ProtoCom & ProtoCom-Lon

Easily Convert Shark® or Nexus® Meters to BACnet® and LonWorks®

ProtoCom
BACnet® Gateway

ProtoCom-Lon
LonWorks® Gateway

Installation & Operation Manual
V.1.02
September 10, 2014

Electro Industries/GaugeTech™
The Leader In Power Monitoring and Smart Grid Solutions™

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ProtoCom/ProtoCom-Lon Installation and Operation Manual Version 1.02

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Customer Service and Support

Customer support is available 9:00 am to 4:30 pm, Eastern Standard Time, Monday through Friday. Please have the model, serial number and a detailed problem description available. If the problem concerns a particular reading, please have all meter readings available. When returning any merchandise to EIG, a return materials authorization number is required. For customer or technical assistance, repair or calibration, phone 516-334-0870 or fax 516-338-4741.

Product Warranty

Electro Industries/GaugeTech warrants all products to be free from defects in material and workmanship for a period of four years from the date of shipment. During the warranty period, we will, at our option, either repair or replace any product that proves to be defective.

To exercise this warranty, fax or call our customer-support department. You will receive prompt assistance and return instructions. Send the instrument, transportation prepaid, to EIG at 1800 Shames Drive, Westbury, NY 11590. Repairs will be made and the instrument will be returned.

This warranty does not apply to defects resulting from unauthorized modification, misuse, or use for any reason other than electrical power monitoring. The ProtoCom/ProtoCom-Lon unit is not a user-serviceable product.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ELECTRO INDUSTRIES/GAUGETECH SHALL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING FROM ANY AUTHORIZED OR UNAUTHORIZED USE OF ANY ELECTRO INDUSTRIES/GAUGETECH PRODUCT. LIABILITY SHALL BE LIMITED TO THE ORIGINAL COST OF THE PRODUCT SOLD.

Use Of Product for Protection

Our products are not to be used for primary over-current protection. Any protection feature in our products is to be used for alarm or secondary protection only.

Disclaimer

The information presented in this publication has been carefully checked for reliability; however, no responsibility is assumed for inaccuracies. The information contained in this document is subject to change without notice.

Safety Symbols

In this manual, this symbol indicates that the operator must refer to an important WARNING or CAUTION in the operating instructions. Please see Chapter 4 for important safety information regarding installation and hookup of the ProtoCom/ProtoCom-Lon unit.

Dans ce manuel, ce symbole indique que l'opérateur doit se référer à un important AVERTISSEMENT ou une MISE EN GARDE dans les instructions opérationnelles. Veuillez consulter le chapitre 4 pour des informations importantes relatives à l'installation et branchement de ProtoCom/ProtoCom-Lon.

UL Compliance

For UL compliance, the following instructions must be met when operating the ProtoCom/ProtoCom-Lon:

• The units shall be powered by listed LPS or Class 2 power supply suited to the expected operating temperature range.

• The interconnecting power connector and power cable shall:

  • Comply with local electrical code

  • Be suited to the expected operating temperature range

  • Meet the current and voltage rating for the ProtoCom/ProtoCom-Lon

• Furthermore, the interconnecting power cable shall:

  • Be of length not exceeding 3.05m (118.3")

- Be constructed of materials rated VW-1 or FT-1 or better

- If the unit is to be installed in an operating environment with a temperature above 65 °C, it should be installed in a Restricted Access Area requiring a key or a special tool to gain access.

- This device must not be connected to a LAN segment with outdoor wiring.

About Electro Industries/GaugeTech (EIG)

Founded in 1975 by engineer and inventor Dr. Samuel Kagan, Electro Industries/GaugeTech changed the face of power monitoring forever with its first breakthrough innovation: an affordable, easy-to-use AC power meter.

More than thirty years since its founding, Electro Industries/GaugeTech, the leader in power monitoring and control, continues to revolutionize the industry with the highest quality, cutting edge power monitoring and control technology on the market today. An ISO 9001:2008 certified company, EIG sets the industry standard for advanced power quality and reporting, revenue metering and substation data acquisition and control. EIG products can be found on site at mainly all of today's leading manufacturers, industrial giants and utilities.

