# 1 BACNET PROTOCOL IMPLEMENTATION CONFORMANCE STATEMENT

<table>
<thead>
<tr>
<th>Date</th>
<th>May 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>BACnet Vendor Name</td>
<td>MSA Safety</td>
</tr>
<tr>
<td>BACnet Vendor ID</td>
<td>37</td>
</tr>
<tr>
<td>Product Name</td>
<td>QuickServer, ProtoCessor, ProtoCarrier, ProtoNode, ProtoAir, EZ Gateway</td>
</tr>
<tr>
<td>Product Model Number</td>
<td>QuickServer (FS-QS-1XYZ), ProtoNode (FPC-NXY), ProtoCarrier (FPC-CXY), ProtoCessor FFP (FPC-FD2 + FPC-ED2), ProtoAir (FPA-XY4), EZ Gateway KNX to BACnet (FS-EZX-KNX-BAC), EZ Gateway M-Bus to Modbus &amp; BACnet (FS-EZX-MBUS-MOD-BAC), EZ Gateway Modbus to BACnet (FS-EZX-MOD-BAC)</td>
</tr>
<tr>
<td>Product Description</td>
<td>This software product will provide bi-directional communication between various RTU, DCS, SCADA and PLC using most common protocols and a BACnet system. The FieldServer can perform protocol conversion (as opposed to routing) between the different BACnet Data Link Layer options. This is arranged by way of static mappings.</td>
</tr>
<tr>
<td>Protocol Conversions</td>
<td>See MSA Safety’s list of protocol drivers to determine available protocol conversions.</td>
</tr>
<tr>
<td>BACnet Protocol Version</td>
<td>Version 1 Revision 16</td>
</tr>
</tbody>
</table>

## 1.1 BACnet Standardized Device Profile (Annex L)

**NOTE:** The FieldServer is a gateway device.

- BACnet Application Specific Controller (B-ASC)

## 1.2 BACnet Interoperability Building Blocks Supported (Annex K)

- K.1.1 BIBB - Data Sharing - ReadProperty-A (DS-RP-A)*
- K.1.2 BIBB - Data Sharing - ReadProperty-B (DS-RP-B)
- K.1.3 BIBB - Data Sharing - ReadPropertyMultiple-A (DS-RPM-A)*
- K.1.4 BIBB - Data Sharing - ReadPropertyMultiple-B (DS-RPM-B)
- K.1.7 BIBB - Data Sharing - WriteProperty-A (DS-WP-A)
- K.1.8 BIBB - Data Sharing - WriteProperty-B (DS-WP-B)
- K.1.9 BIBB - Data Sharing - WritePropertyMultiple-A (DS-WPM-A)*
- K.1.10 BIBB - Data Sharing - WritePropertyMultiple-B (DS-WPM-B)
- K.1.11 BIBB - Data Sharing - COV-A (DS-COV-A)*
- K.1.12 BIBB - Data Sharing - COV-B (DS-COV-B)
- K.2.2 BIBB - Alarm and Event-Notification Internal-B (AE-N-I-B)
- K.2.5 BIBB - Alarm and Event-ACK-B(AE-ACK-B)
- K.2.11 BIBB - Alarm and Event-Information-B (AE-INFO-B)
- K.4.2 BIBB - Trending – Viewing and Modifying Trends Internal-B (T-VMT-I-B)
- K.4.5 BIBB - Trending – Automated Trend Retrieval-B (T-ATR-B)
- K.5.1 BIBB - Device Management - Dynamic Device Binding-A (DM-DDB-A)
- K.5.2 BIBB - Device Management - Dynamic Device Binding-B (DM-DDB-B)
- K.5.3 BIBB - Device Management - Dynamic Object Binding-A (DM-DOB-A)*
- K.5.4 BIBB - Device Management - Dynamic Object Binding-B (DM-DOB-B)
- K.5.6 BIBB - Device Management - DeviceCommunicationControl-B (DM-DCC-B)
- K.5.12 BIBB - Device Management - TimeSynchronization-B (DM-TS-B)
- K.5.16 BIBB - Device Management - ReinitializeDevice-B (DM-RD-B)
- K.5.20 BIBB - Device Management-Restart-B (DM-R-R-B)
- K.5.22 BIBB - Device Management – List Manipulation-B (DM-LM-B)
- K.5.38 BIBB - Network Management-BBMD Configuration-B (NM-BBMDC-B)

* Client functionality not part of B-ASC profile tested by BTL.

