BACnet Protocol Implementation Conformance Statement

Date: 22 February 2019
Vendor Name: Iwaki America
Product Name: W900 Controller
Product Model Number: All
Application Software Version: 3.25-12057
Firmware Revision: 3.25-12058
BACnet Protocol Revision: 1.15

Product Description:

The Walchem W900 is a water treatment process controller.

BACnet Standardized Device Profile (Annex L):

☐ **BACnet Operator Workstation (B-OWS)**
☐ **BACnet Advanced Operator Workstation (B-AWS)**
☐ **BACnet Operator Display (B-OD)**
☐ **BACnet Building Controller (B-BC)**
☐ **BACnet Advanced Application Controller (B-AAC)**
☒ **BACnet Application Specific Controller (B-ASC)**
☐ **BACnet Smart Sensor (B-SS)**
☐ **BACnet Smart Actuator (B-SA)**

BACnet Interoperability Building Blocks Supported (Annex K):

DS-RP-B Data Sharing – Read Property

W900 supports reading of a single property at a time.

DS-RPM-B Data Sharing – Read Property Multiple

W900 supports reading groups of properties with a single BACnet command. W900 does not support message segmentation, so it is possible to request more data than the W900 can fit into a reply message. In this case, W900 generates a "Segmentation Not Supported" response. Clients can then reissue smaller Read Property Multiple requests, or issue an equivalent series of Read Property requests (which will take longer).

DS-WP-B Data Sharing – Write Property

W900 interprets the command to write a single property. W900 does not currently have any writable properties, so all requests generated failure responses.

DM-DDB-B Device Management – Device Dynamic Binding

W900 responds to Who-Is requests with an I-Am packet. W900 supports the optional device instance range limits on the Who-Is request. W900 emits a single unsolicited I-Am message at startup, when the BACnet service restarts, and whenever a change is made to the W900's BACnet Device ID.

DM-DOB-B Device Management – Dynamic Object Binding

W900 responds to Who-Has requests with an I-Have packet. W900 supports both the "Who-Has <Object Identifier>" and "Who-Has <Object Name>" forms of this service, with optional device instance range limits. W900 supports both broadcast and unicast modes of this service. W900 does not emit unsolicited I-Have messages.

DM-DCC-B Device Management – Device Communication Control

W900 allows BACnet clients to disable and reenable BACnet communication via the DCC service. Communication can be disabled either until reenabled, or with a timeout value. The DCC service's optional Password parameter is ignored if present.

Segmentation Capability:

☐ Able to transmit segmented messages Window Size _____

☐ Able to receive segmented messages Window Size _____

Standard Object Types Supported:

- **Device**
- **Analog Input**
- **Analog Value**
- **Binary Input**
- **Binary Value**

Properties supported by each Object Type:

Property ID	Device	Analog Input	Analog Value	Binary Input	Binary Value
Object_Identifier	Read-Only	Read-Only	Read-Only	Read-Only	Read-Only
Object_Name	Read-Only	Read-Only	Read-Only	Read-Only	Read-Only
Object_Type	Read-Only	Read-Only	Read-Only	Read-Only	Read-Only
Present_Value		Read-Only	Read-Only	Read-Only	Read-Only
Description	Read-Only	Read-Only	Read-Only	Read-Only	Read-Only
Device_Type		Read-Only		Read-Only	
Status_Flags		Read-Only	Read-Only	Read-Only	Read-Only
Event_State		Read-Only	Read-Only	Read-Only	Read-Only
Out_Of_Service		Read-Only	Read-Only	Read-Only	
Units		Read-Only	Read-Only		
Min_Pres_Value		Read-Only			
Max_Pres_Value		Read-Only			
Resolution		Read-Only	Read-Only		
Polarity				Read-Only	
Inactive_Text				Read-Only	
Active_Text				Read-Only	Read-Only
Vendor_Name	Read-Only				
Vendor_Identifier	Read-Only				
Model_Name	Read-Only				
Firmware_Revision	Read-Only				
Application_Software_Revision	Read-Only				
Location	Read-Only				
Protocol_Version	Read-Only				
Protocol_Revision	Read-Only				
Protocol_Object_Types_Supported	Read-Only				
Object_List	Read-Only				
Local_Time	Read-Only				
Local_Date	Read-Only				
APDU_Timeout	Read-Only				
Number_Of_APDU_Retries	Read-Only				
Device_Address_Binding	Read-Only				
Database_Revision	Read-Only				
Serial_Number	Read-Only				

Notes:

- Object_Identifier has a factory-assigned value for Device objects that can be changed by the operator. Object_Identifier values for other object types are assigned by the system and cannot be modified by the operator.
- BACnet Analog Input objects are used to represent all W900 sensors, including AI Flowmeters, Digital Inputs other than DI State type, and Virtual Input
- BACnet Analog Value objects are used to represent the W900's Analog Outputs, Pulse Relays, and Analog Control Outputs
- BACnet Binary Input objects are used to represent W900 DI State inputs
- BACnet Binary Value objects are used to represent W900 Discrete Relays and Discrete Control Outputs

Data Link Layer Options:

☒ BACnet IP, (Annex J)
☐ BACnet IP, (Annex J), Foreign Device
☐ ISO 8802-3, Ethernet (Clause 7)
☐ ATA 878.1, 2.5 Mb. ARCNET (Clause 8)
☐ ATA 878.1, EIA-485 ARCNET (Clause 8), baud rate(s) _____
☐ MS/TP master (Clause 9), baud rate(s): _____
☐ MS/TP slave (Clause 9), baud rate(s): _____
☐ Point-To-Point, EIA 232 (Clause 10), baud rate(s):_____
☐ Point-To-Point, modem, (Clause 10), baud rate(s): _____
☐ LonTalk, (Clause 11), medium: _____
☐ BACnet/ZigBee (ANNEX O)
☐ Other: _____

Device Address Binding:

Is static device binding supported? (This is currently necessary for two-way communication with MS/TP slaves and certain other devices.) ☐ Yes ☒ No

Networking Options:

☐ Router, Clause 6 - List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.
☐ 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

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)

Character Sets Supported:

Indicating support for multiple character sets does not imply that they can all be supported simultaneously.

☒ ISO 10646 (UTF-8)	☐ IBM™/Microsoft™ DBCS	☐ ISO 8859-1
☐ ISO 10646 (UCS-2)	☐ ISO 10646 (UCS-4)	☐ JIS X 0208

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

n/a