TRIACTA
SUBMETERING BEYOND MEASURE™

TRIACTA GATEWAY™/GATEWAY-S™ BACnet

Application Note – (R01)

Contents

Introduction

This guide describes the BACnet IP interface for the GATEWAY™/GATEWAY-S™ meters. This interface has been designed to comply with the Standard ANSI/ASHRAE Standard 135-2016 *(Protocol Revision 16.1)*. It can be used with any BTL- compliant BACnet IP application to read meter measurement data as part of an integrated building energy management system.

This interface is fully BTL-tested and BTL-compliant. Refer to "Appendix A: Product Implementation Conformance Statement" on page 9 for the details the GATEWAY™/GATEWAY-S™ meters.

This guide provides information about configuring the BACnet interface, and describes the BACnet objects and services supported by the GATEWAY™/GATEWAY-S™ meters and the specific meter data that can be read from each meter, as follows:

GATEWAY™/GATEWAY-S™ meter BACnet configuration

The BACnet IP interface for the GATEWAY™/GATEWAY-S™ series meters is configured using the TRIACTA Configuration Tool; refer to the GATEWAY™/GATEWAY-S™ Configuration Guide 930-149-01-A.01 for information and instructions on using the tool to configure the meters.

Figure 1 shows the BACnet configuration tab in the Configuration Tool and Table 1 provides a programming description of each field.

Figure 1: BACnet tab in the Report section

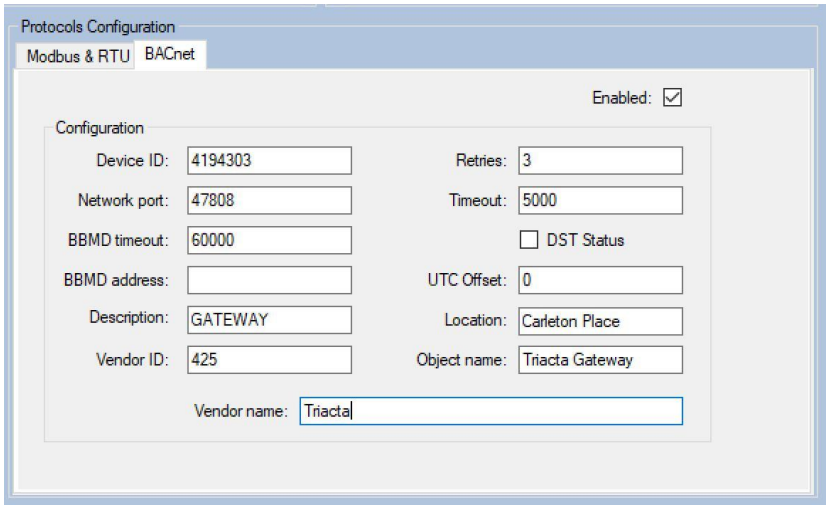


Table 1: BACnet tab configuration parameters

Parameter Description	Description	Programmable
Device ID	User specified BACnet ID number of the meter (between 0 and 4194303). This ID should be different for every device on the BACnet network. Default is 4194303	✓
Network port	DEVICE ID: *(UDP Port number for BACnet/IP communications. Default is 47808)*	✓
BBMD Timeout	The amount of time (seconds) allowed for connection to a BBMD device (if required). Default is 60000 seconds	✓
BBMD Address	The IP address of the BBMD device that controls all devices in the BACnet network (if required). The GATEWAY™/GATEWAY-S™ meters will register with the BBMD as a foreign device. Default is blank (No BBMD devices in the network)	✓
Description	A user definable description of the BACnet device. Default is GATEWAY	✓
Vendor ID	BACnet Vendor Identification number. Default is 425	✓
Vendor Name	METERGY, TRIACTA Div.	✓
Software Version	The software version of the BACnet component (fixed)	✓
UTC Offset	Fixed at 0. All time information is reported in UTC	✓
Location	A user definable description of the physical location of the BACnet device Default is Unknown	✓
Object Name	GATEWAY (Fixed)	✓

GATEWAY/GATEWAY-S BACnet Objects

Once the GATEWAY™/GATEWAY-S™ meter BACnet/IP interface is properly configured, the following BACnet objects will be accessible from any BTL-compliant BACnet/IP application and will be discovered by most BACnet Discovery tools and support the following object types.

- Device object
- Analog input objects
- Accumulator objects

These objects provide device-specific information as described in the following sections.

Model name

Please see the details of supported measurement module types, model name and numbering strategy in Appendix 2.

Segmentation

BACnet packet segmentation is NOT supported by the GATEWAY™/GATEWAY-S™ series meters. TRIACTA recommends using the ReadProperty service to read single objects. If you use the ReadPropertyMultiple service, you must limit the list of objects to be read and do not use reading-all with this service.

Analog input objects

The following analog input objects identify the GATEWAY™/GATEWAY-S™ meter data that is returned in the present value property when reading the specified analog input object.

Except where indicated, all analog input objects are updated every 5 seconds.

Per meter circuit (Meter x)
The following analog input objects are reported for each meter circuit (Meter x).

Per meter circuit (Meter x)
The following analog input objects are reported for each meter circuit (Meter x).

Object name	Description	Units
Meter x Active Power	Current active (real) power	Watts
Meter x Reactive Power	Current reactive power	VARs - Volt Ampere Reactive
Meter x Apparent Power	Current apparent power	VAs -Volt Ampere
Meter x Power Factor	Current power factor	pf
Meter x Peak Demand	Highest demand measured over any demand time interval since either the meter was commissioned or since the last Peak Demand Reset.	Watts
Meter x Present Demand	Demand measured for the most recent demand time interval.	Watts

The number of discovered meter circuits is determined by the model number and configuration of the GATEWAY™/GATEWAY-S™ meter.

***NOTE: Peak/ Present Demand** must be enabled in the **Types** tab of the **Report** section in the GATEWAY™/GATEWAY-S™ configuration tool to enable demand data. The demand calculation type (Block or Sliding Window Demand) and the demand interval duration are specified during meter configuration. Refer to the GATEWAY™/GATEWAY-S™ Configuration Guide for details on how to configure the parameters in the Report section of the configuration tool.*

Per meter circuit and meter element (Meter x, Element p)
The following analog input objects are reported for each meter element (p) on each meter circuit (x).

Object name	Description	Units
Meter x Element p Current	Instantaneous current per element	Amperes
Meter x Element p Voltage	Instantaneous voltage per element	Volts
Meter x Element p Power Factor	Instantaneous power factor per element	pf
Meter x Element p Phase Angle	Instantaneous phase angle per element	Degrees-phase
Meter x Element p Active Power	Instantaneous active power per element	Watts
Meter x Element p Reactive Power	Instantaneous reactive power per element	Volt Amperes Reactive
Meter x Element p Apparent Power	Instantaneous apparent power per element	Volt Amperes

Refer to Appendix 2 for the number of circuits and elements for each GATEWAY™/GATEWAY-S™ model number and configuration.

A mixed configuration is given to show the details of how the objects are displayed in accordance with it in the **BACnet Device Object** which also includes pulses.

NOTE: *The **Pulses** report type must be enabled in the **Types** tab of the **Report** section in the GATEWAY™/GATEWAY-S™ configuration tool to enable the pulse count registers. Refer to the GATEWAY™/GATEWAY-S™ Meters Configuration Guide for details on how to enable the pulse count and set the pulse scale factor parameters in the configuration tool.*

Accumulator objects

The following accumulator objects identify the GATEWAY™/GATEWAY-S™ meter data that is returned in the present value property when reading the specified accumulator object. These objects report the total measured units from when the meter was commissioned or from when the register last overflowed, to present.

Object Name	Description	Units
Meter x Active Energy Delivered Register	Cumulative total of active (real) energy delivered	Watt-hours
Meter x Active Energy Received Register	Cumulative total of active (real) energy received	Watt-hours
Meter x Reactive Energy Delivered Register	Cumulative total of reactive (real) energy delivered	volt-ampere-reactive-hours
Meter x Reactive Energy Received Register	Cumulative total of reactive (real) energy received	volt-ampere-reactive-hours
Meter x Apparent Energy Register	Cumulative total of apparent energy delivered	
Pulse 1-48 Input register	Cumulative total pulse count, multiplied by the pulse scale factor	

BACnet Device Object

The BACnet object details are provided as a function of the meter configuration in this section. There are module options which have different circuit configuration capabilities and affect the number of appearances of analog objects. The BACnet object response is dynamic in that it will only represent the configured meter points and their elements. It will not show blank objects where no meter points or external Pulse inputs are configured.

The Maximum objects possible are;

- Measurement Module objects single element all units of measure enabled = 768
- External Pulse module objects fully loaded (48 Pairs) = 48

Mixed Configuration Full Example

This is a demonstration of the relationship between the meter configuration and how the BACnet objects appear in accordance with it. Please refer to the GATEWAY Configuration Guide 930-149-01-A.01 for more details of meter configuration using the GATEWAY Configuration Tool. All "Record Types were enabled for this demonstration which will produce multiple outputs per meter point. What follows are the web pages of a meter configuration and the associated BACnet output.

Web Page Output

Module 1		Module 2		Module 3		Module 4	
Type	Energy 80mA	Type	Energy 80mA	Type	Energy 80mA	Type	Pulse
Status	OK	Status	OK	Status	OK	Status	OK
Part Number	500-074-02	Part Number	500-074-02	Part Number	500-044-02	Part Number	500-043-01
Hardware Revision	B.01	Hardware Revision	B.01	Hardware Revision	B.00	Hardware Revision	B.00
Serial Number	219202007	Serial Number	219202008	Serial Number	218350403	Serial Number	117400217
Firmware Revision	NONE	Firmware Revision	NONE	Firmware Revision	NONE	Firmware Revision	1.01
Firmware Build	NONE	Firmware Build	NONE	Firmware Build	NONE	Firmware Build	1004
Date	OCT-18-2019	Date	OCT-18-2019	Date	15-Feb-22	Date	14-Nov-17
Integrator 1	0	Integrator 1	0	Integrator 1	0	Integrator 1	0
Integrator 2	0	Integrator 2	0	Integrator 2	0	Integrator 2	0
Integrator 3	0	Integrator 3	0	Integrator 3	0	Integrator 3	0
Integrator 4	0	Integrator 4	0	Integrator 4	0	Integrator 4	0

