

BACnet Protocol Implementation Conformance Statement

Date: September 2, 2015

Vendor Name: Delta Controls Inc.

Product Name: enteliZONE

Product Model Numbers: eZFC-424R4-24, eZ-440R4-230, eZV-440

Product Version: 3.40-eZ2.1

BACnet Protocol Revision: 12

Product Description

enteliZONE is a family of Delta controllers for HVAC zone applications. While there are multiple models in the enteliZONE family they can be grouped into categories that share the same BACnet features differing only in the amount and type of I/O between model options in each group. This PICs statement is for enteliZONE configurable MS/TP model options.

Unless otherwise noted all models support all the BACnet capabilities indicated.

BACnet Standardized Device Profile (Annex L)

BACnet Application Specific Controller (B-ASC)

BACnet Interoperability Building Blocks (Annex K)

Data Sharing	DS-RP-A ¹	Data Sharing-ReadProperty-A
	DS-RP-B	Data Sharing-ReadProperty-B
	DS-RPM-B	Data Sharing-ReadPropertyMultiple-B
	DS-WP-A	Data Sharing-WriteProperty-A
	DS-WP-B	Data Sharing-WriteProperty-B
	DS-COV-B	Data Sharing-COV-B
	DS- COVU-B	Data Sharing-COV-Unsolicited-B

¹ eZ-440R4-230 and eZV-440 models only.

Alarm and Event Management	AE-N-I-B	Alarm and Event-Notification Internal-B
	AE-INFO-B	Alarm and Event-Information-B

Scheduling	SCHED-WS-I-B	Scheduling-Weekly Schedule-Internal-B
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Trending	T-VMT-I-B	Trending-Viewing and Modifying Trends-Internal-B
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Device and Network Management	DM-DDB-A	Device Management-Dynamic Device Binding-A
	DM-DDB-B	Device Management-Dynamic Device Binding-B
	DM-DOB-B	Device Management-Dynamic Object Binding-B
	DM-DCC-B	Device Management-DeviceCommunicationControl-B
	DM-PT-A	Device Management-Private Transfer-A
	DM-PT-B	Device Management-Private Transfer-B
	DM-TS-B	Device Management-TimeSynchronization-B
	DM-RD-B	Device Management-ReinitializeDevice-B
	DM-BR-B	Device Management-Backup and Restore-B
	DM-OCD-B	Device Management-Object Creation and Deletion-B

Segmentation Capability

- Able to transmit segmented message Window Size = 1
- Able to receive segmented message Window Size = 1

Standard Object Types Supported

The following table lists the standard object types supported with a list of optional and writeable properties for each object type. Objects that can be dynamically created or deleted using the createobject and delete object services are indicated with Create and Delete Checkboxes below the object type name.

