

BACnet Protocol Implementation Conformance Statement

Date: March 14, 2018

Vendor Name: Delta Controls Inc.

Product Name: enteliZONE

Product Model Numbers: eZNT-T100, eZNT-T331, eZNT-T304
eZNTW, eZNTW-Wi

Product Version: 3.40-eZ3.1

BACnet Protocol Revision: 12

Product Description

The enteliZONE eZNx thermostats are a family of Delta controllers for HVAC zone applications. While there are multiple models in the enteliZONE eZNx 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, and ports (MS/TP or IP) in each group.

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

BACnet Standardized Device Profile (Annex L)

BACnet Application Specific Controller (B-ASC)
BACnet Gateway (B-GW), (eZNTW product line only)

BACnet Interoperability Building Blocks (Annex K)

Data Sharing	DS-RP-A	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

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

Gateway	GW-EO-B	Gateway-Embedded Objects-B
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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 create object 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 <input checked="" type="checkbox"/> Create <input checked="" type="checkbox"/> Delete	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"/> 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 <input checked="" type="checkbox"/> Create <input checked="" type="checkbox"/> Delete	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"/>		

Object Type (& Create/Delete Support)	Property Identifier	Writable C-Conditional	Optional	Property Range Restriction	
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	
	<input checked="" type="checkbox"/> Create	Object_Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-36 characters
	<input checked="" type="checkbox"/> Delete	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"/>		
	<input checked="" type="checkbox"/> Create	Alarm_Value	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	<input checked="" type="checkbox"/> Delete	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"/>	
		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"/>		
	<input checked="" type="checkbox"/> Create	Change_Of_State_Count	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Accepts writes of value of zero only
	<input checked="" type="checkbox"/> Delete	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"/>	

Object Type (& Create/Delete Support)	Property Identifier	Writable C-Conditional	Optional	Property Range Restriction	
-----	Notification_Class	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-36 characters	
	Notify_Type	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
	Object_Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	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"/>	0-64 characters	
	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
	<input checked="" type="checkbox"/> Create <input checked="" type="checkbox"/> Delete	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"/>		
Device Object	Present_Value	<input checked="" type="checkbox"/> C	<input type="checkbox"/>	0-64 characters	
	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"/>		
	Last_Restore_Time	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
	Local_Date	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
	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
Event Enrollment Object	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0-64 characters	
	Event_Parameters	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-36 characters	
	Notification_Class	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
	Object_Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
	Object_Property_Reference	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
File Object	Archive	<input checked="" type="checkbox"/>	<input type="checkbox"/>		0-64 characters
	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
	Object_Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1-36 characters	
Loop Object	Action	<input checked="" type="checkbox"/>	<input type="checkbox"/>		

Object Type (& Create/Delete Support)	Property Identifier	Writable C- Conditional	Optional	Property Range Restriction
.....	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
<input checked="" type="checkbox"/> Create	Out_Of_Service	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/> Delete	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"/>	
Program Object	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0-64 characters
	Description_Of_Halt	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Reason_For_Halt	<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"/>	
	Program_Change	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	Reason_For_Halt	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Schedule Object	Description	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0-64 characters

Object Type (& Create/Delete Support)	Property Identifier	Writable C-Conditional	Optional	Property Range Restriction
	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"/>	
	Weekly_Schedule	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Trend Log Object	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
Notes: Only supported by Model name starts with "eZNT-", or "eZNTW-En"
- BACnet IP, (Annex J) – non-BBMD Functionality
Notes: Only supported by Model name starts with "eZNTW-Wi-"
- BACnet IP, (Annex J), Foreign Device
- ISO 8802-3, Ethernet (Clause 7)

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 eZNTW product line is a communications gateway for EnOcean wireless communication.

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)