Meter ID	Badge #	Ref.	Slot	Circuit	Phase	Meter ID	Badge #	Ref.	Slot	Circuit	Phase
Meter 01	Unassigned					Meter 09	Unassigned				
Element 1		VREF1	1	1	A	Element 1		VREF1	2	5	B
Element 2		VREF1	1	2	B	Element 2		VREF1	2	6	C
Meter 02	Unassigned					Meter 10	Unassigned				
Element 1		VREF1	1	3	C	Element 1		VREF1	2	7	A
Element 2		VREF1	1	4	A	Element 2		VREF1	2	8	B
Meter 03	Unassigned					Meter 11	Unassigned				
Element 1		VREF1	1	5	B	Element 1		VREF1	2	9	C
Element 2		VREF1	1	6	C	Element 2		VREF1	2	10	A
Meter 04	Unassigned					Meter 12	Unassigned				
Element 1		VREF1	1	7	A	Element 1		VREF1	2	11	B
Element 2		VREF1	1	8	B	Element 2		VREF1	2	12	C
Meter 05	Unassigned					Meter 13	Unassigned				
Element 1		VREF1	1	9	C	Element 1		VREF1	3	1	A
Element 2		VREF1	1	10	A	Element 2		VREF1	3	2	B
Meter 06	Unassigned					Element 3		VREF1	3	3	C
Element 1		VREF1	1	11	B	Meter 14	Unassigned				
Element 2		VREF1	1	12	C	Element 1		VREF1	3	4	A
Meter 07	Unassigned					Element 2		VREF1	3	5	B
Element 1		VREF1	2	1	A	Element 3		VREF1	3	6	C
Element 2		VREF1	2	2	B	Meter 15	Unassigned				
Meter 08	Unassigned					Element 1		VREF1	3	7	A
Element 1		VREF1	2	3	C	Element 2		VREF1	3	8	B
Element 2		VREF1	2	4	A	Element 3		VREF1	3	9	C

Enabled Interval Reports
Wh Delivered
Wh Received
VARh Delivered
VARh Received
VAh
Pulse
Present Demand
Present VA Demand
Voltage
Peak Current

Enabled Register Reports
Wh Delivered
Wh Received
VARh Delivered
VARh Received
VAh
Pulse
Peak Demand
Peak VA Demand

BACnet Mixed Configuration Output

Object Type	Object Id	Object Name	Value	Description
Device	123456	" "		Triacrta
AnalogInput	0	Meter 1 Active Power	0	Meter 1 Active Power
AnalogInput	1	Meter 1 Reactive Power	0	Meter 1 Reactive Power
AnalogInput	2	Meter 1 Apparent Power	0	Meter 1 Apparent Power
AnalogInput	3	Meter 1 Power Factor	0	Meter 1 Power Factor
AnalogInput	4	Meter 1 Demand W	0	Meter 1 Demand W
AnalogInput	5	Meter 1 Demand W Present	0	Meter 1 Demand W Present
AnalogInput	6	Meter 1 Demand VA	0	Meter 1 Demand VA
AnalogInput	7	Meter 1 Demand VA Present	0	Meter 1 Demand VA Present
AnalogInput	8	Meter 1 Element 1 Power	0	Meter 1 Element 1 Power
AnalogInput	9	Meter 1 Element 1 Reactive Power	0	Meter 1 Element 1 Reactive Power
AnalogInput	10	Meter 1 Element 1 Apparent Power	0	Meter 1 Element 1 Apparent Power
AnalogInput	11	Meter 1 Element 1 Power Factor	0	Meter 1 Element 1 Power Factor
AnalogInput	12	Meter 1 Element 1 Angle	0	Meter 1 Element 1 Angle
AnalogInput	13	Meter 1 Element 1 Current	0	Meter 1 Element 1 Current
AnalogInput	14	Meter 1 Element 1 Voltage	0	Meter 1 Element 1 Voltage
AnalogInput	15	Meter 1 Element 2 Power	0	Meter 1 Element 2 Power
AnalogInput	16	Meter 1 Element 2 Reactive Power	0	Meter 1 Element 2 Reactive Power
AnalogInput	17	Meter 1 Element 2 Apparent Power	0	Meter 1 Element 2 Apparent Power
AnalogInput	18	Meter 1 Element 2 Power Factor	0	Meter 1 Element 2 Power Factor
AnalogInput	19	Meter 1 Element 2 Angle	0	Meter 1 Element 2 Angle
AnalogInput	20	Meter 1 Element 2 Current	0	Meter 1 Element 2 Current
AnalogInput	21	Meter 1 Element 2 Voltage	0	Meter 1 Element 2 Voltage
AnalogInput	22	Meter 2 Active Power	0	Meter 2 Active Power
AnalogInput	23	Meter 2 Reactive Power	0	Meter 2 Reactive Power
AnalogInput	24	Meter 2 Apparent Power	0	Meter 2 Apparent Power
AnalogInput	25	Meter 2 Power Factor	0	Meter 2 Power Factor
AnalogInput	26	Meter 2 Demand W	0	Meter 2 Demand W
AnalogInput	27	Meter 2 Demand W Present	0	Meter 2 Demand W Present
AnalogInput	28	Meter 2 Demand VA	0	Meter 2 Demand VA
AnalogInput	29	Meter 2 Demand VA Present	0	Meter 2 Demand VA Present
AnalogInput	30	Meter 2 Element 1 Power	0	Meter 2 Element 1 Power
AnalogInput	31	Meter 2 Element 1 Reactive Power	0	Meter 2 Element 1 Reactive Power
AnalogInput	32	Meter 2 Element 1 Apparent Power	0	Meter 2 Element 1 Apparent Power
AnalogInput	33	Meter 2 Element 1 Power Factor	0	Meter 2 Element 1 Power Factor
AnalogInput	34	Meter 2 Element 1 Angle	0	Meter 2 Element 1 Angle
AnalogInput	35	Meter 2 Element 1 Current	0	Meter 2 Element 1 Current
AnalogInput	36	Meter 2 Element 1 Voltage	0	Meter 2 Element 1 Voltage
AnalogInput	37	Meter 2 Element 2 Power	0	Meter 2 Element 2 Power
AnalogInput	38	Meter 2 Element 2 Reactive Power	0	Meter 2 Element 2 Reactive Power
AnalogInput	39	Meter 2 Element 2 Apparent Power	0	Meter 2 Element 2 Apparent Power
AnalogInput	40	Meter 2 Element 2 Power Factor	0	Meter 2 Element 2 Power Factor
AnalogInput	41	Meter 2 Element 2 Angle	0	Meter 2 Element 2 Angle
AnalogInput	42	Meter 2 Element 2 Current	0	Meter 2 Element 2 Current
AnalogInput	43	Meter 2 Element 2 Voltage	0	Meter 2 Element 2 Voltage
AnalogInput	44	Meter 3 Active Power	0	Meter 3 Active Power
AnalogInput	45	Meter 3 Reactive Power	0	Meter 3 Reactive Power
AnalogInput	46	Meter 3 Apparent Power	0	Meter 3 Apparent Power
AnalogInput	47	Meter 3 Power Factor	0	Meter 3 Power Factor
AnalogInput	48	Meter 3 Demand W	0	Meter 3 Demand W
AnalogInput	49	Meter 3 Demand W Present	0	Meter 3 Demand W Present
AnalogInput	50	Meter 3 Demand VA	0	Meter 3 Demand VA
AnalogInput	51	Meter 3 Demand VA Present	0	Meter 3 Demand VA Present
AnalogInput	52	Meter 3 Element 1 Power	0	Meter 3 Element 1 Power
AnalogInput	53	Meter 3 Element 1 Reactive Power	0	Meter 3 Element 1 Reactive Power
AnalogInput	54	Meter 3 Element 1 Apparent Power	0	Meter 3 Element 1 Apparent Power

AnalogInput	55	Meter 3 Element 1 Power Factor	0	Meter 3 Element 1 Power Factor
AnalogInput	56	Meter 3 Element 1 Angle	0	Meter 3 Element 1 Angle
AnalogInput	57	Meter 3 Element 1 Current	0	Meter 3 Element 1 Current
AnalogInput	58	Meter 3 Element 1 Voltage	0	Meter 3 Element 1 Voltage
AnalogInput	59	Meter 3 Element 2 Power	0	Meter 3 Element 2 Power
AnalogInput	60	Meter 3 Element 2 Reactive Power	0	Meter 3 Element 2 Reactive Power
AnalogInput	61	Meter 3 Element 2 Apparent Power	0	Meter 3 Element 2 Apparent Power
AnalogInput	62	Meter 3 Element 2 Power Factor	0	Meter 3 Element 2 Power Factor
AnalogInput	63	Meter 3 Element 2 Angle	0	Meter 3 Element 2 Angle
AnalogInput	64	Meter 3 Element 2 Current	0	Meter 3 Element 2 Current
AnalogInput	65	Meter 3 Element 2 Voltage	0	Meter 3 Element 2 Voltage
AnalogInput	66	Meter 4 Active Power	0	Meter 4 Active Power
AnalogInput	67	Meter 4 Reactive Power	0	Meter 4 Reactive Power
AnalogInput	68	Meter 4 Apparent Power	0	Meter 4 Apparent Power
AnalogInput	69	Meter 4 Power Factor	0	Meter 4 Power Factor
AnalogInput	70	Meter 4 Demand W	0	Meter 4 Demand W
AnalogInput	71	Meter 4 Demand W Present	0	Meter 4 Demand W Present
AnalogInput	72	Meter 4 Demand VA	0	Meter 4 Demand VA
AnalogInput	73	Meter 4 Demand VA Present	0	Meter 4 Demand VA Present
AnalogInput	74	Meter 4 Element 1 Power	0	Meter 4 Element 1 Power
AnalogInput	75	Meter 4 Element 1 Reactive Power	0	Meter 4 Element 1 Reactive Power
AnalogInput	76	Meter 4 Element 1 Apparent Power	0	Meter 4 Element 1 Apparent Power
AnalogInput	77	Meter 4 Element 1 Power Factor	0	Meter 4 Element 1 Power Factor
AnalogInput	78	Meter 4 Element 1 Angle	0	Meter 4 Element 1 Angle
AnalogInput	79	Meter 4 Element 1 Current	0	Meter 4 Element 1 Current
AnalogInput	80	Meter 4 Element 1 Voltage	0	Meter 4 Element 1 Voltage
AnalogInput	81	Meter 4 Element 2 Power	0	Meter 4 Element 2 Power
AnalogInput	82	Meter 4 Element 2 Reactive Power	0	Meter 4 Element 2 Reactive Power
AnalogInput	83	Meter 4 Element 2 Apparent Power	0	Meter 4 Element 2 Apparent Power
AnalogInput	84	Meter 4 Element 2 Power Factor	0	Meter 4 Element 2 Power Factor
AnalogInput	85	Meter 4 Element 2 Angle	0	Meter 4 Element 2 Angle
AnalogInput	86	Meter 4 Element 2 Current	0	Meter 4 Element 2 Current
AnalogInput	87	Meter 4 Element 2 Voltage	0	Meter 4 Element 2 Voltage
AnalogInput	88	Meter 5 Active Power	0	Meter 5 Active Power
AnalogInput	89	Meter 5 Reactive Power	0	Meter 5 Reactive Power
AnalogInput	90	Meter 5 Apparent Power	0	Meter 5 Apparent Power
AnalogInput	91	Meter 5 Power Factor	0	Meter 5 Power Factor
AnalogInput	92	Meter 5 Demand W	0	Meter 5 Demand W
AnalogInput	93	Meter 5 Demand W Present	0	Meter 5 Demand W Present
AnalogInput	94	Meter 5 Demand VA	0	Meter 5 Demand VA
AnalogInput	95	Meter 5 Demand VA Present	0	Meter 5 Demand VA Present
AnalogInput	96	Meter 5 Element 1 Power	0	Meter 5 Element 1 Power
AnalogInput	97	Meter 5 Element 1 Reactive Power	0	Meter 5 Element 1 Reactive Power
AnalogInput	98	Meter 5 Element 1 Apparent Power	0	Meter 5 Element 1 Apparent Power
AnalogInput	99	Meter 5 Element 1 Power Factor	0	Meter 5 Element 1 Power Factor
AnalogInput	100	Meter 5 Element 1 Angle	0	Meter 5 Element 1 Angle
AnalogInput	101	Meter 5 Element 1 Current	0	Meter 5 Element 1 Current
AnalogInput	102	Meter 5 Element 1 Voltage	0	Meter 5 Element 1 Voltage
AnalogInput	103	Meter 5 Element 2 Power	0	Meter 5 Element 2 Power
AnalogInput	104	Meter 5 Element 2 Reactive Power	0	Meter 5 Element 2 Reactive Power
AnalogInput	105	Meter 5 Element 2 Apparent Power	0	Meter 5 Element 2 Apparent Power
AnalogInput	106	Meter 5 Element 2 Power Factor	0	Meter 5 Element 2 Power Factor
AnalogInput	107	Meter 5 Element 2 Angle	0	Meter 5 Element 2 Angle
AnalogInput	108	Meter 5 Element 2 Current	0	Meter 5 Element 2 Current
AnalogInput	109	Meter 5 Element 2 Voltage	0	Meter 5 Element 2 Voltage
AnalogInput	110	Meter 6 Active Power	0	Meter 6 Active Power

