

## BACNET PROTOCOL IMPLEMENTATION CONFORMANCE STATEMENT

XMW90 series transmitters are wall-mount transmitters for building automation applications. XMW90 series includes transmitter models for measuring humidity, carbon dioxide, and temperature.

<b>Date</b>	March 7, 2014
<b>Vendor Name</b>	Vaisala Oyj
<b>Product Name</b>	XMW90
<b>Product Model Numbers</b>	HMW95   GMW95   GMW95R
<b>Applications Software Version</b>	1.1.28 and later
<b>Firmware Version</b>	1.1.0.0 and later
<b>BACnet Protocol Revision</b>	Version 1, Revision 4
<b>BACnet Standardized Device Profile (Annex L)</b>	<input type="checkbox"/> BACnet Operator Workstation (B-OWS) <input type="checkbox"/> BACnet Building Controller (B-BC) <input type="checkbox"/> BACnet Advanced Application Controller (B-AAC) <input type="checkbox"/> BACnet Application Specific Controller (B-ASC) <input checked="" type="checkbox"/> BACnet Smart Sensor (B-SS) <input type="checkbox"/> BACnet Smart Actuator (B-SA)
<b>List of all BACnet Interoperability Building Blocks Supported (Annex K)</b>	DS-RP-B, DS-RPM-B, DS-WP-B, DS-COVU-B, DM-DDB-B, DM-DOB-B, DM-DCC-B, DM-RD-B
<b>Segmentation Capability</b>	<input type="checkbox"/> Segmentation Requests Supported <input type="checkbox"/> Segmentation Responses Supported
<b>Standard Object Types Supported</b>	<input checked="" type="checkbox"/> Analog Input <input type="checkbox"/> Analog Output <input checked="" type="checkbox"/> Analog Value <input type="checkbox"/> Averaging <input type="checkbox"/> Binary Input <input type="checkbox"/> Binary Output <input type="checkbox"/> Binary Value <input type="checkbox"/> Calendar <input type="checkbox"/> Command <input checked="" type="checkbox"/> Device <input type="checkbox"/> Event Enrollment <input type="checkbox"/> File <input type="checkbox"/> Group <input type="checkbox"/> Life Safety Point <input type="checkbox"/> Life Safety Zone <input type="checkbox"/> Loop

	<input type="checkbox"/> Multistate Input <input type="checkbox"/> Multistate Output <input type="checkbox"/> Multistate Value <input type="checkbox"/> Notification Class <input type="checkbox"/> Program <input type="checkbox"/> Schedule <input type="checkbox"/> Trend Log
<b>Data Link Layer Options</b>	<input type="checkbox"/> BACnet Internet Protocol (IP) (Annex J) <input type="checkbox"/> BACnet IP (Annex J), Foreign Device <input type="checkbox"/> ISO 88023, Ethernet (Clause 7) <input type="checkbox"/> ANSI/ATA 878.1, 2.5 MB ARCNET® network (Clause 8) <input type="checkbox"/> ANSI/ATA 878.1, RS485 ARCNET network (Clause 8), baud rates: _____ <input checked="" type="checkbox"/> Master-Slave/Token-Passing (MS/TP) master (Clause 9), baud rates: 9600, 19200, 38400, 57600, 76800, 115200 <input checked="" type="checkbox"/> MS/TP slave (Clause 9), baud rates: 9600, 19200, 38400, 57600, 76800, 115200 <input type="checkbox"/> Point-To-Point, EIA 232 (Clause 10), baud rates: _____ <input type="checkbox"/> Point-To-Point, modem (Clause 10), baud rates: _____ <input type="checkbox"/> LonTalk® protocol (Clause 11), medium: _____ <input type="checkbox"/> Other: _____
<b>Device Address Binding</b>  <b>Is static device binding supported?</b> (required for two-way communication between MS/TP slaves and other devices)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Networking Options</b>  Does the BBMD support registrations by Foreign Devices?	<input type="checkbox"/> Router, Clause 6: <input type="checkbox"/> Annex H, BACnet Tunneling Router over IP <input type="checkbox"/> BACnet/IP Broadcast Management Device (BBMD) <hr/> <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Character Sets Supported</b>	<input checked="" type="checkbox"/> UTF-8 / ANSI X3.4 <input type="checkbox"/> IBM®/Microsoft® DoubleByte Character Set (DBCS) <input type="checkbox"/> ISO 8859-1 <input type="checkbox"/> ISO 10646 Universal Character Set-2 (UCS2) <input type="checkbox"/> ISO 10646 (UCS-4) <input type="checkbox"/> Japanese Industrial Standard (JIS) C 6226
<b>Types of non-BACnet equipment/network(s) supported</b>	None

## Supported Standard Object Types and their Features

- No dynamically creatable or deletable objects.
- The present value property of an analog value object may be range restricted depending on the current application.

