

# BACnet protocol implementation conformance statement (PICS)

Priva Blue ID C4 C-MX34 Controller



Article number: 5001919

Version: 01.000

Date: August 2016

| Product information                |                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product name and model number      | Priva Blue ID C4 C-MX34 Controller                                                                                                                                                                                                                                                                                                                                                                                                        |
| Application software version       | 1.2                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Firmware revision                  | 1.0                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| BACnet protocol revision           | 9                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Product description                | The controller contains a powerful microprocessor. It can be easily programmed for building automation purposes. The processing speed and computing power mesh seamlessly with the requirements of modern and integrated systems. The controller uses a reliable operating system that ensures quality and operational security. It is fully controllable via BACnet including commissioning, writing, reading, alarm and event handling. |
| BACnet standardized device profile | BACnet Building Controller (B-BC)                                                                                                                                                                                                                                                                                                                                                                                                         |
| Date certified                     | 1 August 2016                                                                                                                                                                                                                                                                                                                                                                                                                             |

| Vendor information |                                                                                                                                                                                           |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vendor name        | Priva B.V.                                                                                                                                                                                |
| Vendor ID          | 105                                                                                                                                                                                       |
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| Supported BIBBs |                                                        |
|-----------------|--------------------------------------------------------|
| DS-RP-A         | Data Sharing - Read Property - A                       |
| DS-RP-B         | Data Sharing - Read Property - B                       |
| DS-RPM-A        | Data Sharing - Read Property Multiple - A              |
| DS-RPM-B        | Data Sharing - Read Property Multiple - B              |
| DS-WP-A         | Data Sharing - Write Property - A                      |
| DS-WP-B         | Data Sharing - Write Property - B                      |
| DS-WPM-B        | Data Sharing - Write Property Multiple - B             |
| DS-COV-A        | Data Sharing - COV - A                                 |
| DS-COV-B        | Data Sharing - COV - B                                 |
| AE-N-I-B        | Alarm and Event - Notification Internal - B            |
| AE-ACK-B        | Alarm and Event - Acknowledge Alarm - B                |
| AE-ASUM-B       | Alarm and Event - Alarm Summary - B                    |
| AE-ESUM-B       | Alarm and Event - Enrollment Summary - B               |
| AE-INFO-B       | Alarm and Event - Information - B                      |
| SCHED-I-B       | Scheduling - Internal - B                              |
| SCHED-E-B       | Scheduling - External - B                              |
| T-VMT-I-B       | Trending - Viewing and Modifying Trends - Internal - B |
| T-VMT-E-B       | Trending - Viewing and Modifying Trends - External - B |
| T-ATR-B         | Trending - Automated Trend Retrieval - B               |
| 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 - Device Communication Control - B   |
| DM-TS-B         | Device Management - Time Synchronization - B           |
| DM-UTC-B        | Device Management - UTC Time Synchronization - B       |
| DM-RD-B         | Device Management - Reinitialize Device - B            |
| DM-BR-B         | Device Management - Backup and Restore - B             |
| DM-LM-B         | Device Management - List Manipulation - B              |
| DM-OCD-B        | Device Management - Object Creation and Deletion - B   |
| NM-CE-A         | Network Management - Connection Establishment - A      |
| NM-RC-B         | Network Management - Router Configuration - B          |

| Standard object types supported <sup>1</sup> Dynamically creatable and deletable |     |
|----------------------------------------------------------------------------------|-----|
| Accumulator                                                                      | no  |
| Analog Input                                                                     | no  |
| Analog Value                                                                     | no  |
| Binary Input                                                                     | no  |
| Binary Output                                                                    | no  |
| Binary Value                                                                     | no  |
| Calendar                                                                         | yes |
| Device                                                                           | no  |
| Event Enrollment                                                                 | no  |
| File                                                                             | yes |
| Loop                                                                             | no  |
| Multi-state Output                                                               | no  |
| Multi-state Value                                                                | no  |
| Notification Class                                                               | no  |
| Schedule                                                                         | yes |
| Trend Log                                                                        | yes |