AnalogInput	111	Meter 6 Reactive Power	0	Meter 6 Reactive Power
AnalogInput	112	Meter 6 Apparent Power	0	Meter 6 Apparent Power
AnalogInput	113	Meter 6 Power Factor	0	Meter 6 Power Factor
AnalogInput	114	Meter 6 Demand W	0	Meter 6 Demand W
AnalogInput	115	Meter 6 Demand W Present	0	Meter 6 Demand W Present
AnalogInput	116	Meter 6 Demand VA	0	Meter 6 Demand VA
AnalogInput	117	Meter 6 Demand VA Present	0	Meter 6 Demand VA Present
AnalogInput	118	Meter 6 Element 1 Power	0	Meter 6 Element 1 Power
AnalogInput	119	Meter 6 Element 1 Reactive Power	0	Meter 6 Element 1 Reactive Power
AnalogInput	120	Meter 6 Element 1 Apparent Power	0	Meter 6 Element 1 Apparent Power
AnalogInput	121	Meter 6 Element 1 Power Factor	0	Meter 6 Element 1 Power Factor
AnalogInput	122	Meter 6 Element 1 Angle	0	Meter 6 Element 1 Angle
AnalogInput	123	Meter 6 Element 1 Current	0	Meter 6 Element 1 Current
AnalogInput	124	Meter 6 Element 1 Voltage	0	Meter 6 Element 1 Voltage
AnalogInput	125	Meter 6 Element 2 Power	0	Meter 6 Element 2 Power
AnalogInput	126	Meter 6 Element 2 Reactive Power	0	Meter 6 Element 2 Reactive Power
AnalogInput	127	Meter 6 Element 2 Apparent Power	0	Meter 6 Element 2 Apparent Power
AnalogInput	128	Meter 6 Element 2 Power Factor	0	Meter 6 Element 2 Power Factor
AnalogInput	129	Meter 6 Element 2 Angle	0	Meter 6 Element 2 Angle
AnalogInput	130	Meter 6 Element 2 Current	0	Meter 6 Element 2 Current
AnalogInput	131	Meter 6 Element 2 Voltage	0	Meter 6 Element 2 Voltage
AnalogInput	132	Meter 7 Active Power	0	Meter 7 Active Power
AnalogInput	133	Meter 7 Reactive Power	0	Meter 7 Reactive Power
AnalogInput	134	Meter 7 Apparent Power	0	Meter 7 Apparent Power
AnalogInput	135	Meter 7 Power Factor	0	Meter 7 Power Factor
AnalogInput	136	Meter 7 Demand W	0	Meter 7 Demand W
AnalogInput	137	Meter 7 Demand W Present	0	Meter 7 Demand W Present
AnalogInput	138	Meter 7 Demand VA	0	Meter 7 Demand VA
AnalogInput	139	Meter 7 Demand VA Present	0	Meter 7 Demand VA Present
AnalogInput	140	Meter 7 Element 1 Power	0	Meter 7 Element 1 Power
AnalogInput	141	Meter 7 Element 1 Reactive Power	0	Meter 7 Element 1 Reactive Power
AnalogInput	142	Meter 7 Element 1 Apparent Power	0	Meter 7 Element 1 Apparent Power
AnalogInput	143	Meter 7 Element 1 Power Factor	0	Meter 7 Element 1 Power Factor
AnalogInput	144	Meter 7 Element 1 Angle	0	Meter 7 Element 1 Angle
AnalogInput	145	Meter 7 Element 1 Current	0	Meter 7 Element 1 Current
AnalogInput	146	Meter 7 Element 1 Voltage	0	Meter 7 Element 1 Voltage
AnalogInput	147	Meter 7 Element 2 Power	0	Meter 7 Element 2 Power
AnalogInput	148	Meter 7 Element 2 Reactive Power	0	Meter 7 Element 2 Reactive Power
AnalogInput	149	Meter 7 Element 2 Apparent Power	0	Meter 7 Element 2 Apparent Power
AnalogInput	150	Meter 7 Element 2 Power Factor	0	Meter 7 Element 2 Power Factor
AnalogInput	151	Meter 7 Element 2 Angle	0	Meter 7 Element 2 Angle
AnalogInput	152	Meter 7 Element 2 Current	0	Meter 7 Element 2 Current
AnalogInput	153	Meter 7 Element 2 Voltage	0	Meter 7 Element 2 Voltage
AnalogInput	154	Meter 8 Active Power	0	Meter 8 Active Power
AnalogInput	155	Meter 8 Reactive Power	0	Meter 8 Reactive Power
AnalogInput	156	Meter 8 Apparent Power	0	Meter 8 Apparent Power
AnalogInput	157	Meter 8 Power Factor	0	Meter 8 Power Factor
AnalogInput	158	Meter 8 Demand W	0	Meter 8 Demand W
AnalogInput	159	Meter 8 Demand W Present	0	Meter 8 Demand W Present
AnalogInput	160	Meter 8 Demand VA	0	Meter 8 Demand VA
AnalogInput	161	Meter 8 Demand VA Present	0	Meter 8 Demand VA Present
AnalogInput	162	Meter 8 Element 1 Power	0	Meter 8 Element 1 Power
AnalogInput	163	Meter 8 Element 1 Reactive Power	0	Meter 8 Element 1 Reactive Power
AnalogInput	164	Meter 8 Element 1 Apparent Power	0	Meter 8 Element 1 Apparent Power
AnalogInput	165	Meter 8 Element 1 Power Factor	0	Meter 8 Element 1 Power Factor
AnalogInput	166	Meter 8 Element 1 Angle	0	Meter 8 Element 1 Angle
AnalogInput	167	Meter 8 Element 1 Current	0	Meter 8 Element 1 Current

AnalogInput	168	Meter 8 Element 1 Voltage	0	Meter 8 Element 1 Voltage
AnalogInput	169	Meter 8 Element 2 Power	0	Meter 8 Element 2 Power
AnalogInput	170	Meter 8 Element 2 Reactive Power	0	Meter 8 Element 2 Reactive Power
AnalogInput	171	Meter 8 Element 2 Apparent Power	0	Meter 8 Element 2 Apparent Power
AnalogInput	172	Meter 8 Element 2 Power Factor	0	Meter 8 Element 2 Power Factor
AnalogInput	173	Meter 8 Element 2 Angle	0	Meter 8 Element 2 Angle
AnalogInput	174	Meter 8 Element 2 Current	0	Meter 8 Element 2 Current
AnalogInput	175	Meter 8 Element 2 Voltage	0	Meter 8 Element 2 Voltage
AnalogInput	176	Meter 9 Active Power	0	Meter 9 Active Power
AnalogInput	177	Meter 9 Reactive Power	0	Meter 9 Reactive Power
AnalogInput	178	Meter 9 Apparent Power	0	Meter 9 Apparent Power
AnalogInput	179	Meter 9 Power Factor	0	Meter 9 Power Factor
AnalogInput	180	Meter 9 Demand W	0	Meter 9 Demand W
AnalogInput	181	Meter 9 Demand W Present	0	Meter 9 Demand W Present
AnalogInput	182	Meter 9 Demand VA	0	Meter 9 Demand VA
AnalogInput	183	Meter 9 Demand VA Present	0	Meter 9 Demand VA Present
AnalogInput	184	Meter 9 Element 1 Power	0	Meter 9 Element 1 Power
AnalogInput	185	Meter 9 Element 1 Reactive Power	0	Meter 9 Element 1 Reactive Power
AnalogInput	186	Meter 9 Element 1 Apparent Power	0	Meter 9 Element 1 Apparent Power
AnalogInput	187	Meter 9 Element 1 Power Factor	0	Meter 9 Element 1 Power Factor
AnalogInput	188	Meter 9 Element 1 Angle	0	Meter 9 Element 1 Angle
AnalogInput	189	Meter 9 Element 1 Current	0	Meter 9 Element 1 Current
AnalogInput	190	Meter 9 Element 1 Voltage	0	Meter 9 Element 1 Voltage
AnalogInput	191	Meter 9 Element 2 Power	0	Meter 9 Element 2 Power
AnalogInput	192	Meter 9 Element 2 Reactive Power	0	Meter 9 Element 2 Reactive Power
AnalogInput	193	Meter 9 Element 2 Apparent Power	0	Meter 9 Element 2 Apparent Power
AnalogInput	194	Meter 9 Element 2 Power Factor	0	Meter 9 Element 2 Power Factor
AnalogInput	195	Meter 9 Element 2 Angle	0	Meter 9 Element 2 Angle
AnalogInput	196	Meter 9 Element 2 Current	0	Meter 9 Element 2 Current
AnalogInput	197	Meter 9 Element 2 Voltage	0	Meter 9 Element 2 Voltage
AnalogInput	198	Meter 10 Active Power	0	Meter 10 Active Power
AnalogInput	199	Meter 10 Reactive Power	0	Meter 10 Reactive Power
AnalogInput	200	Meter 10 Apparent Power	0	Meter 10 Apparent Power
AnalogInput	201	Meter 10 Power Factor	0	Meter 10 Power Factor
AnalogInput	202	Meter 10 Demand W	0	Meter 10 Demand W
AnalogInput	203	Meter 10 Demand W Present	0	Meter 10 Demand W Present
AnalogInput	204	Meter 10 Demand VA	0	Meter 10 Demand VA
AnalogInput	205	Meter 10 Demand VA Present	0	Meter 10 Demand VA Present
AnalogInput	206	Meter 10 Element 1 Power	0	Meter 10 Element 1 Power
AnalogInput	207	Meter 10 Element 1 Reactive Power	0	Meter 10 Element 1 Reactive Power
AnalogInput	208	Meter 10 Element 1 Apparent Power	0	Meter 10 Element 1 Apparent Power
AnalogInput	209	Meter 10 Element 1 Power Factor	0	Meter 10 Element 1 Power Factor
AnalogInput	210	Meter 10 Element 1 Angle	0	Meter 10 Element 1 Angle
AnalogInput	211	Meter 10 Element 1 Current	0	Meter 10 Element 1 Current
AnalogInput	212	Meter 10 Element 1 Voltage	0	Meter 10 Element 1 Voltage
AnalogInput	213	Meter 10 Element 2 Power	0	Meter 10 Element 2 Power
AnalogInput	214	Meter 10 Element 2 Reactive Power	0	Meter 10 Element 2 Reactive Power
AnalogInput	215	Meter 10 Element 2 Apparent Power	0	Meter 10 Element 2 Apparent Power
AnalogInput	216	Meter 10 Element 2 Power Factor	0	Meter 10 Element 2 Power Factor
AnalogInput	217	Meter 10 Element 2 Angle	0	Meter 10 Element 2 Angle
AnalogInput	218	Meter 10 Element 2 Current	0	Meter 10 Element 2 Current
AnalogInput	219	Meter 10 Element 2 Voltage	0	Meter 10 Element 2 Voltage
AnalogInput	220	Meter 11 Active Power	0	Meter 11 Active Power
AnalogInput	221	Meter 11 Reactive Power	0	Meter 11 Reactive Power
AnalogInput	222	Meter 11 Apparent Power	0	Meter 11 Apparent Power
AnalogInput	223	Meter 11 Power Factor	0	Meter 11 Power Factor
AnalogInput	224	Meter 11 Demand W	0	Meter 11 Demand W

