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# **BACnet Testing Labs Product Listing**

This product has been tested at the BACnet Testing Labs and found to comply with all the necessary interoperability requirements in place on the published test date. This listing represents the tested capability of the Listed Product. For information on additional functionality that was not covered in the test process, refer to the Manufacturer's PICS statement on the BI website.

#### **Listing Information**

| Vendor   |                          | Listing Status |
|--|--------------------------|----------------|
| Beckhoff Automation GmbH<br>Eiserstraße 5<br>33415 Verl<br>Germany |                          | Listed Product |
| Test Requirements  | BACnet Protocol Revision | Date Tested    |
| Requirements as of August 2012                                     | Revision 12 (135-2010)   | March 2014     |

| Product Name      | Model Number                      | Software Version |
|-------------------|-----------------------------------|------------------|
| TwinCAT BACnet/IP | CX8091, CX9020,<br>CX5010, CX5020 | 2.0.2.2          |

#### **Device Profiles**

| Profile                           | Model Numbers |
|-----------------------------------|---------------|
| BACnet Building Controller (B-BC) | All models    |

#### **BIBBs Supported**

| Data Sharing | ReadProperty-A          | DS-RP-A  |
|--------------|-------------------------|----------|
|              | ReadProperty-B          | DS-RP-B  |
|              | ReadPropertyMultiple-A  | DS-RPM-A |
|              | ReadPropertyMultiple-B  | DS-RPM-B |
|              | WriteProperty-A         | DS-WP-A  |
|              | WriteProperty-B         | DS-WP-B  |
|              | WritePropertyMultiple-B | DS-WPM-B |
|              | COV-A                   | DS-COV-A |
|              | COV-B                   | DS-COV-B |

|                    | Notification Internal-B                 | AE-N-I-B    |
|--------------------|---|-------------|
|                    | Notification External-B                 | AE-N-E-B    |
| Alarm and Event    | ACK-B                                   | AE-ACK-B    |
| Notification       | Alarm Summary-B                         | AE-ASUM-B   |
|                    | Enrollment Summary-B                    | AE-ESUM-B   |
|                    | Information-B                           | AE-INFO-B   |
|                    |   |             |
| Scheduling         | Internal-B                              | SCHED-I-B   |
| Scriedding         | External-B                              | SCHED-E-B   |
|                    |   |             |
|                    | Viewing and Modifying Trends Internal-B | T-VMT-I-B   |
| Trending           | Viewing and Modifying Trends External-B | T-VMT-E-B   |
|                    | Automated Trend Retrieval-B             | T-ATR-B     |
|                    |   |             |
|                    | Dynamic Device Binding-A                | DM-DDB-A    |
|                    | Dynamic Device Binding-B                | DM-DDB-B    |
|                    | Dynamic Object Binding-B                | DM-DOB-B    |
|                    | DeviceCommunicationControl-B            | DM-DCC-B    |
|                    | Automatic Time Synchronization-A        | DM-ATS-A    |
|                    | TimeSynchronization-A                   | DM-TS-A     |
| Device and Network | UTCTimeSynchronization-A                | DM-UTC-A    |
| Management         | TimeSynchronization-B                   | DM-TS-B     |
|                    | UTCTimeSynchronization-B                | DM-UTC-B    |
|                    | ReinitializeDevice-B                    | DM-RD-B     |
|                    | Backup and Restore-B                    | DM-BR-B     |
|                    | Restart-B                               | DM-R-B      |
|                    | List Manipulation-B                     | DM-LM-B     |
|                    | List Manipulation-B                     | BINI EINI B |

# **Object Type Support**

| Analog Input      | Analog Output      | Analog Value      |
|-------------------|--------------------|-------------------|
| Binary Input      | Binary Output      | Binary Value      |
| Averaging         | Calendar           | Command           |
| Device            |                    |                   |
| Event Enrollment  | File               | Group             |
| Multi-State Input | Multi-State Output | Multi-State Value |
| Loop              | Notification Class | Program           |
| Schedule          | Structured View    | Trend Log         |

# **Data Link Layer Options**

| Media               | Options                            |
|---------------------|------------------------------------|
| BACnet IP (Annex J) | BBMD, Register As a Foreign Device |

# **Networking Options**

| Networking Functionality | Media     |
|--------------------------|-----------|
| Annex J BBMD             | BACnet/IP |

# **Character Set Support**

ISO 10646 (UTF-8)
JIS 0208
ISO 10646 (UCS-4)
ISO 10646 (UCS-2)
ISO 8859-1