<sup>1</sup> For each supported object type additional data is provided further down.

| Supported properties per object type | Required or optional | Readable (R) or readable/writeable (R/W) | Additional comments                                                                 |
|--------------------------------------|----------------------|------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Accumulator</b>                   |                      |                                          |                                                                                     |
| Object_Identifier                    | required             | R                                        |                                                                                     |
| Object_Name                          | required             | R                                        |                                                                                     |
| Object_Type                          | required             | R                                        |                                                                                     |
| Present_Value                        | required             | R/W                                      |                                                                                     |
| Description                          | optional             | R                                        |                                                                                     |
| Status_Flags                         | required             | R                                        |                                                                                     |
| Event_State                          | required             | R                                        |                                                                                     |
| Out_Of_Service                       | required             | R/W                                      |                                                                                     |
| Scale                                | required             | R                                        |                                                                                     |
| Units                                | required             | R                                        |                                                                                     |
| Prescale                             | optional             | R                                        |                                                                                     |
| Max_Pres_Value                       | required             | R                                        |                                                                                     |
| <b>Analog Input</b>                  |                      |                                          |                                                                                     |
| Object_Identifier                    | required             | R                                        |                                                                                     |
| Object_Name                          | required             | R                                        |                                                                                     |
| Object_Type                          | required             | R                                        |                                                                                     |
| Present_Value                        | required             | R                                        |                                                                                     |
| Description                          | optional             | R                                        |                                                                                     |
| Status_Flags                         | required             | R                                        |                                                                                     |
| Event_State                          | required             | R                                        |                                                                                     |
| Reliability                          | optional             | R                                        |                                                                                     |
| Out_Of_Service                       | required             | R/W                                      |                                                                                     |
| Units                                | required             | R                                        |                                                                                     |
| COV_Increment                        | optional             | R/W                                      |                                                                                     |
| <b>Analog Value</b>                  |                      |                                          |                                                                                     |
| Object_Identifier                    | required             | R                                        |                                                                                     |
| Object_Name                          | required             | R                                        |                                                                                     |
| Object_Type                          | required             | R                                        |                                                                                     |
| Present_Value                        | required             | R/W                                      | This property is writable if the object has a Priority_Array (i.e. is commandable). |
| Description                          | optional             | R                                        |                                                                                     |
| Status_Flags                         | required             | R                                        |                                                                                     |
| Event_State                          | required             | R                                        |                                                                                     |
| Out_Of_Service                       | required             | R/W                                      |                                                                                     |
| Units                                | required             | R                                        |                                                                                     |
| Priority_Array                       | required             | R                                        |                                                                                     |