AnalogInput	225	Meter 11 Demand W Present	0	Meter 11 Demand W Present
AnalogInput	226	Meter 11 Demand VA	0	Meter 11 Demand VA
AnalogInput	227	Meter 11 Demand VA Present	0	Meter 11 Demand VA Present
AnalogInput	228	Meter 11 Element 1 Power	0	Meter 11 Element 1 Power
AnalogInput	229	Meter 11 Element 1 Reactive Power	0	Meter 11 Element 1 Reactive Power
AnalogInput	230	Meter 11 Element 1 Apparent Power	0	Meter 11 Element 1 Apparent Power
AnalogInput	231	Meter 11 Element 1 Power Factor	0	Meter 11 Element 1 Power Factor
AnalogInput	232	Meter 11 Element 1 Angle	0	Meter 11 Element 1 Angle
AnalogInput	233	Meter 11 Element 1 Current	0	Meter 11 Element 1 Current
AnalogInput	234	Meter 11 Element 1 Voltage	0	Meter 11 Element 1 Voltage
AnalogInput	235	Meter 11 Element 2 Power	0	Meter 11 Element 2 Power
AnalogInput	236	Meter 11 Element 2 Reactive Power	0	Meter 11 Element 2 Reactive Power
AnalogInput	237	Meter 11 Element 2 Apparent Power	0	Meter 11 Element 2 Apparent Power
AnalogInput	238	Meter 11 Element 2 Power Factor	0	Meter 11 Element 2 Power Factor
AnalogInput	239	Meter 11 Element 2 Angle	0	Meter 11 Element 2 Angle
AnalogInput	240	Meter 11 Element 2 Current	0	Meter 11 Element 2 Current
AnalogInput	241	Meter 11 Element 2 Voltage	0	Meter 11 Element 2 Voltage
AnalogInput	242	Meter 12 Active Power	0	Meter 12 Active Power
AnalogInput	243	Meter 12 Reactive Power	0	Meter 12 Reactive Power
AnalogInput	244	Meter 12 Apparent Power	0	Meter 12 Apparent Power
AnalogInput	245	Meter 12 Power Factor	0	Meter 12 Power Factor
AnalogInput	246	Meter 12 Demand W	0	Meter 12 Demand W
AnalogInput	247	Meter 12 Demand W Present	0	Meter 12 Demand W Present
AnalogInput	248	Meter 12 Demand VA	0	Meter 12 Demand VA
AnalogInput	249	Meter 12 Demand VA Present	0	Meter 12 Demand VA Present
AnalogInput	250	Meter 12 Element 1 Power	0	Meter 12 Element 1 Power
AnalogInput	251	Meter 12 Element 1 Reactive Power	0	Meter 12 Element 1 Reactive Power
AnalogInput	252	Meter 12 Element 1 Apparent Power	0	Meter 12 Element 1 Apparent Power
AnalogInput	253	Meter 12 Element 1 Power Factor	0	Meter 12 Element 1 Power Factor
AnalogInput	254	Meter 12 Element 1 Angle	0	Meter 12 Element 1 Angle
AnalogInput	255	Meter 12 Element 1 Current	0	Meter 12 Element 1 Current
AnalogInput	256	Meter 12 Element 1 Voltage	0	Meter 12 Element 1 Voltage
AnalogInput	257	Meter 12 Element 2 Power	0	Meter 12 Element 2 Power
AnalogInput	258	Meter 12 Element 2 Reactive Power	0	Meter 12 Element 2 Reactive Power
AnalogInput	259	Meter 12 Element 2 Apparent Power	0	Meter 12 Element 2 Apparent Power
AnalogInput	260	Meter 12 Element 2 Power Factor	0	Meter 12 Element 2 Power Factor
AnalogInput	261	Meter 12 Element 2 Angle	0	Meter 12 Element 2 Angle
AnalogInput	262	Meter 12 Element 2 Current	0	Meter 12 Element 2 Current
AnalogInput	263	Meter 12 Element 2 Voltage	0	Meter 12 Element 2 Voltage
AnalogInput	264	Meter 13 Active Power	0	Meter 13 Active Power
AnalogInput	265	Meter 13 Reactive Power	0	Meter 13 Reactive Power
AnalogInput	266	Meter 13 Apparent Power	0	Meter 13 Apparent Power
AnalogInput	267	Meter 13 Power Factor	0	Meter 13 Power Factor
AnalogInput	268	Meter 13 Demand W	0	Meter 13 Demand W
AnalogInput	269	Meter 13 Demand W Present	0	Meter 13 Demand W Present
AnalogInput	270	Meter 13 Demand VA	0	Meter 13 Demand VA
AnalogInput	271	Meter 13 Demand VA Present	0	Meter 13 Demand VA Present
AnalogInput	272	Meter 13 Element 1 Power	0	Meter 13 Element 1 Power
AnalogInput	273	Meter 13 Element 1 Reactive Power	0	Meter 13 Element 1 Reactive Power
AnalogInput	274	Meter 13 Element 1 Apparent Power	0	Meter 13 Element 1 Apparent Power
AnalogInput	275	Meter 13 Element 1 Power Factor	0	Meter 13 Element 1 Power Factor
AnalogInput	276	Meter 13 Element 1 Angle	0	Meter 13 Element 1 Angle
AnalogInput	277	Meter 13 Element 1 Current	0	Meter 13 Element 1 Current
AnalogInput	278	Meter 13 Element 1 Voltage	0	Meter 13 Element 1 Voltage
AnalogInput	279	Meter 13 Element 2 Power	0	Meter 13 Element 2 Power
AnalogInput	280	Meter 13 Element 2 Reactive Power	0	Meter 13 Element 2 Reactive Power
AnalogInput	281	Meter 13 Element 2 Apparent Power	0	Meter 13 Element 2 Apparent Power

AnalogInput	282	Meter 13 Element 2 Power Factor	0	Meter 13 Element 2 Power Factor
AnalogInput	283	Meter 13 Element 2 Angle	0	Meter 13 Element 2 Angle
AnalogInput	284	Meter 13 Element 2 Current	0	Meter 13 Element 2 Current
AnalogInput	285	Meter 13 Element 2 Voltage	0	Meter 13 Element 2 Voltage
AnalogInput	286	Meter 13 Element 3 Power	0	Meter 13 Element 3 Power
AnalogInput	287	Meter 13 Element 3 Reactive Power	0	Meter 13 Element 3 Reactive Power
AnalogInput	288	Meter 13 Element 3 Apparent Power	0	Meter 13 Element 3 Apparent Power
AnalogInput	289	Meter 13 Element 3 Power Factor	0	Meter 13 Element 3 Power Factor
AnalogInput	290	Meter 13 Element 3 Angle	0	Meter 13 Element 3 Angle
AnalogInput	291	Meter 13 Element 3 Current	0	Meter 13 Element 3 Current
AnalogInput	292	Meter 13 Element 3 Voltage	0	Meter 13 Element 3 Voltage
AnalogInput	293	Meter 14 Active Power	0	Meter 14 Active Power
AnalogInput	294	Meter 14 Reactive Power	0	Meter 14 Reactive Power
AnalogInput	295	Meter 14 Apparent Power	0	Meter 14 Apparent Power
AnalogInput	296	Meter 14 Power Factor	0	Meter 14 Power Factor
AnalogInput	297	Meter 14 Demand W	0	Meter 14 Demand W
AnalogInput	298	Meter 14 Demand W Present	0	Meter 14 Demand W Present
AnalogInput	299	Meter 14 Demand VA	0	Meter 14 Demand VA
AnalogInput	300	Meter 14 Demand VA Present	0	Meter 14 Demand VA Present
AnalogInput	301	Meter 14 Element 1 Power	0	Meter 14 Element 1 Power
AnalogInput	302	Meter 14 Element 1 Reactive Power	0	Meter 14 Element 1 Reactive Power
AnalogInput	303	Meter 14 Element 1 Apparent Power	0	Meter 14 Element 1 Apparent Power
AnalogInput	304	Meter 14 Element 1 Power Factor	0	Meter 14 Element 1 Power Factor
AnalogInput	305	Meter 14 Element 1 Angle	0	Meter 14 Element 1 Angle
AnalogInput	306	Meter 14 Element 1 Current	0	Meter 14 Element 1 Current
AnalogInput	307	Meter 14 Element 1 Voltage	0	Meter 14 Element 1 Voltage
AnalogInput	308	Meter 14 Element 2 Power	0	Meter 14 Element 2 Power
AnalogInput	309	Meter 14 Element 2 Reactive Power	0	Meter 14 Element 2 Reactive Power
AnalogInput	310	Meter 14 Element 2 Apparent Power	0	Meter 14 Element 2 Apparent Power
AnalogInput	311	Meter 14 Element 2 Power Factor	0	Meter 14 Element 2 Power Factor
AnalogInput	312	Meter 14 Element 2 Angle	0	Meter 14 Element 2 Angle
AnalogInput	313	Meter 14 Element 2 Current	0	Meter 14 Element 2 Current
AnalogInput	314	Meter 14 Element 2 Voltage	0	Meter 14 Element 2 Voltage
AnalogInput	315	Meter 14 Element 3 Power	0	Meter 14 Element 3 Power
AnalogInput	316	Meter 14 Element 3 Reactive Power	0	Meter 14 Element 3 Reactive Power
AnalogInput	317	Meter 14 Element 3 Apparent Power	0	Meter 14 Element 3 Apparent Power
AnalogInput	318	Meter 14 Element 3 Power Factor	0	Meter 14 Element 3 Power Factor
AnalogInput	319	Meter 14 Element 3 Angle	0	Meter 14 Element 3 Angle
AnalogInput	320	Meter 14 Element 3 Current	0	Meter 14 Element 3 Current
AnalogInput	321	Meter 14 Element 3 Voltage	0	Meter 14 Element 3 Voltage
AnalogInput	322	Meter 15 Active Power	0	Meter 15 Active Power
AnalogInput	323	Meter 15 Reactive Power	0	Meter 15 Reactive Power
AnalogInput	324	Meter 15 Apparent Power	0	Meter 15 Apparent Power
AnalogInput	325	Meter 15 Power Factor	0	Meter 15 Power Factor
AnalogInput	326	Meter 15 Demand W	0	Meter 15 Demand W
AnalogInput	327	Meter 15 Demand W Present	0	Meter 15 Demand W Present
AnalogInput	328	Meter 15 Demand VA	0	Meter 15 Demand VA
AnalogInput	329	Meter 15 Demand VA Present	0	Meter 15 Demand VA Present
AnalogInput	330	Meter 15 Element 1 Power	0	Meter 15 Element 1 Power
AnalogInput	331	Meter 15 Element 1 Reactive Power	0	Meter 15 Element 1 Reactive Power
AnalogInput	332	Meter 15 Element 1 Apparent Power	0	Meter 15 Element 1 Apparent Power
AnalogInput	333	Meter 15 Element 1 Power Factor	0	Meter 15 Element 1 Power Factor
AnalogInput	334	Meter 15 Element 1 Angle	0	Meter 15 Element 1 Angle
AnalogInput	335	Meter 15 Element 1 Current	0	Meter 15 Element 1 Current
AnalogInput	336	Meter 15 Element 1 Voltage	0	Meter 15 Element 1 Voltage
AnalogInput	337	Meter 15 Element 2 Power	0	Meter 15 Element 2 Power
AnalogInput	338	Meter 15 Element 2 Reactive Power	0	Meter 15 Element 2 Reactive Power