EIG products are primarily designed, manufactured, tested and calibrated at our facility in Westbury, New York.

Revision History

The following table lists revision information for this manual, Doc #E204701, the *ProtoCom/ProtoCom-Lon Installation and Operation Manual.*

Version Number	Revision Date	Summary of Changes
V.1.01	8/6/2014	First release
V.1.02	9/10/2014	Section 1.9 reorganized and Section 1.9.1 added - DIN Rail installation instructions

Table of Contents

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1: Introduction to the ProtoCom/ProtoCom-Lon

1.1: Overview of the ProtoCom/ProtoCom-Lon Gateway

The ProtoCom/ProtoCom-Lon is an external, high performance Building Automation System (BAS) multi-protocol gateway that is pre-configured to automatically communicate between Electro Industries/Gaugetech (EIG) meters and various building automation protocols.

The ProtoCom supports:

Figure 1.1: ProtoCom/ProtoCom-Lon

BACnet® MS/TP, BACnet®/IP, Johnson Controls' Metasys® N2, EtherNet/IP and DF1, and Modbus® TCP protocols; and the ProtoCom-Lon supports the LonWorks® protocol. With the ProtoCom, the meters' Modbus communication is converted into BACnet or other popular BAS protocols. With the ProtoCom-Lon, the meters' Modbus communication is converted into LonWorks® protocol.

The ProtoCom/ProtoCom-Lon connects to the EIG meter's RS485 port. Once connected, the ProtoCom/ProtoCom-Lon unit auto-detects the EIG meter model it is connected to, and loads the pre-configured protocol data points for that meter, e.g., the Shark® 200 meter's BACnet® objects. You do not need to do manual mapping of the meter's Modbus points.

The ProtoCom/ProtoCom-Lon is shipped as a kit (ProtoCom-KT/ProtoCom-Lon-KT) which consists of the unit, a power supply, a communication cable, a one page Quickstart guide, and this manual on a CD.

1.2: EIG Devices and Available Point Count

The total number of devices attached to ProtoCom cannot exceed 1500 Modbus registers for BACnet MS/TP, BACnet/IP, Modbus/TCP, Metasys N2, EtherNet/IP, or DF1.

The total number of devices attached to ProtoCom-Lon cannot exceed 1000 Modbus registers for LonWorks.

Refer to the following table for the supported EIG meters and their associated data points.

Devices	Point Count
Shark® 100 Meter	56
Shark® 200 Meter	68
Nexus® 1252 1262 1272 Meters	48
DMMS 425 Meter	46
Nexus® 1500 Meter	56
MP200-Y Metering System	241
MP200-S Metering System	571

1.3: Specifications

	ProtoCom	ProtoCom-Lon
Electrical Connections	One 6-pin Phoenix connector, one RS485 +/- ground port, power +/- frame ground port One 3-pin RS485 Phoenix connector, one RS485 +/- ground port One Ethernet-10/100 Ethernet port	One 6-pin Phoenix connector, one RS485 +/- ground port, power +/- frame ground port One Ethernet 10/100 BaseT port One FTT-10 LonWorks port
Approvals:	CE Certified; TUV approved to UL 916, EN 60950-1, EN 50491-3 and CSA C22-2 standards; FCC Class A Part 15; OPC Self-tested for Compliance; RoHS Compliant; CSA 205 Approved	
Power Requirements	Multi-mode power adapter: 9-30VDC or 12 - 24VAC	
Physical Dimensions	11.5 cm L x 8.3 cm W x 4.1 cm H (4.5 x 3.2 x 1.6 in.)	
Weight:	0.2 kg (0.4 lbs)	
Operating Temperature:	-40°C to 75°C (-40°F to167°F)	
Surge Suppression	EN61000-4-2 ESD EN61000-4-3 EMC EN61000-4-4 EFT	
Humidity:	5 - 90% RH (non-condensing)	
(Specifications subject to change without notice)		