| Supported properties per object type | Required or optional | Readable (R) or readable/writeable (R/W) | Additional comments                                                                                           |
|--------------------------------------|----------------------|------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Relinquish_Default                   | required             | R                                        |                                                                                                               |
| COV_Increment                        | optional             | R/W                                      |                                                                                                               |
| <b>Binary Input</b>                  |                      |                                          |                                                                                                               |
| Object_Identifier                    | required             | R                                        |                                                                                                               |
| Object_Name                          | required             | R                                        |                                                                                                               |
| Object_Type                          | required             | R                                        |                                                                                                               |
| Present_Value                        | required             | R/W                                      |                                                                                                               |
| Description                          | optional             | R                                        |                                                                                                               |
| Status_Flags                         | required             | R                                        |                                                                                                               |
| Event_State                          | required             | R                                        |                                                                                                               |
| Out_Of_Service                       | required             | R/W                                      |                                                                                                               |
| Polarity                             | required             | R                                        |                                                                                                               |
| Inactive_Text                        | optional             | R                                        |                                                                                                               |
| Active_Text                          | optional             | R                                        |                                                                                                               |
| Time_Delay                           | optional             | R                                        | These properties are only present if the object has a Notification_Class (i.e. supports intrinsic reporting). |
| Notification_Class                   | optional             | R                                        |                                                                                                               |
| Alarm_Value                          | optional             | R                                        |                                                                                                               |
| Event_Enable                         | optional             | R                                        |                                                                                                               |
| Acked_Transitions                    | optional             | R                                        |                                                                                                               |
| Notify_Type                          | optional             | R                                        |                                                                                                               |
| Event_Time_Stamps                    | optional             | R                                        |                                                                                                               |
| <b>Binary Output</b>                 |                      |                                          |                                                                                                               |
| Object_Identifier                    | required             | R                                        |                                                                                                               |
| Object_Name                          | required             | R                                        |                                                                                                               |
| Object_Type                          | required             | R                                        |                                                                                                               |
| Present_Value                        | required             | R/W                                      |                                                                                                               |
| Description                          | optional             | R                                        |                                                                                                               |
| Status_Flags                         | required             | R                                        |                                                                                                               |
| Event_State                          | required             | R                                        |                                                                                                               |
| Out_Of_Service                       | required             | R/W                                      |                                                                                                               |
| Polarity                             | optional             | R                                        |                                                                                                               |
| Inactive_Text                        | optional             | R                                        |                                                                                                               |
| Active_Text                          | optional             | R                                        |                                                                                                               |
| Priority_Array                       | required             | R                                        |                                                                                                               |
| Relinquish_Default                   | required             | R                                        |                                                                                                               |
| <b>Binary Value</b>                  |                      |                                          |                                                                                                               |
| Object_Identifier                    | required             | R                                        |                                                                                                               |
| Object_Name                          | required             | R                                        |                                                                                                               |
| Object_Type                          | required             | R                                        |                                                                                                               |
| Present_Value                        | required             | R/W                                      | This property is writable if the object has a Priority_Array (i.e. is commandable).                           |
| Description                          | optional             | R                                        |                                                                                                               |
| Status_Flags                         | required             | R                                        |                                                                                                               |
| Event_State                          | required             | R                                        |                                                                                                               |
| Out_Of_Service                       | required             | R/W                                      |                                                                                                               |
| Inactive_Text                        | optional             | R                                        |                                                                                                               |
| Active_Text                          | optional             | R                                        |                                                                                                               |
| Priority_Array                       | required             | R                                        |                                                                                                               |
| Relinquish_Default                   | required             | R                                        |                                                                                                               |
| Time_Delay                           | optional             | R                                        | These properties are only present if the object has a Notification_Class (i.e. supports intrinsic reporting). |
| Notification_Class                   | optional             | R                                        |                                                                                                               |
| Alarm_Value                          | optional             | R                                        |                                                                                                               |
| Event_Enable                         | optional             | R                                        |                                                                                                               |
| Acked_Transitions                    | optional             | R                                        |                                                                                                               |
| Notify_Type                          | optional             | R                                        |                                                                                                               |
| Event_Time_Stamps                    | optional             | R                                        |                                                                                                               |