AnalogInput	339	Meter 15 Element 2 Apparent Power	0	Meter 15 Element 2 Apparent Power
AnalogInput	340	Meter 15 Element 2 Power Factor	0	Meter 15 Element 2 Power Factor
AnalogInput	341	Meter 15 Element 2 Angle	0	Meter 15 Element 2 Angle
AnalogInput	342	Meter 15 Element 2 Current	0	Meter 15 Element 2 Current
AnalogInput	343	Meter 15 Element 2 Voltage	0	Meter 15 Element 2 Voltage
AnalogInput	344	Meter 15 Element 3 Power	0	Meter 15 Element 3 Power
AnalogInput	345	Meter 15 Element 3 Reactive Power	0	Meter 15 Element 3 Reactive Power
AnalogInput	346	Meter 15 Element 3 Apparent Power	0	Meter 15 Element 3 Apparent Power
AnalogInput	347	Meter 15 Element 3 Power Factor	0	Meter 15 Element 3 Power Factor
AnalogInput	348	Meter 15 Element 3 Angle	0	Meter 15 Element 3 Angle
AnalogInput	349	Meter 15 Element 3 Current	0	Meter 15 Element 3 Current
AnalogInput	350	Meter 15 Element 3 Voltage	0	Meter 15 Element 3 Voltage
AnalogInput	351	Meter 16 Active Power	0	Meter 16 Active Power
AnalogInput	352	Meter 16 Reactive Power	0	Meter 16 Reactive Power
AnalogInput	353	Meter 16 Apparent Power	0	Meter 16 Apparent Power
AnalogInput	354	Meter 16 Power Factor	0	Meter 16 Power Factor
AnalogInput	355	Meter 16 Demand W	0	Meter 16 Demand W
AnalogInput	356	Meter 16 Demand W Present	0	Meter 16 Demand W Present
AnalogInput	357	Meter 16 Demand VA	0	Meter 16 Demand VA
AnalogInput	358	Meter 16 Demand VA Present	0	Meter 16 Demand VA Present
AnalogInput	359	Meter 16 Element 1 Power	0	Meter 16 Element 1 Power
AnalogInput	360	Meter 16 Element 1 Reactive Power	0	Meter 16 Element 1 Reactive Power
AnalogInput	361	Meter 16 Element 1 Apparent Power	0	Meter 16 Element 1 Apparent Power
AnalogInput	362	Meter 16 Element 1 Power Factor	0	Meter 16 Element 1 Power Factor
AnalogInput	363	Meter 16 Element 1 Angle	0	Meter 16 Element 1 Angle
AnalogInput	364	Meter 16 Element 1 Current	0	Meter 16 Element 1 Current
AnalogInput	365	Meter 16 Element 1 Voltage	0	Meter 16 Element 1 Voltage
AnalogInput	366	Meter 16 Element 2 Power	0	Meter 16 Element 2 Power
AnalogInput	367	Meter 16 Element 2 Reactive Power	0	Meter 16 Element 2 Reactive Power
AnalogInput	368	Meter 16 Element 2 Apparent Power	0	Meter 16 Element 2 Apparent Power
AnalogInput	369	Meter 16 Element 2 Power Factor	0	Meter 16 Element 2 Power Factor
AnalogInput	370	Meter 16 Element 2 Angle	0	Meter 16 Element 2 Angle
AnalogInput	371	Meter 16 Element 2 Current	0	Meter 16 Element 2 Current
AnalogInput	372	Meter 16 Element 2 Voltage	0	Meter 16 Element 2 Voltage
AnalogInput	373	Meter 16 Element 3 Power	0	Meter 16 Element 3 Power
AnalogInput	374	Meter 16 Element 3 Reactive Power	0	Meter 16 Element 3 Reactive Power
AnalogInput	375	Meter 16 Element 3 Apparent Power	0	Meter 16 Element 3 Apparent Power
AnalogInput	376	Meter 16 Element 3 Power Factor	0	Meter 16 Element 3 Power Factor
AnalogInput	377	Meter 16 Element 3 Angle	0	Meter 16 Element 3 Angle
AnalogInput	378	Meter 16 Element 3 Current	0	Meter 16 Element 3 Current
AnalogInput	379	Meter 16 Element 3 Voltage	0	Meter 16 Element 3 Voltage
Accumulator	0	Meter 1 Active Energy Delivered Register	0	Meter 1 Active Energy Delivered Register
Accumulator	1	Meter 1 Active Energy Received Register	0	Meter 1 Active Energy Received Register
Accumulator	2	Meter 1 Reactive Energy Delivered Register	0	Meter 1 Reactive Energy Delivered Register
Accumulator	3	Meter 1 Reactive Energy Received Register	0	Meter 1 Reactive Energy Received Register
Accumulator	4	Meter 1 Apparent Energy Register	0	Meter 1 Apparent Energy Register
Accumulator	5	Meter 2 Active Energy Delivered Register	0	Meter 2 Active Energy Delivered Register
Accumulator	6	Meter 2 Active Energy Received Register	0	Meter 2 Active Energy Received Register
Accumulator	7	Meter 2 Reactive Energy Delivered Register	0	Meter 2 Reactive Energy Delivered Register
Accumulator	8	Meter 2 Reactive Energy Received Register	0	Meter 2 Reactive Energy Received Register
Accumulator	9	Meter 2 Apparent Energy Register	0	Meter 2 Apparent Energy Register
Accumulator	10	Meter 3 Active Energy Delivered Register	0	Meter 3 Active Energy Delivered Register
Accumulator	11	Meter 3 Active Energy Received Register	0	Meter 3 Active Energy Received Register
Accumulator	12	Meter 3 Reactive Energy Delivered Register	0	Meter 3 Reactive Energy Delivered Register
Accumulator	13	Meter 3 Reactive Energy Received Register	0	Meter 3 Reactive Energy Received Register
Accumulator	14	Meter 3 Apparent Energy Register	0	Meter 3 Apparent Energy Register
Accumulator	15	Meter 4 Active Energy Delivered Register	0	Meter 4 Active Energy Delivered Register
Accumulator	16	Meter 4 Active Energy Received Register	0	Meter 4 Active Energy Received Register

Accumulator	17	Meter 4 Reactive Energy Delivered Register	0	Meter 4 Reactive Energy Delivered Register
Accumulator	18	Meter 4 Reactive Energy Received Register	0	Meter 4 Reactive Energy Received Register
Accumulator	19	Meter 4 Apparent Energy Register	0	Meter 4 Apparent Energy Register
Accumulator	20	Meter 5 Active Energy Delivered Register	0	Meter 5 Active Energy Delivered Register
Accumulator	21	Meter 5 Active Energy Received Register	0	Meter 5 Active Energy Received Register
Accumulator	22	Meter 5 Reactive Energy Delivered Register	0	Meter 5 Reactive Energy Delivered Register
Accumulator	23	Meter 5 Reactive Energy Received Register	0	Meter 5 Reactive Energy Received Register
Accumulator	24	Meter 5 Apparent Energy Register	0	Meter 5 Apparent Energy Register
Accumulator	25	Meter 6 Active Energy Delivered Register	0	Meter 6 Active Energy Delivered Register
Accumulator	26	Meter 6 Active Energy Received Register	0	Meter 6 Active Energy Received Register
Accumulator	27	Meter 6 Reactive Energy Delivered Register	0	Meter 6 Reactive Energy Delivered Register
Accumulator	28	Meter 6 Reactive Energy Received Register	0	Meter 6 Reactive Energy Received Register
Accumulator	29	Meter 6 Apparent Energy Register	0	Meter 6 Apparent Energy Register
Accumulator	30	Meter 7 Active Energy Delivered Register	0	Meter 7 Active Energy Delivered Register
Accumulator	31	Meter 7 Active Energy Received Register	0	Meter 7 Active Energy Received Register
Accumulator	32	Meter 7 Reactive Energy Delivered Register	0	Meter 7 Reactive Energy Delivered Register
Accumulator	33	Meter 7 Reactive Energy Received Register	0	Meter 7 Reactive Energy Received Register
Accumulator	34	Meter 7 Apparent Energy Register	0	Meter 7 Apparent Energy Register
Accumulator	35	Meter 8 Active Energy Delivered Register	0	Meter 8 Active Energy Delivered Register
Accumulator	36	Meter 8 Active Energy Received Register	0	Meter 8 Active Energy Received Register
Accumulator	37	Meter 8 Reactive Energy Delivered Register	0	Meter 8 Reactive Energy Delivered Register
Accumulator	38	Meter 8 Reactive Energy Received Register	0	Meter 8 Reactive Energy Received Register
Accumulator	39	Meter 8 Apparent Energy Register	0	Meter 8 Apparent Energy Register
Accumulator	40	Meter 9 Active Energy Delivered Register	0	Meter 9 Active Energy Delivered Register
Accumulator	41	Meter 9 Active Energy Received Register	0	Meter 9 Active Energy Received Register
Accumulator	42	Meter 9 Reactive Energy Delivered Register	0	Meter 9 Reactive Energy Delivered Register
Accumulator	43	Meter 9 Reactive Energy Received Register	0	Meter 9 Reactive Energy Received Register
Accumulator	44	Meter 9 Apparent Energy Register	0	Meter 9 Apparent Energy Register
Accumulator	45	Meter 10 Active Energy Delivered Register	0	Meter 10 Active Energy Delivered Register
Accumulator	46	Meter 10 Active Energy Received Register	0	Meter 10 Active Energy Received Register
Accumulator	47	Meter 10 Reactive Energy Delivered Register	0	Meter 10 Reactive Energy Delivered Register
Accumulator	48	Meter 10 Reactive Energy Received Register	0	Meter 10 Reactive Energy Received Register
Accumulator	49	Meter 10 Apparent Energy Register	0	Meter 10 Apparent Energy Register
Accumulator	50	Meter 11 Active Energy Delivered Register	0	Meter 11 Active Energy Delivered Register
Accumulator	51	Meter 11 Active Energy Received Register	0	Meter 11 Active Energy Received Register
Accumulator	52	Meter 11 Reactive Energy Delivered Register	0	Meter 11 Reactive Energy Delivered Register
Accumulator	53	Meter 11 Reactive Energy Received Register	0	Meter 11 Reactive Energy Received Register
Accumulator	54	Meter 11 Apparent Energy Register	0	Meter 11 Apparent Energy Register
Accumulator	55	Meter 12 Active Energy Delivered Register	0	Meter 12 Active Energy Delivered Register
Accumulator	56	Meter 12 Active Energy Received Register	0	Meter 12 Active Energy Received Register
Accumulator	57	Meter 12 Reactive Energy Delivered Register	0	Meter 12 Reactive Energy Delivered Register
Accumulator	58	Meter 12 Reactive Energy Received Register	0	Meter 12 Reactive Energy Received Register
Accumulator	59	Meter 12 Apparent Energy Register	0	Meter 12 Apparent Energy Register
Accumulator	60	Meter 13 Active Energy Delivered Register	0	Meter 13 Active Energy Delivered Register
Accumulator	61	Meter 13 Active Energy Received Register	0	Meter 13 Active Energy Received Register
Accumulator	62	Meter 13 Reactive Energy Delivered Register	0	Meter 13 Reactive Energy Delivered Register
Accumulator	63	Meter 13 Reactive Energy Received Register	0	Meter 13 Reactive Energy Received Register
Accumulator	64	Meter 13 Apparent Energy Register	0	Meter 13 Apparent Energy Register
Accumulator	65	Meter 14 Active Energy Delivered Register	0	Meter 14 Active Energy Delivered Register
Accumulator	66	Meter 14 Active Energy Received Register	0	Meter 14 Active Energy Received Register

