BACNET PICS

BACnet Protocol Implementation Conformance Statement (PICS)

Date:	January 18, 2021
Vendor Name:	Elkor Technologies, Inc.
Product Name:	WattsOn-Mark II
Product Model Number:	W2-E4-xxxx
Applications Software Version:	V1.13
Firmware Revision:	V12.08
BACnet Protocol Revision:	16
Product Description:	

The WattsOn-Mark II is a three-phase, four-quadrant, revenue grade precision power and energy meter. This product supports native BACnet/IP, connecting directly to the LAN using Ethernet or Wi-Fi.

BACnet Standard Device Profile (Annex L):

☐ BACnet Operator Workstation (B-OWS)
☐ 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):

☒ Data Sharing – ReadProperty-B (DS-RP-B)
☒ Data Sharing – ReadPropertyMultiple-B (DS-RPM-B)
☒ Data Sharing – WriteProperty-B (DS-WP-B)
☒ Device Management – Dynamic Device Binding-B (DM-DDB-B)
☒ Device Management – Dynamic Object Binding-B (DM-DOB-B)
☒ Device Management – DeviceCommunicationControl-B (DM-DCC-B)
☒ Device Management – ReinitializeDevice-B (DM-RD-B)

Segmentation Capability:

☒ Able to transmit segmented messages Window Size ___1____
☐ Able to receive segmented messages Window Size _____

Standard Object Types Supported:

This device supports the following object types: Device, Binary Input, Binary Value, Analog Input, Analog Value, Multi-State Input, Multi-State Value, Character String Value, Date-Time Value, Positive Integer Value, File, and Structured View.

The following table summarizes the optional properties supported by this device, and the object types they are supported with. Not all objects of a given object type necessarily support all optional properties (indicated with an asterisk). No optional properties are implemented for object types not shown in the table below. Dynamic object creation and deletion are not supported on this device. No optional properties are implemented for File or Structured View objects.

Optional Property / Optionally Writeable Property	Object Type									
	Device	Binary Input	Binary Value	Analog Input	Analog Value	Multi-State Input	Multi-State Value	Character String Value	Date-Time Value	Positive Integer Value
Object Name	(R)/W									
Description	R/W					R*		R*		
APDU Segment Timeout	R/W									
Max Segments Accepted	R									
Serial Number	R									
Structured Object List	R									
Device UUID	R									
Reliability		R	R	R	R	R	R	R	R	R
Active Text		R	R							
Inactive Text		R	R							
Update Interval				R*						
State Text						R	R			

R – Optional property implemented as readable
R/W – Optional property implemented as readable and writable
(R)/W – Required read-only property implemented as readable and writable
* Not all objects of this object type support this optional property

The following summarizes the proprietary properties implemented by the device. These properties add additional information that may be useful to some clients. Their descriptions are shown below:

Modbus Register: The offset of the Modbus Register corresponding to the BACnet object.
Modbus Field Length: The number of sequential 16-bit Modbus registers used in the corresponding register.
Modbus Field Type: A string describing the underlying storage data type for the corresponding register.
Modbus Decimal Places: The number of implicit decimal places in a fixed-point Modbus register.
Default Value: A string indicating the default value for a BACnet object representing a user-modifiable setting.
Networking Mode: Indicates whether a network-related setting was assigned manually or using DHCP.

The following table summarizes the proprietary properties supported by this device, and the object types they are supported with. Not all objects of a given object type necessarily support all proprietary properties (indicated with an asterisk). No optional properties are implemented for object types not shown in the table below.

Proprietary Properties	Property ID	BACnet Encoding	Object Type						
			Binary Value	Analog Input	Analog Value	Multi-State Input	Multi-State Value	Character String Value	Positive Integer
Modbus Register	8000	Unsigend Integer	R*	R*	R*		R*		R
Modbus Field Length	8001	Unsigend Integer	R*	R*	R*		R*	R*	R
Modbus Field Type	8002	Character String	R*	R*	R*		R*		R
Modbus Decimal Places	8003	UInsigned Integer		R*					
Default Value	8004	Character String						R*	
Networking Mode	8005	Character String				R*			

R – Proprietary property implemented as readable
* Not all objects of this object type support this optional property

Data Link Layer Options:

☒ BACnet IP, (Annex J)
☒ BACnet IP, (Annex J), Foreign Device
☐ ISO 8802-3, Ethernet (Clause 7)
☐ ANSI/ATA 878.1, 2.5 Mb. ARCNET (Clause 8)
☐ ANSI/ATA 878.1, RS-485 ARCNET (Clause 8), baud rate(s) _____
☐ MS/TP master (Clause 9), baud rate(s): 4800, 9600, 19200, 38400, 57600, 76800, 115200
☐ 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: _____
☐ Other: _____

Device Address Binding:

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

Networking Options:

☐ Router, Clause 6 - List all routing configurations
☐ Annex H, BACnet Tunneling Router over IP
☐ BACnet/IP Broadcast Management Device (BBMD)
Does the BBMD support registrations by Foreign Devices? ☐ Yes ☐ No

Character Sets Supported:

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

☒ ANSI X3.4 ☐ IBM™/Microsoft™ DBCS ☐ ISO 8859-1
☐ ISO 10646 (UCS-2) ☐ ISO 10646 (UCS-4) ☐ JIS C 6226

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)