| Supported properties per object type | Required or optional | Readable (R) or readable/writeable (R/W) | Additional comments                                          |
|--------------------------------------|----------------------|------------------------------------------|--------------------------------------------------------------|
| <b>Calendar</b>                      |                      |                                          |                                                              |
| Object_Identifier                    | required             | R                                        | This property can be specified when the object is created.   |
| Object_Name                          | required             | R                                        |                                                              |
| Object_Type                          | required             | R                                        |                                                              |
| Present_Value                        | required             | R                                        |                                                              |
| Description                          | optional             | R/W                                      | These properties can be specified when the object is created |
| Date_List                            | required             | R/W                                      |                                                              |
| <b>Device</b>                        |                      |                                          |                                                              |
| Object_Identifier                    | required             | R                                        |                                                              |
| Object_Name                          | required             | R                                        |                                                              |
| Object_Type                          | required             | R                                        |                                                              |
| System_Status                        | required             | R                                        |                                                              |
| Vendor_Name                          | required             | R                                        |                                                              |
| Vendor_Identifier                    | required             | R                                        |                                                              |
| Model_Name                           | required             | R                                        |                                                              |
| Firmware_Revision                    | required             | R                                        |                                                              |
| Application_Software_Version         | required             | R                                        |                                                              |
| Description                          | optional             | R                                        |                                                              |
| Protocol_Version                     | required             | R                                        |                                                              |
| Protocol_Revision                    | required             | R                                        |                                                              |
| Protocol_Services_Supported          | required             | R                                        |                                                              |
| Protocol_Object_Types_Supported      | required             | R                                        |                                                              |
| Object List                          | required             | R                                        |                                                              |
| Max_APDU_Length_Accepted             | required             | R                                        |                                                              |
| Segmentation_Supported               | required             | R                                        |                                                              |
| Max_Segments_Accepted                | optional             | R                                        |                                                              |
| Local_Time                           | optional             | R                                        |                                                              |
| Local_Date                           | optional             | R                                        |                                                              |
| UTC_Offset                           | optional             | R                                        |                                                              |
| Daylight_Savings_Status              | optional             | R                                        |                                                              |
| APDU_Segment_Timeout                 | optional             | R                                        |                                                              |
| APDU_Timeout                         | required             | R/W                                      |                                                              |
| Number_Of_APDU_Retries               | required             | R/W                                      |                                                              |
| Device_Address_Binding               | required             | R                                        |                                                              |
| Database_Revision                    | required             | R                                        |                                                              |
| Configuration_Files                  | optional             | R                                        |                                                              |
| Last_Restore_Time                    | optional             | R                                        |                                                              |
| Backup_Failure_Timeout               | optional             | R/W                                      |                                                              |
| Active_COV_Subscriptions             | optional             | R                                        |                                                              |
| <b>Event Enrollment</b>              |                      |                                          |                                                              |
| Object_Identifier                    | required             | R                                        |                                                              |
| Object_Name                          | required             | R                                        |                                                              |
| Object_Type                          | required             | R                                        |                                                              |
| Description                          | optional             | R                                        |                                                              |
| Event_Type                           | required             | R                                        |                                                              |
| Notify_Type                          | required             | R                                        |                                                              |
| Event_Parameters                     | required             | R                                        |                                                              |
| Object_Property_Reference            | required             | R                                        |                                                              |
| Event_State                          | required             | R                                        |                                                              |
| Event_Enable                         | required             | R                                        |                                                              |
| Acked_Transitions                    | required             | R                                        |                                                              |
| Notification_Class                   | required             | R                                        |                                                              |
| Event_Time_Stamps                    | required             | R                                        |                                                              |
| <b>File</b>                          |                      |                                          |                                                              |
| Object_Identifier                    | required             | R                                        |                                                              |
| Object_Name                          | required             | R                                        | This property can be specified when the object is created.   |