Accumulator	67	Meter 14 Reactive Energy Delivered Register	0	Meter 14 Reactive Energy Delivered Register
Accumulator	68	Meter 14 Reactive Energy Received Register	0	Meter 14 Reactive Energy Received Register
Accumulator	69	Meter 14 Apparent Energy Register	0	Meter 14 Apparent Energy Register
Accumulator	70	Meter 15 Active Energy Delivered Register	0	Meter 15 Active Energy Delivered Register
Accumulator	71	Meter 15 Active Energy Received Register	0	Meter 15 Active Energy Received Register
Accumulator	72	Meter 15 Reactive Energy Delivered Register	0	Meter 15 Reactive Energy Delivered Register
Accumulator	73	Meter 15 Reactive Energy Received Register	0	Meter 15 Reactive Energy Received Register
Accumulator	74	Meter 15 Apparent Energy Register	0	Meter 15 Apparent Energy Register
Accumulator	75	Meter 16 Active Energy Delivered Register	0	Meter 16 Active Energy Delivered Register
Accumulator	76	Meter 16 Active Energy Received Register	0	Meter 16 Active Energy Received Register
Accumulator	77	Meter 16 Reactive Energy Delivered Register	0	Meter 16 Reactive Energy Delivered Register
Accumulator	78	Meter 16 Reactive Energy Received Register	0	Meter 16 Reactive Energy Received Register
Accumulator	79	Meter 16 Apparent Energy Register	0	Meter 16 Apparent Energy Register
Accumulator	80	Pulse Counter 1 register	0	Pulse Counter 1 register
Accumulator	81	Pulse Counter 2 register	0	Pulse Counter 2 register
Accumulator	82	Pulse Counter 3 register	0	Pulse Counter 3 register
Accumulator	83	Pulse Counter 4 register	0	Pulse Counter 4 register
Accumulator	84	Pulse Counter 5 register	0	Pulse Counter 5 register
Accumulator	85	Pulse Counter 6 register	0	Pulse Counter 6 register
Accumulator	86	Pulse Counter 7 register	0	Pulse Counter 7 register
Accumulator	87	Pulse Counter 8 register	0	Pulse Counter 8 register
Accumulator	88	Pulse Counter 9 register	0	Pulse Counter 9 register
Accumulator	89	Pulse Counter 10 register	0	Pulse Counter 10 register
Accumulator	90	Pulse Counter 11 register	0	Pulse Counter 11 register
Accumulator	91	Pulse Counter 12 register	0	Pulse Counter 12 register

Example Single meter point:
This is a 500-074-02 with only one meter point configured.

Object Type	**Object Id**	**Object Name**	**Value**	**Description**
Device	123456			Triacta
AnalogInput	0	Meter 1 Active Power	0	Meter 1 Active Power
AnalogInput	1	Meter 1 Reactive Power	0	Meter 1 Reactive Power
AnalogInput	2	Meter 1 Apparent Power	0	Meter 1 Apparent Power
AnalogInput	3	Meter 1 Power Factor	0	Meter 1 Power Factor
AnalogInput	4	Meter 1 Demand W	0	Meter 1 Demand W
AnalogInput	5	Meter 1 Demand W Present	0	Meter 1 Demand W Present
AnalogInput	6	Meter 1 Demand VA	0	Meter 1 Demand VA
AnalogInput	7	Meter 1 Demand VA Present	0	Meter 1 Demand VA Present
AnalogInput	8	Meter 1 Element 1 Power	0	Meter 1 Element 1 Power
AnalogInput	9	Meter 1 Element 1 Reactive Power	0	Meter 1 Element 1 Reactive Power
AnalogInput	10	Meter 1 Element 1 Apparent Power	0	Meter 1 Element 1 Apparent Power
AnalogInput	11	Meter 1 Element 1 Power Factor	0	Meter 1 Element 1 Power Factor
AnalogInput	12	Meter 1 Element 1 Angle	0	Meter 1 Element 1 Angle
AnalogInput	13	Meter 1 Element 1 Current	0	Meter 1 Element 1 Current
AnalogInput	14	Meter 1 Element 1 Voltage	0	Meter 1 Element 1 Voltage
AnalogInput	15	Meter 1 Element 2 Power	0	Meter 1 Element 2 Power
AnalogInput	16	Meter 1 Element 2 Reactive Power	0	Meter 1 Element 2 Reactive Power
AnalogInput	17	Meter 1 Element 2 Apparent Power	0	Meter 1 Element 2 Apparent Power
AnalogInput	18	Meter 1 Element 2 Power Factor	0	Meter 1 Element 2 Power Factor
AnalogInput	19	Meter 1 Element 2 Angle	0	Meter 1 Element 2 Angle

AnalogInput	20	Meter 1 Element 2 Current	0	Meter 1 Element 2 Current
AnalogInput	21	Meter 1 Element 2 Voltage	0	Meter 1 Element 2 Voltage
Accumulator	0	Meter 1 Active Energy Delivered Register	0	Meter 1 Active Energy Delivered Register
Accumulator	1	Meter 1 Active Energy Received Register	0	Meter 1 Active Energy Received Register
Accumulator	2	Meter 1 Reactive Energy Delivered Register	0	Meter 1 Reactive Energy Delivered Register
Accumulator	3	Meter 1 Reactive Energy Received Register	0	Meter 1 Reactive Energy Received Register
Accumulator	4	Meter 1 Apparent Energy Register	0	Meter 1 Apparent Energy Register

Note: Some attention should be paid to configuration scenarios where the meter would be in combined mode. This is highlighted currently because of the element skip scenarios as associated with 2 Phase meters and is also why the full output of both the 500-074-02 and the 500-044-02 are presented here.

External Pulse input module 500-043-01

This module can be in all 4 slots so the maximum object appearance = 48 external pulse inputs and the associated data will be analog objects. This module can also be mixed with other module types. The values for the accumulators are floats. Intervals are not transmitted. In a mixed circuit these will be shared by 12 circuits with whatever is in the other slots.

The available data for this analog object is shown here.

Property Name	**Property Value**
object-identifier	(accumulator, 0)
object-name	Pulse Counter 1 register
object-type	accumulator
present-value	5
status-flags	{}
event-state	normal
out-of-service	FALSE
scale	float-scale: 1
units	no-units
max-pres-value	999999999999
description	Pulse Counter 1 register
property-list	{present-value, status-flags, event-state, out-of-service, scale, units, max-pres-value, description}

Measurement Module 500-044-01

Circuit counts for these are 16 3 Phase meters, 16 2 phase meters, 48 single phase meters. There are both Analog Inputs and analog accumulator values are available and shown in this data profile. All 4 slots in this case are populated with the same module type.

Analog Input Object

Property Name	Property Value
object-identifier	(analog-input, 1)
object-name	Meter 1 Reactive Power
object-type	analog-input
present-value	0
status-flags	{}
event-state	normal
out-of-service	FALSE
units	volt-amperes-reactive
description	Meter 1 Reactive Power
reliability	no-fault-detected
Proprietary property-1500	unsigned: 0

Accumulator Object

Property Name	Property Value
object-identifier	(accumulator, 1)
object-name	Meter 1 Active Energy Received Register
object-type	accumulator
present-value	277
status-flags	{}
event-state	normal
out-of-service	FALSE
scale	float-scale: 1
units	watt-hours
max-pres-value	999999999999
description	Meter 1 Active Energy Received Register

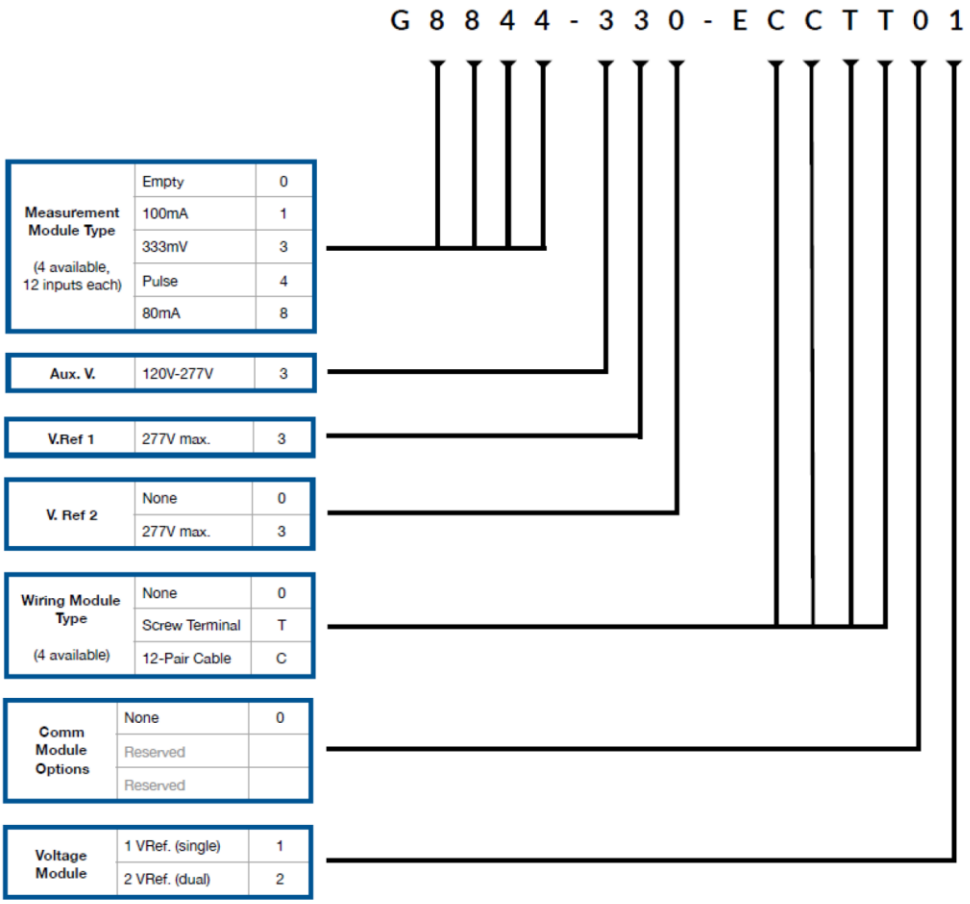
PICS

Date: June 9, 2022
Vendor Name: METERGY Solutions Inc., TRIACTA Division
Product Name: GATEWAY/GATEWAY-S Series Multi Circuit Electricity Meter
Product Model Number: *The following Configuration Guide strategizes product Model numbers, descriptions and how they appear. This excerpt from the GATEWAY Installation Guide Doc. 930-148-01-A00 Appendix 2 should be used to identify all of the possible models associated with this application for the GATEWAY/GATEWAY-S. This would also include meters without all of the modules installed or mixes of different modules. The rest of the model doesn't speak to configuration of the meter at all. It merely discusses as the document states, the voltage and the cabling ordering information. The meter is capable of being programmed in custom variants of the approved service configurations. Any combination of the 1 to 4 physical measurement module slots may be populated.*

