Event_Parameters	Event_Parameters
Event_State	
Event_Enable	Event_Enable
Acked_Transitions	
Notification_Class	Notification_Class
Event_Time_Stamps	

File Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Description	Description
File_Type	
File_Size	File_Size
Modification_Date	
Archive	Archive
Read_Only	
Record_Count	Record_Count
File_Access_Method	

Group Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Description	Description
List_Of_Group_Members	
Present_Value	

Life Safety Point Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Present_Value	Present_Value
Tracking_Value	
Description	
Device_Type	
Status_Flags	
Event_State	
Reliability	
Out_Of_Service	Out_Of_Service
Notification_Class	
Life_Safety_Alarm_Values	Life_Safety_Alarm_Values
Alarm_Values	Alarm_Values
Fault_Values	Fault_Values
Event_Enable	Event_Enable
Acked_Transitions	
Notify_Type	Notify_Type
Event_Time_Stamps	
Silenced	

Operation_Expected	
Maintenance_Required	
Setting	
Direct_Reading	
Units	
Member_Of	

Life Safety Zone Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Present_Value	Present_Value
Tracking_Value	
Description	
Device_Type	
Status_Flags	
Event_State	
Reliability	
Out_Of_Service	Out_Of_Service
Notification_Class	
Life_Safety_Alarm_Values	Life_Safety_Alarm_Values
Alarm_Values	Alarm_Values
Fault_Values	Fault_Values
Event_Enable	Event_Enable
Acked_Transitions	
Notify_Type	Notify_Type
Event_Time_Stamps	
Silenced	
Operation_Expected	
Maintenance_Required	
Zone_Members	

Loop Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Present_Value	Present_Value
Description	Description
Status_Flags	
Event_State	
Reliability	
Out_Of_Service	Out_Of_Service
Update_Interval	Update_Interval
Output_Units	Output_Units
Manipulated_Variable_Reference	Manipulated_Variable_Reference
Controlled_Variable_Reference	Controlled_Variable_Reference
Controlled_Variable_Value	Controlled_Variable_Value
Controlled_Variable_Units	Controlled_Variable_Units
Setpoint_Reference	Setpoint_Reference
Setpoint	Setpoint
Action	Action
Proportional_Constant	Proportional_Constant
Proportional_Constant_Units	Proportional_Constant_Units
Integral_Constant	Integral_Constant
Integral_Constant_Units	Integral_Constant_Units
Derivative_Constant	Derivative_Constant
Derivative_Constant_Units	Derivative_Constant_Units
Bias	Bias
Maximum_Output	Maximum_Output
Minimum_Output	Minimum_Output
Priority_For_Writing	Priority_For_Writing

COV_Increment	COV_Increment
Time_Delay	Time_Delay
Notification_Class	Notification_Class
Error_Limit	Error_Limit
Event_Enable	Event_Enable
Acked_Transitions	
Notify_Type	Notify_Type
Event_Time_Stamps	

Multi-State Input Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Present_Value	Present_Value
Description	Description
Device_Type	Device_Type
Status_Flags	
Event_State	
Reliability	
Out_Of_Service	Out_Of_Service
Number_Of_States	Number_Of_States
State_Text	State_Text
Time_Delay	Time_Delay
Notification_Class	Notification_Class
Alarm_Values	Alarm_Values
Fault_Values	Fault_Values
Event_Enable	Event_Enable
Acked_Transitions	
Notify_Type	Notify_Type
Event_Time_Stamps	

Multi-State Output Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Present_Value	Present_Value
Description	Description
Device_Type	Device_Type
Status_Flags	
Event_State	
Reliability	
Out_Of_Service	Out_Of_Service
Number_Of_States	Number_Of_States
State_Text	State_Text
Priority_Array	
Relinquish_Default	Relinquish_Default
Time_Delay	Time_Delay
Notification_Class	Notification_Class
Feedback_Values	Feedback_Values
Event_Enable	Event_Enable
Acked_Transitions	
Notify_Type	Notify_Type
Event_Time_Stamps	

Multi-State Value Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Present_Value	Present_Value

Description	Description
Status_Flags	
Event_State	
Reliability	
Out_Of_Service	Out_Of_Service
Number_Of_States	Number_Of_States
State_Text	State_Text
Priority_Array	
Relinquish_Default	Relinquish_Default
Time_Delay	Time_Delay
Notification_Class	Notification_Class
Alarm_Values	Alarm_Values
Fault_Values	Fault_Values
Event_Enable	Event_Enable
Acked_Transitions	
Notify_Type	Notify_Type
Event_Time_Stamps	

Notification Class Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Description	Description
Notification_Class	Notification_Class
Priority	Priority
Recipient_List	Recipient_List
Ack_Required	Ack_Required

Program Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Program_State	
Program_Change	Program_Change
Reason_For_Halt	Reason_For_Halt
Description_Of_Halt	Description_Of_Halt
Program_Location	Program_Location
Description	Description
Instance_Of	Instance_Of
Status_Flags	
Reliability	
Out_Of_Service	Out_Of_Service

Pulse Converter Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Description	Description
Present_Value	Present_Value
Input_Reference	Input_Reference
Status_Flags	
Event_State	
Reliability	
Out_Of_Service	Out_Of_Service
Units	Units
Scale_Factor	Scale_Factor
Adjust_Value	Adjust_Value
Count	
Update_Time	

Count_Change_Time	
Count_Before_Change	
COV_Increment	COV_Increment
COV_Period	COV_Period
Notification_Class	Notification_Class
Time_Delay	Time_Delay
High_Limit	High_Limit
Low_Limit	Low_Limit
Deadband	Deadband
Limit_Enable	Limit_Enable
Event_Enable	Event_Enable
Acked_Transitions	
Notify_Type	Notify_Type
Event_Time_Stamps	

Schedule Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Present_Value	
Description	Description
Effective_Period	Effective_Period
Weekly_Schedule	Weekly_Schedule
Exception_Schedule	Exception_Schedule
List_Of_Object_Property_References	List_Of_Object_Property_References
Priority_For_Writing	Priority_For_Writing
Status_Flags	
Reliability	
Out_Of_Service	Out_Of_Service
Schedule_Default	Schedule_Default

Trend Log Object:

Readable Properties	Writable Properties
Object_Identifier	
Object_Name	
Object_Type	
Description	Description
Log_Enable	Log_Enable
Start_Time	Start_Time
Stop_Time	Stop_Time
Log_DeviceObjectProperty	Log_DeviceObjectProperty
Log_Interval	Log_Interval
COV_Resubscription_Interval	COV_Resubscription_Interval
Client_COV_Increment	Client_COV_Increment
Stop_When_Full	Stop_When_Full
Buffer_Size	Buffer_Size
Log_Buffer	
Record_Count	Record_Count
Total_Record_Count	
Notification_Threshold	Notification_Threshold
Records_Since_Notification	
Last_Notify_Record	
Event_State	
Notification_Class	Notification_Class
Event_Enable	Event_Enable
Acked_Transitions	
Notify_Type	Notify_Type
Event_Time_Stamps	