| Supported properties per object type | Required or optional | Readable (R) or readable/writeable (R/W) | Additional comments                                                                 |
|--------------------------------------|----------------------|------------------------------------------|-------------------------------------------------------------------------------------|
| Object_Type                          | required             | R                                        |                                                                                     |
| Description                          | optional             | R/W                                      | These properties can be specified when the object is created.                       |
| File_Type                            | required             | R/W                                      |                                                                                     |
| File_Size                            | required             | R/W                                      |                                                                                     |
| Modification_Date                    | required             | R                                        |                                                                                     |
| Archive                              | required             | R/W                                      |                                                                                     |
| Read_Only                            | required             | R                                        |                                                                                     |
| File_Access_Method                   | required             | R                                        | Always STREAM_ACCESS                                                                |
| <b>Loop</b>                          |                      |                                          |                                                                                     |
| Object_Identifier                    | required             | R                                        |                                                                                     |
| Object_Name                          | required             | R                                        |                                                                                     |
| Object_Type                          | required             | R                                        |                                                                                     |
| Present_Value                        | required             | R                                        |                                                                                     |
| Description                          | optional             | R                                        |                                                                                     |
| Status_Flags                         | required             | R                                        |                                                                                     |
| Event_State                          | required             | R                                        |                                                                                     |
| Out_of_Service                       | required             | R/W                                      |                                                                                     |
| Output_Units                         | required             | R                                        |                                                                                     |
| Manipulated_Variable_Reference       | required             | R                                        |                                                                                     |
| Controlled_Variable_Reference        | required             | R                                        |                                                                                     |
| Controlled_Variable_Value            | required             | R                                        |                                                                                     |
| Controlled_Variable_Units            | required             | R                                        |                                                                                     |
| Setpoint_Reference                   | required             | R                                        |                                                                                     |
| Setpoint                             | required             | R                                        |                                                                                     |
| Action                               | required             | R                                        |                                                                                     |
| Proportional_Constant                | optional             | R/W                                      |                                                                                     |
| Proportional_Constant_Units          | optional             | R                                        |                                                                                     |
| Integral_Constant                    | optional             | R/W                                      |                                                                                     |
| Integral_Constant_Units              | optional             | R                                        |                                                                                     |
| Derivative_Constant                  | optional             | R/W                                      |                                                                                     |
| Derivative_Constant_Units            | optional             | R                                        |                                                                                     |
| Bias                                 | optional             | R/W                                      |                                                                                     |
| Maximum_Output                       | optional             | R/W                                      |                                                                                     |
| Minimum_Output                       | optional             | R                                        |                                                                                     |
| Priority_For_Writing                 | required             | R                                        |                                                                                     |
| COV_Increment                        | optional             | R/W                                      |                                                                                     |
| <b>Multi-state Output</b>            |                      |                                          |                                                                                     |
| Object_Identifier                    | required             | R                                        |                                                                                     |
| Object_Name                          | required             | R                                        |                                                                                     |
| Object_Type                          | required             | R                                        |                                                                                     |
| Present_Value                        | required             | R/W                                      |                                                                                     |
| Description                          | optional             | R                                        |                                                                                     |
| Status_Flags                         | required             | R                                        |                                                                                     |
| Event_State                          | required             | R                                        |                                                                                     |
| Out_of_Service                       | required             | R/W                                      |                                                                                     |
| Number_Of_States                     | required             | R                                        |                                                                                     |
| State_Text                           | optional             | R                                        |                                                                                     |
| Priority_Array                       | required             | R                                        |                                                                                     |
| Relinquish_Default                   | required             | R                                        |                                                                                     |
| <b>Multi-state Value</b>             |                      |                                          |                                                                                     |
| Object_Identifier                    | required             | R                                        |                                                                                     |
| Object_Name                          | required             | R                                        |                                                                                     |
| Object_Type                          | required             | R                                        |                                                                                     |
| Present_Value                        | required             | R/W                                      | This property is writable if the object has a Priority_Array (i.e. is commandable). |
| Description                          | optional             | R                                        |                                                                                     |