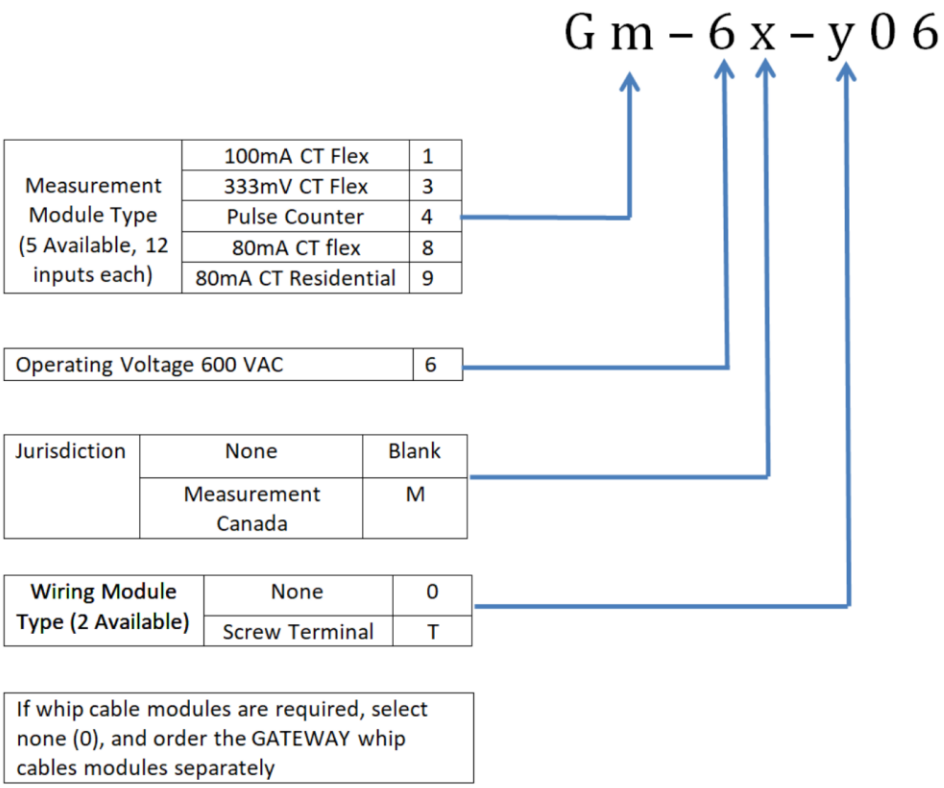
The GATEWAY-S is the same strategy and uses the identical BACnet software but only has one module slot as opposed to 4.

Triacta GATEWAY™

Appendix 2: Triacta GATEWAY™ Part Number Configuration Guide



Appendix 2: Triacta GATEWAY-S Part Number Configuration Guide



Application Software Version: v1.1.7-1005
Firmware Revision: N/A
BACnet Protocol Version: 1.0.0
BACnet Protocol Revision: 16.1

Product Description

The GATEWAY/GATEWAY-S Series electricity meters are designed for multi-tenant billing and cost allocation purposes. They are configurable to support 48/12 single element/single phase, 2 element/2-phase or 3 element/3-phase general service type configurations. They measure active, reactive and apparent energy, delivered and received. Multiple variants support different mixes of measurement modules in multiples of the service types expressed, using a selection of 80mA, 100mA secondary output transformers, 333mV secondary output transducers or pulse counters. The units and associated CTs are typically installed in an electrical room or a multi-tenant environment. The CTs are typically installed in an electrical panel.

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)
X	BACnet Smart Actuator (B-SA)
	BACnet Smart Sensor (B-SS)

BACnet Interoperability Building Blocks (BIBBs) Supported

BIBB	Description of the BIBB	Supported (x: yes o: no)
DS	**Data Sharing**	
DS-RP-A	Data Sharing-ReadProperty-A	**o**
DS-RP-B	Data Sharing-ReadProperty-B	**x**
DS-RPM-A	Data Sharing-ReadPropertyMultiple-A	**o**
DS-RPM-B	Data Sharing-ReadPropertyMultiple-B	**x**
DS-WP-A	Data Sharing-WriteProperty-A	**o**
DS-WP-B	Data Sharing-WriteProperty-B	**x**
DS-WPM-A	Data Sharing-WritePropertyMultiple-A	**o**
DS-WPM-B	Data Sharing-WritePropertyMultiple-B	**o**
DS-COV-A	Data Sharing-Change Of Value-A	**o**
DS-COV-B	Data Sharing-Change Of Value-B	**o**
DS-COVP-A	Data Sharing-Change Of Value Property-A	**o**
DS-COVP-B	Data Sharing-Change Of Value Property-B	**o**
DS-COVU-A	Data Sharing-Change Of Value Unsubscribed-A	**o**
DS-COVU-B	Data Sharing-Change Of Value Unsubscribed-B	**o**
DS-V-A	Data Sharing-View-A	**o**
DS-AV-A	Data Sharing-Advanced View-A	**o**
DS-M-A	Data Sharing-Modify-A	**o**
DS-AM-A	Data Sharing-Advanced Modify-A	**o**
DS-WG-A	Data Sharing-WriteGroup-A	**o**
DS-WG-I-B	Data Sharing-WriteGroup-Internal-B	**o**
DS-WG-E-B	Data Sharing-WriteGroup-External-B	**o**
DS-VSI-B	Data Sharing-Value Source Information-B	**o**
DS-COVM-A	Data Sharing-Change Of Value Multiple-A	**o**
DS-COVM-B	Data Sharing-Change Of Value Multiple-B	**o**
Initiates ReadRange	Initiates ReadRange	**o**
Executes ReadRange	Executes ReadRange	**o**
DS-LSV-A	Data Sharing-Life Safety View-A	**o**
DS-LSAV-A	Data Sharing-Life Safety Advanced View-A	**o**
DS-LSM-A	Data Sharing-Life Safety Modify-A	**o**
DS-LSAM-A	Data Sharing-Life Safety Advanced Modify-A	**o**
DS-ACV-A	Data Sharing-Access Control View-A	**o**
DS-ACAV-A	Data Sharing-Access Control Advanced View-A	**o**
DS-ACM-A	Data Sharing-Access Control Modify-A	**o**
DS-ACAM-A	Data Sharing-Access Control Advanced Modify-A	**o**

DS-ACUC-A	Data Sharing-Access Control User Configuration-A	o
DS-ACUC-B	Data Sharing-Access Control User Configuration-B	o
DS-ACSC-A	Data Sharing-Access Control Site Configuration-A	o
DS-ACSC-B	Data Sharing-Access Control Site Configuration-B	o
DS-ACAD-A	Data Sharing-Access Control Access Door-A	o
DS-ACAD-B	Data Sharing-Access Control Access Door-B	o
DS-ACCDI-A	Data Sharing-Access Control Credential Data Input-A	o
DS-ACCDI-B	Data Sharing-Access Control Credential Data Input-B	o
DS-LO-A	Data Sharing-Lighting Output -A	o
DS-LOS-A	Data Sharing-Lighting Output Status-A	o
DS-ALO-A	Data Sharing-Advanced Lighting Output-A	o
DS-LO-B	Data Sharing-Lighting Output-B	o
DS-BLO-B	Data Sharing-Binary Lighting Output-B	o
DS-LOM-A	Data Sharing-Lighting Output Management-A	o
DS-LV-A	Data Sharing-Lighting View-A	o
DS-LAV-A	Data Sharing-Lighting Advanced View-A	o
DS-LM-A	Data Sharing-Lighting Modify-A	o
DS-LAM-A	Data Sharing-Lighting Advanced Modify-A	o
AE	**Alarm and Event**	
AE-N-A	Alarm and Event Management-Notification-A	o
AE-N-I-B	Alarm and Event Management-Notification Internal-B	o
AE-N-E-B	Alarm and Event Management-Notification External-B	o
AE-ACK-A	Alarm and Event Management-Acknowledge-A	o
AE-ACK-B	Alarm and Event Management-Acknowledge-B	o
AE-ASUM-A	Alarm and Event Management-Alarm Summary-A	o
AE-ASUM-B	Alarm and Event Management-Alarm Summary-B	o
AE-ESUM-A	Alarm and Event Management-Enrollment Summary-A	o
AE-ESUM-B	Alarm and Event Management-Enrollment Summary-B	o
AE-INFO-A	Alarm and Event Management-Information-A	o
AE-INFO-B	Alarm and Event Management-Information-B	o
AE-LS-A	Alarm and Event Management-LifeSafety-A	o
AE-LS-B	Alarm and Event Management-LifeSafety-B	o
AE-VN-A	Alarm and Event Management-View Notifications-A	o
AE-AVN-A	Alarm and Event Management-Advanced View Notifications-A	o
AE-VM-A	Alarm and Event Management-View and Modify-A	o
AE-AVM-A	Alarm and Event Management-Advanced View and Modify-A	o
AE-AS-A	Alarm and Event Management-Alarm Summary View-A	o
AE-ELV-A	Alarm and Event Management-Event Log View-A	o
AE-ELVM-A	Alarm and Event Management-Event Log View and Modify-A	o
AE-EL-I-B	Alarm and Event Management-Event Log-Internal-B	o
AE-EL-E-B	Alarm and Event Management-Event Log-External-B	o
AE-NF-B	Alarm and Event Management-Notification Forwarder-B	o
AE-NF-I-B	Alarm and Event Management-Notification Forwarder-Internal-B	o
AE-CRL-B	Alarm and Event Management-Configurable Recipient Lists-B	o
AE-TES-A	Alarm and Event Management-Temporary Event Subscription-A	o
AE-LSVN-A	Alarm and Event Management-Life Safety View Notifications-A	o
AE-LSAVN-A	Alarm and Event Management-Life Safety Advanced View Notifications-A	o
AE-LSVM-A	Alarm and Event Management-Life Safety View and Modify-A	o
AE-LSAVM-A	Alarm and Event Management-Life Safety Advanced View and Modify-A	o