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1.3 Segmentation Capability

None

1.4 Object Types and Optional Properties Supported

<table>
<thead>
<tr>
<th>Object Type</th>
<th>Optional Properties Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device Object</td>
<td>Location, Description, UTC Offset, Active COV Subscriptions, Database Revision</td>
</tr>
<tr>
<td>Analog Input</td>
<td>Reliability, Description</td>
</tr>
<tr>
<td>Analog Output</td>
<td>Reliability, Description, Max_Pres_Value, Min_Pres_Value</td>
</tr>
<tr>
<td>Analog Value</td>
<td>Reliability, Description</td>
</tr>
<tr>
<td>Binary Input</td>
<td>Reliability, Description, Active_Text, Inactive_Text</td>
</tr>
<tr>
<td>Binary Output</td>
<td>Reliability, Description, Active_Text, Inactive_Text</td>
</tr>
<tr>
<td>Binary Value</td>
<td>Reliability, Description, Active_Text, Inactive_Text</td>
</tr>
<tr>
<td>Multi State Input</td>
<td>Reliability, Description, State_Text</td>
</tr>
<tr>
<td>Multi State Output</td>
<td>Reliability, Description, State_Text</td>
</tr>
<tr>
<td>Multi State Value</td>
<td>Reliability, Description, State_Text</td>
</tr>
<tr>
<td>Notification Class Object</td>
<td>Object_Name</td>
</tr>
<tr>
<td>Trend Log</td>
<td>Description</td>
</tr>
<tr>
<td>Life Safety Point</td>
<td>Description</td>
</tr>
</tbody>
</table>

1.5 Unsupported Properties and Restrictions

- Does not support BACnet CreateObject
- Does not support BACnet DeleteObject
- Does not support any optional properties
- No additional writeable properties exist
- No proprietary properties exist
- No range restrictions exist
- Client Driver can only read Present Value property

1.6 Data Link Layer Options

- BACnet/IP, (Annex J)
- ANSI/ATA 878.1, 2.5 Mb, ARCNET (Clause 8)
- Point-to-Point, EIA 232 (Clause 10), baud rate up to 57.6 Kbps
- ISO 8802-3, Ethernet (Clause 7)
- MS/TP master (Clause 9), baud rate up to 76.8 Kbps
- MS/TP slave (Clause 9), baud rate up to 76.8 Kbps
1.7 Device Address Binding
Not supported

1.8 Networking Options

- Router, Clause 6 – List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.
- Annex H, BACnet Tunneling Router over IP
- Annex H.2, Multiple “Virtual” BACnet Devices in a Single Physical Device
- BACnet/IP Broadcast Management Device (BBMD)
- Registrations by Foreign Devices

1.9 Character Sets Supported
Where support for multiple character sets is indicated, this does not imply that they can all be supported simultaneously.

- ISO 10646 (UTF-8) ANSI X3.4
- ISO 10646 (UCS-2)
- IBM/Microsoft DBCS
- ISO 10646 (ICS-4)
- ISO 8859-1
- JIS C

1.10 Non-BACnet Equipment/Networks Supported
If this product is a communication gateway, describe the types of non-BACnet equipment/networks(s) that the gateway supports:

- Modbus RTU
- Modbus TCP/IP
- LonWorks
- Metasys N2
- SNMP
- DNP 3.0 serial and Ethernet
- XML
- GE-EGD
- GE-SRTP
- OPC
- Allen Bradley DF1
- Allen Bradley CSP
- Canatal
- Carrier
- Caterpillar MSX
- ControlNet
- DataAire
- DeviceNet
- EST3 ECP
- EST QuickStart
- Fike Cheetah
- Gamewell-FCI
- GE-SNP
- JBus
- Lutron
- McQuay
- Mircom
- Notifier Fire Panels
- Profibus
- Russelectric
- Secutron
- Siemens Fire Safety
- Silent Knight
- SimplexGrinnell
- Spectronics
- Stulz
- TAC I/Net
- Veeder-Root