| Supported properties per object type | Required or optional | Readable (R) or readable/writeable (R/W) | Additional comments                                                      |
|--------------------------------------|----------------------|------------------------------------------|--------------------------------------------------------------------------|
| Status_Flags                         | required             | R                                        |                                                                          |
| Event_State                          | required             | R                                        |                                                                          |
| Out_of_Service                       | required             | R/W                                      |                                                                          |
| Number_Of_States                     | required             | R                                        |                                                                          |
| State_Text                           | optional             | R                                        |                                                                          |
| Priority_Array                       | optional             | R                                        |                                                                          |
| Relinquish Default                   | optional             | R                                        |                                                                          |
| <b>Notification Class</b>            |                      |                                          |                                                                          |
| Object_Identifier                    | required             | R                                        |                                                                          |
| Object_Name                          | required             | R                                        |                                                                          |
| Object_Type                          | required             | R                                        |                                                                          |
| Description                          | optional             | R                                        |                                                                          |
| Notification_Class                   | required             | R                                        |                                                                          |
| Priority                             | required             | R/W                                      |                                                                          |
| Ack_Required                         | required             | R                                        |                                                                          |
| Recipient List                       | required             | R/W                                      |                                                                          |
| <b>Schedule</b>                      |                      |                                          |                                                                          |
| Object_Identifier                    | required             | R                                        |                                                                          |
| Object_Name                          | required             | R                                        | This property can be specified when the object is created.               |
| Object_Type                          | required             | R                                        |                                                                          |
| Present_Value                        | required             | R                                        |                                                                          |
| Description                          | optional             | R/W                                      | These properties can be specified when the object is created.            |
| Effective_Period                     | required             | R/W                                      |                                                                          |
| Weekly_Schedule                      | optional             | R/W                                      |                                                                          |
| Exception_Schedule                   | optional             | R                                        |                                                                          |
| Schedule_Default                     | required             | R/W                                      |                                                                          |
| List_Of_Object_Property_References   | required             | R/W                                      |                                                                          |
| Priority_For_Writing                 | required             | R/W                                      |                                                                          |
| Status_Flags                         | required             | R                                        |                                                                          |
| Out_of_Service                       | required             | R/W                                      | This property can be specified when the object is created.               |
| Reliability                          | required             | R                                        |                                                                          |
| <b>Trend Log</b>                     |                      |                                          |                                                                          |
| Object_Identifier                    | required             | R                                        |                                                                          |
| Object_Name                          | required             | R                                        | This property can be specified when the object is created.               |
| Object_Type                          | required             | R                                        |                                                                          |
| Description                          | optional             | R/W                                      | These properties can be specified when the object is created.            |
| Enable                               | required             | R/W                                      |                                                                          |
| Start_Time                           | optional             | R/W                                      |                                                                          |
| Stop_Time                            | optional             | R/W                                      |                                                                          |
| Log_Device_Object_Property           | optional             | R/W                                      |                                                                          |
| Log_Interval                         | optional             | R/W                                      |                                                                          |
| Stop_When_Full                       | required             | R                                        |                                                                          |
| Buffer_Size                          | required             | R                                        | This property can be specified when the object is created.               |
| Log_Buffer                           | required             | R                                        |                                                                          |
| Record_Count                         | required             | R/W                                      |                                                                          |
| Total_Record_Count                   | required             | R                                        |                                                                          |
| Notification_Threshold               | optional             | R/W                                      | This property can be specified when the object is created.               |
| Records_Since_Notification           | optional             | R                                        |                                                                          |
| Last_Notify_Record                   | optional             | R                                        |                                                                          |
| Events_State                         | required             | R                                        |                                                                          |
| Notification_Class                   | optional             | R/W                                      | These properties are only writable if the object is dynamically created. |
| Event_Enable                         | optional             | R/W                                      |                                                                          |
| Acked_Transitions                    | optional             | R                                        |                                                                          |

| Supported properties per object type | Required or optional | Readable (R) or readable/writeable (R/W) | Additional comments |
|--------------------------------------|----------------------|------------------------------------------|---------------------|
| Notify_Types                         | optional             | R                                        |                     |
| Event_Time_Stamps                    | optional             | R                                        |                     |
| Status_Flags                         | required             | R                                        |                     |
| Reliability                          | optional             | R                                        |                     |
| Logging_Type                         | required             | R                                        | Always POLLED       |

| Other features                |                                                                                                                                                                                                                                                                        |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Segmentation capability       | <ul style="list-style-type: none"> <li>segmented requests supported, window size: 16</li> <li>segmented responses supported, window size: 16</li> </ul>                                                                                                                |
| Data link layer options       | <ul style="list-style-type: none"> <li>BACnet IP, DIX Ethernet</li> <li>MS/TP master, baud rates: 9600, 19200, 38400, 57600, 76800, 115200</li> </ul>                                                                                                                  |
| Static device address binding | not supported                                                                                                                                                                                                                                                          |
| Networking options            | <ul style="list-style-type: none"> <li>router</li> <li>routing configuration: Ethernet MS/TP</li> <li>BACnet/IP broadcast management device (BBMD) and support for foreign device subscriptions</li> <li>network address translation (NAT) is not supported</li> </ul> |
| Network security options      | non-secure device                                                                                                                                                                                                                                                      |
| Character set supported       | ANSI X3.4                                                                                                                                                                                                                                                              |