

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 |
|-------------------|--------------|---------------------------------------|

| | | |
|-----------------|-----------|--|
| Trending | T-VMT-I-B | Trending-Viewing and Modifying Trends-Internal-B |
|-----------------|-----------|--|

| | | |
|--------------------------------------|----------|--|
| 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)