AE-AC-A	Alarm and Event Management-Access Control-A	**o**
AE-AC-B	Alarm and Event Management-Access Control-B	**o**
AE-ACAVN-A	Alarm and Event Management-Access Control Advanced View Notifications-A	**o**
AE-ACVM-A	Alarm and Event Management-Access Control View and Modify-A	**o**
AE-ACAVM-A	Alarm and Event Management-Access Control Advanced View and Modify-A	**o**
SCHED	**Scheduling**	
SCHED-A	Scheduling-A	**o**
SCHED-I-B	Scheduling-Internal-B	**o**
SCHED-E-B	Scheduling-External-B	**o**
SCHED-R-B	Scheduling-Readonly-B	**o**
SCHED-AVM-A	Scheduling-Advanced View and Modify-A	**o**
SCHED-VM-A	Scheduling-View and Modify-A	**o**
SCHED-WS-A	Scheduling-Weekly Schedule-A	**o**
SCHED-WS-I-B	Scheduling-Weekly Schedule Internal-B	**o**
SCHED-TMR-I-B	Scheduling-Timer-Internal-B	**o**
SCHED-TMR-E-B	Scheduling-Timer-External-B	**o**
T	**Trending**	
T-VMT-A	Trending-Viewing and Modifying Trends-A	**o**
T-VMT-I-B	Trending-Viewing and Modifying Trends Internal-B	**o**
T-VMT-E-B	Trending-Viewing and Modifying Trends External-B	**o**
T-ATR-A	Trending-Automated Trend Retrieval-A	**o**
T-ATR-B	Trending-Automated Trend Retrieval-B	**o**
T-VMMV-A	Trending-Viewing and Modifying Multiple Values-A	**o**
T-VMMV-I-B	Trending-Viewing and Modifying Multiple Values Internal-B	**o**
T-VMMV-E-B	Trending-Viewing and Modifying Multiple Values External-B	**o**
T-AMVR-A	Trending-Automated Multiple Value Retrieval-A	**o**
T-AMVR-B	Trending-Automated Multiple Value Retrieval-B	**o**
T-V-A	Trending-View-A	**o**
T-AVM-A	Trending-Advanced View and Modify-A	**o**
T-A-A	Trending-Archival-A	**o**
DM	**Device Management**	
DM-DDB-A	Device Management-Dynamic Device Binding-A	**o**
DM-DDB-B	Device Management-Dynamic Device Binding-B	**x**
DM-DOB-A	Device Management-Dynamic Object Binding-A	**o**
DM-DOB-B	Device Management-Dynamic Object Binding-B	**x**
DM-DCC-A	Device Management-DeviceCommunicationControl-A	**o**
DM-DCC-B	Device Management-DeviceCommunicationControl-B	**o**
DM-TM-A	Device Management-Text Message-A	**o**
DM-TM-B	Device Management-Text Message-B	**o**
DM-TS-A	Device Management-TimeSynchronization-A	**o**
DM-TS-B	Device Management-TimeSynchronization-B	**x**
DM-UTC-A	Device Management-UTCTimeSynchronization-A	**o**
DM-UTC-B	Device Management-UTCTimeSynchronization-B	**x**
DM-RD-A	Device Management-ReinitializeDevice-A	**o**
DM-RD-B	Device Management-ReinitializeDevice-B	**o**
DM-BR-A	Device Management-Backup and Restore-A	**o**
DM-BR-B	Device Management-Backup and Restore-B	**o**
DM-R-A	Device Management-Restart-A	**o**
DM-R-B	Device Management-Restart-B	**o**
DM-LM-A	Device Management-List Manipulation-A	**o**

DM-LM-B	Device Management-List Manipulation-B	o
DM-OCD-A	Device Management-Object Creation and Deletion-A	o
DM-OCD-B	Device Management-Object Creation and Deletion-B	o
DM-VT-A	Device Management-Virtual Terminal-A	o
DM-VT-B	Device Management-Virtual Terminal-B	o
DM-ANM-A	Device Management-Automatic Network Mapping-A	o
DM-ADM-A	Device Management-Automatic Device Mapping-A	o
DM-ATS-A	Device Management-Automatic Time Synchronization-A	o
DM-MTS-A	Device Management-Manual Time Synchronization-A	o
DM-SP-VM-A	Device Management-Slave Proxy-View and Modify-A	o
DM-SP-B	Device Management-Slave Proxy-B	o
DM-LOM-A	Device Management – Lighting Output Management-A	o
NM	**Network Management**	
NM-CE-A	Network Management-Connection Establishment-A	o
NM-CE-B	Network Management-Connection Establishment-B	o
NM-RC-A	Network Management-Router Configuration-A	o
NM-RC-B	Network Management-Router Configuration-B	o
NM-BBMDC-B	Network Management-BBMD Configuration-B	o
NM-BBMDC-A	Network Management-BBMD Configuration-A	o
NM-FDR-A	Network Management-Foreign Device Registration-A	o
NS	**Network Security**	
NS-SD	Network Security-Secure Device	o
NS-ED	Network Security-Encrypted Device	o
NS-MAD	Network Security-Multi-Application Device	o
NS-DMK-A	Network Security-Device Master Key-A	o
NS-DMK-B	Network Security-Device Master Key-B	o
NS-KS	Network Security-Key Server	o
NS-TKS	Network Security-Temporary Key Server	o
NS-SR	Network Security-Secure Router	o
NS-SP	Network Security-Security Proxy	o
GW	**Gateway**	
GW-VN-B	Gateway-Virtual Network-B	o
GW-EO-B	Gateway-Embedded Objects-B	o
AR	**Audit Reporting**	
AR-L-A	Audit Reporting-Logging- A	o
AR-R-B	Audit Reporting-Reporter-B	o
AR-R-S-B	Audit Reporting-Reporter-Simple-B	o
AR-F-B	Audit Reporting-Forwarder-B	o
AR-V-A	Audit Reporting-View-A	o
AR-AVM-A	Audit Reporting-Advanced View and Modify-A	o

14. Device Profile

Standard Profiles	Claimed x: yes o: no
Operator Interfaces	
BACnet Cross-Domain Advanced Operator Workstation (B-XAWS)	o
BACnet Advanced Operator Workstation (B-AWS)	o
BACnet Operator Workstation (B-OWS)	o
BACnet Operator Display (B-OD)	o
Lighting Operator Interfaces	
BACnet Advanced Lighting Workstation (B-ALWS)	o
BACnet Lighting Operator Display (B-LOD)	o
BACnet Advanced Lighting Control Station (B-ALCS)	o
BACnet Lighting Control Station (B-LCS)	o
BACnet Lighting Supervisor (B-LS)	o
BACnet Lighting Device (B-LD)	o
Life Safety Operator Interfaces	
BACnet Advanced Life Safety Workstation (B-ALSWS)	o
BACnet Life Safety Workstation (B-LSWS)	o
BACnet Life Safety Annunciator Panel (B-LSAP)	o
Access Control Operator Interfaces	
BACnet Advanced Access Control Workstation (B-AACWS)	o
BACnet Access Control Workstation (B-ACWS)	o
BACnet Access Control Security Display (B-ACSD)	o
Controllers	
BACnet Building Controller (B-BC)	o
BACnet Advanced Application Controller (B-AAC)	o
BACnet Application Specific Controller (B-ASC)	o
BACnet Smart Actuator (B-SA)	x
BACnet Smart Sensor (B-SS)	o
Life Safety Controllers	
BACnet Advanced Life Safety Controller (B-ALSC)	o
BACnet Life Safety Controller (B-LSC)	o
Access Control Controllers	
BACnet Advanced Access Control Controller (B-AACC)	o
BACnet Access Control Controller (B-ACC)	o
Miscellaneous	
BACnet Router (B-RTR)	o
BACnet Gateway (B-GW)	o
BACnet Broadcast Management Device (B-BBMD)	o
BACnet Access Control Door Controller (B-ACDC)	o
BACnet Access Control Credential Reader (B-ACCR)	o
BACnet General (B-GENERAL)	o

Test Category	Supported (x: yes o: no)
Basic Functionality Tests	x
Segmentation Support	o
BACnet/IP - Annex J - non-BBMD Functionality	x
BACnet/IP - Annex J - BBMD	x
Data Link Layer-ZigBee	o
Data Link Layer-Ethernet	o
Data Link Layer-ARCNET	o
Data Link Layer - MS/TP - Master Node	o
Data Link Layer - MS/TP - Slave Node	o
Routing	o
Object Tests	x

Segmentation Capability

Able to transmit segmented messages: N/A Window Size: N/A

Able to receive segmented messages: N/A Window Size: N/A

Standard Object Types Supported

Properties that are Writable and Optional are indicated.

Accumulator		
Property	W	O
Description		X
Event_State		
Max_Pres_Value		
Object_Identifier		
Object_Name		
Object_Type		
Out_Of_Service		
Present_Value		
Scale		
Status_Flags		
Units		

Analog Input		
Property	W	O
Description		X
Event_State		
Object_Identifier		
Object_Name		
Object_Type		
Out_Of_Service		
Present_Value		
Status_Flags		
Units		

Device		
Property	W	O
APDU_Timeout	X	
Application_Software_Version		
Database_Revision		
Daylight_Savings_Status	X	
Description	X	X
Device_Address_Binding		
Firmware_Revision		
Local_Date		X
Local_Time		X
Location	X	X
Max_APDU_Length_Accepted		
Model_Name		
Number_Of_APDU_Retries	X	
Object_Identifier	X	
Object_List		
Object_Name	X	
Object_Type		
Profile_Name		X
Protocol_Object_Types_Supported		
Protocol_Revision		
Protocol_Services_Supported		
Protocol_Version		
Segmentation_Supported		
System_Status		
UTC_Offset	X	X
Vendor_Identifier		
Vendor_Name		

Data Link Layer Options

X	BACnet IP
X	BACnet IP, Foreign Device ISO 8802_3, Ethernet ANSI/ATA 878.1, 2.5 MB ARCNET ANSI/ATA 878.1, EIA_485 ARCNET, baud rate(s)_____ MS/TP master, baud rate(s) _____ MS/TP slave, baud rate(s)_____ Point-To-Point, EIA 232, baud rate(s)_____ Point-To-Point, modem, baud rate(s)_____ LonTalk, medium: _____ BACnet/Zigbee _____ Other

Character Sets Supported

- [x] ISO 10646 (UTF-8)
- [ ] ISO 10646 (UCS-2)
- [ ] IBM /Microsoft DBCS
- [ ] ISO 8859-1
- [ ] ISO 10646 (UCS-4)
- [ ] JIS C 6626

Network Security Options

- [x] Non-secure Device
- [ ] Secure Device
  - [ ] Multiple Application-Specific Keys
  - [ ] Supports encryption (NS-ED BIBB)
  - [ ] Key Server (NS-KS BIBB)