Standard Properties Summary

Object Type (& Create/Delete Support)	Property Identifier	Writable C-Conditional	Optional	Property Range Restriction
Analog Input Object	Acked_Transitions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	COV_Increment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Deadband	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0-64 characters
	Device_Type	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Event_Time_Stamps	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	High_Limit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Low_Limit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Max_Pres_Value	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Min_Pres_Value	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Notification_Class	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Notify_Type	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Object_Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-36 characters
Out_Of_Service	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Object Type (& Create/Delete Support)	Property Identifier	Writable C- Conditional	Optional	Property Range Restriction
	Present_Value	<input checked="" type="checkbox"/> C	<input type="checkbox"/>	
	Reliability	<input checked="" type="checkbox"/> C	<input checked="" type="checkbox"/>	
	Resolution	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Time_Delay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Analog Output Object	Acked_Transitions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	COV_Increment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Deadband	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0-64 characters
	Device_Type	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Event_Time_Stamps	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	High_Limit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Low_Limit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Max_Pres_Value	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Min_Pres_Value	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Notification_Class	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Notify_Type	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Object_Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-36 characters
	Out_Of_Service	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Present_Value	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Reliability	<input checked="" type="checkbox"/> C	<input checked="" type="checkbox"/>	
	Relinquish_Default	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Resolution	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Time_Delay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Analog Value Object	COV_Increment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0-64 characters
	Object_Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-36 characters
	Out_Of_Service	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Present_Value	<input checked="" type="checkbox"/> C	<input type="checkbox"/>	
	Reliability	<input checked="" type="checkbox"/> C	<input checked="" type="checkbox"/>	
	Units	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Binary Input Object	Acked_Transitions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Active_Text	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Alarm_Value	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Change_Of_State_Count	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Accepts writes of value of zero only
	Change_Of_State_Time	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0-64 characters
	Device_Type	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Event_Time_Stamps	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Inactive_Text	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Notification_Class	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Object Type (& Create/Delete Support)	Property Identifier	Writable C- Conditional	Optional	Property Range Restriction
	Notify_Type	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Object_Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-36 characters
	Out_Of_Service	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Present_Value	<input checked="" type="checkbox"/> C	<input type="checkbox"/>	
	Polarity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Reliability	<input checked="" type="checkbox"/> C	<input checked="" type="checkbox"/>	
	Time_Delay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Time_Of_State_Count_Reset	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Binary Output Object	Acked_Transitions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Active_Text	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Change_Of_State_Count	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Accepts writes of value of zero only
	Change_Of_State_Time	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0-64 characters
	Device_Type	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Event_Time_Stamps	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Feedback_Value	<input checked="" type="checkbox"/> C	<input type="checkbox"/>	
	Inactive_Text	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Minimum_Off_Time	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Minimum_On_Time	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Notification_Class	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Notify_Type	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Object_Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-36 characters
	Out_Of_Service	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Present_Value	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Polarity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Reliability	<input checked="" type="checkbox"/> C	<input checked="" type="checkbox"/>	
	Relinquish_Default	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Time_Delay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Time_Of_State_Count_Reset	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Binary Value Object	Active_Text	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0-64 characters
	Inactive_Text	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Object_Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-36 characters
	Out_Of_Service	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Present_Value	<input checked="" type="checkbox"/> C	<input type="checkbox"/>	
Device Object	APDU_Segment_Timeout	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Backup_Failure_Timeout	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Configuration_Files	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0-64 characters
	Last_Restore_Time	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Local_Date	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Object Type (& Create/Delete Support)	Property Identifier	Writable C- Conditional	Optional	Property Range Restriction
	Local_Time	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Location	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Max_Info_Frames	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Max_Master	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Max_Segments_Accepted	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Number_Of_APDU_Retries	<input type="checkbox"/>	<input type="checkbox"/>	
	Object_Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-36 characters
File Object	Archive	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0-64 characters
	Object_Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-36 characters
Loop Object	Action	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Bias	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Range is 0.0 to 100.0
	Controlled_Variable_Reference	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Controlled_Variable_Units	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Controlled_Variable_Value	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	COV_Increment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Derivative_Constant	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Derivative_Constant_Units	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0-64 characters
	Integral_Constant	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Integral_Constant_Units	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Manipulated_Variable_Reference	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Object_Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-36 characters
	Out_Of_Service	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Output_Units	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Present_Value	<input checked="" type="checkbox"/> C	<input type="checkbox"/>	
	Priority_For_Writing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Proportional_Constant	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Proportional_Constant_Units	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Reliability	<input checked="" type="checkbox"/> C	<input checked="" type="checkbox"/>	
	Setpoint	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Setpoint_Reference	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Multi-State Value Object	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0-64 characters
	Object_Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-36 characters
	Out_Of_Service	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Present_Value	<input checked="" type="checkbox"/> C	<input type="checkbox"/>	
	State_Text	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Notification Class Object	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0-64 characters
	Object_Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-36 characters
<input checked="" type="checkbox"/> Create	Priority	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/> Delete	Recipient_List	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Object Type (& Create/Delete Support)	Property Identifier	Writable C- Conditional	Optional	Property Range Restriction
Schedule Object	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0-64 characters
	Effective_Period	<input checked="" type="checkbox"/>	<input type="checkbox"/>	endDate must be later than the startDate
	List_Of_Object_Property_References	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Object_Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-36 characters
	Out_Of_Service	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Priority_For_Writing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Schedule_Default	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Trend Log Object	Weekly_Schedule	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0-64 characters
	Log_DeviceObjectProperty	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Log_Enable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Log_Interval	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
	Object_Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-36 characters
	Record_Count	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Start_Time	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Stop_Time	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Stop_When_Full	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Proprietary Properties Summary

Proprietary properties are supported.

Data Link Layer Options

MS/TP master (Clause 9), baud rate(s): 9600, 19200, 38400, 76800

Device Address Binding

Is static device binding supported? Yes No

Networking Options

Router, Clause 6

Annex H, BACnet Tunneling Router over IP

BACnet/IP Broadcast Management Device (BBMD)

Does the BBMD support registrations by Foreign Devices? Yes No

Does the BBMD support network address translation? Yes No

Character Set Supported

ISO 10646 (UTF-8) / ANSI X3.4

Communication Gateway

enteliZONE is not a communications gateway.

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)