**Table 1 Device Object**

Property	Conformance code	Writable
Object_Identifier	R	Yes
Object_Name	R	Yes
Object_Type	R	No
System_Status	R	No
Vendor_Name	R	No
Vendor_Identifier	R	No
Model_Name	R	No
Firmware_Revision	R	No
Application_Software_Revision	R	No
Location	O	Yes
Description	O	Yes
Protocol_Version	R	No
Protocol_Revision	R	No
Protocol_Services	R	No
Protocol_Object_Types_Supported	R	No
Object_List	R	No
Max_APDU_Length_Accepted	R	No
Max_Master	R	Yes
Max_Info_Frames	R	No
Segmentation_Supported	R	No
APDU_Timeout	R	No
APDU_Retries	R	No
Device_Address_Binding	R	No
Database_Revision	R	No

**Table 2 Analog Input Object**

Property	Conformance code	Writable
Object_Identifier	R	No
Object_Name	R	No
Object_Type	R	No
Present_Value	R	Yes (When Oos*)
Description	O	No
Units	R	No
Status_Flags	R	Yes (when OoS)
Reliability	R	Yes (when OoS)
Event_State	R	No
Out_of_Service	R	Yes
COV_Increment	O	Yes
Min_Pres_Value	O	No
Max_Pres_Value	O	No

\* Out-of-service bit is set.

**Table 3 Analog Value Object**

Property	Conformance code	Writable
Object Identifier	R	No
Object Name	R	No
Object Type	R	No
Present Value	R	Yes
Description	O	No
Units	R	No
Status Flags	R	No
Event State	R	No
Out of Service	R	No

## BIBBs Supported

Table 4 below lists all the BIBBs which, per ANSI/ASHRAE Standard 135-2008, could be supported by a BACnet Smart Sensor (B-SS). The checked BIBBs are supported by the device.

**Table 4 BACnet Smart Sensor BIBBs Support**

Application Service (B-SS)	Designation	Supported
Data Sharing - Read Property - A	DS-RP-A	<input type="checkbox"/>
Data Sharing - Read Property - B	DS-RP-B	<input checked="" type="checkbox"/>
Data Sharing - Read Property Multiple - A	DS-RPM-A	<input type="checkbox"/>
Data Sharing - Read Property Multiple - B	DS-RPM-B	<input checked="" type="checkbox"/>
Data Sharing - Write Property - A	DS-WP-A	<input type="checkbox"/>
Data Sharing - Write Property - B	DS-WP-B	<input checked="" type="checkbox"/>
Data Sharing - Write Property Multiple - B	DS-WPM-B	<input type="checkbox"/>
Data Sharing - COV - Unsolicited - A	DS-COVU-A	<input type="checkbox"/>
Data Sharing - COV - Unsolicited - B	DS-COVU-B	<input checked="" type="checkbox"/>
Alarm and Event - Notification Internal - B	AE-N-I-B	<input type="checkbox"/>
Alarm and Event - ACK - B	AE-ACK-B	<input type="checkbox"/>
Alarm and Event - Information - B	AE-INFO-B	<input type="checkbox"/>
Alarm and Event - Enrollment Summary - B	AE-ESUM-B	<input type="checkbox"/>
Scheduling - External - B	SCHED-E-B	<input type="checkbox"/>
Trending - Viewing and Modifying Trends Internal - B	T-VMT-I-B	<input type="checkbox"/>
Trending - Automated Trend Retrieval - B	T-ATR-B	<input type="checkbox"/>
Device Management - Dynamic Device Binding - A	DM-DDB-A	<input type="checkbox"/>
Device Management - Dynamic Device Binding - B	DM-DDB-B	<input checked="" type="checkbox"/>
Device Management - Dynamic Object Binding - A	DM-DOB-A	<input type="checkbox"/>
Device Management - Dynamic Object Binding - B	DM-DOB-B	<input checked="" type="checkbox"/>
Device Management - Device Communication Control - B	DM-DCC-B	<input checked="" type="checkbox"/>
Device Management - Time Synchronization - B	DM-TS-B	<input type="checkbox"/>
Device Management - UTC Time Synchronization - B	DM-UTC-B	<input type="checkbox"/>
Device Management - Reinitialize Device - B	DM-RD-B	<input checked="" type="checkbox"/>
Device Management - Backup and Restore - B	DM-BR-B	<input type="checkbox"/>
Network Management - Connection Establishment - A	NM-CE-A	<input type="checkbox"/>