1.4: ProtoCom/ProtoCom-Lon Dimensions
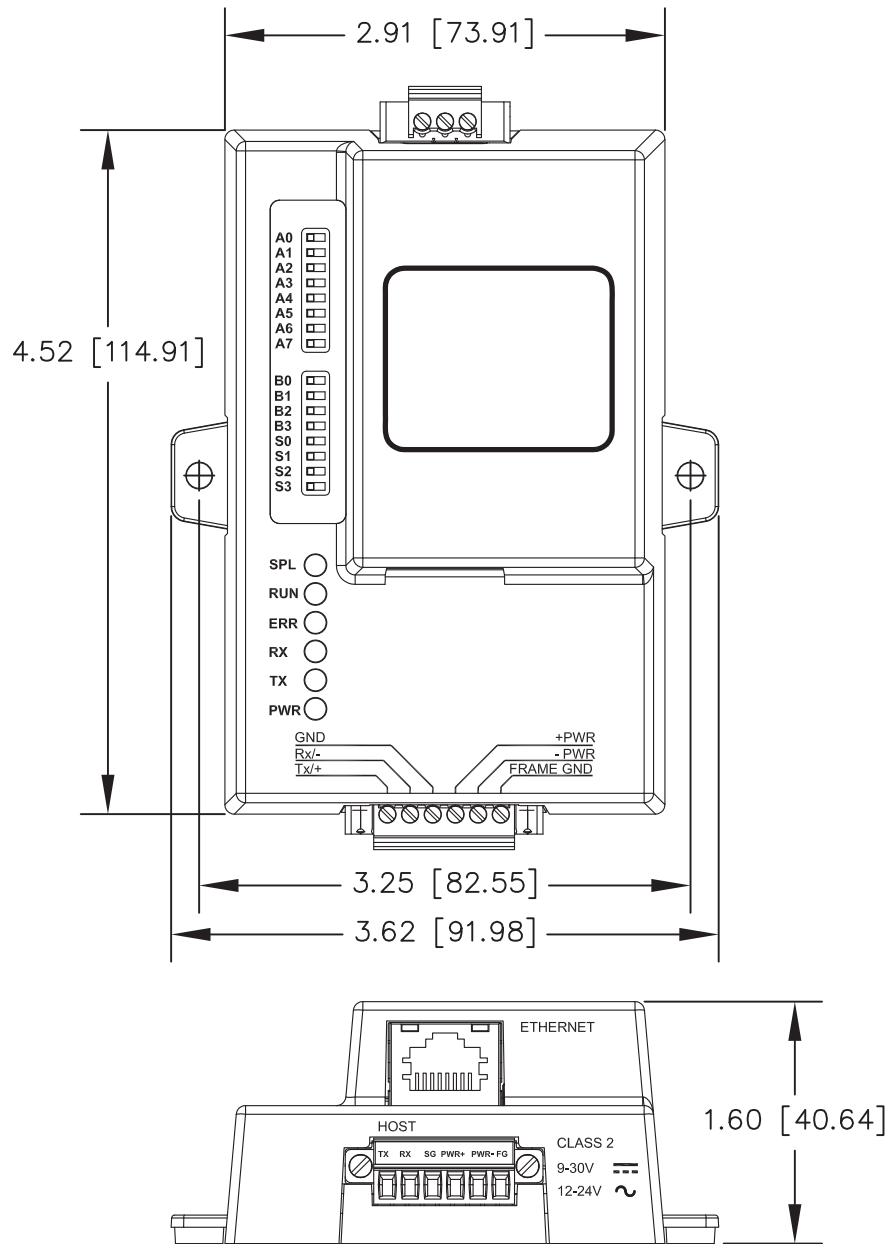
Figure 1.2: ProtoCom Dimensions in inches[cm]

1.5: Electrical Connections

RS485 Port to Field Protocol

LEDs: Field RS485 Rx/Tx

End of Line Termination Switch

LEDs: RUN, ERR, Offline, RUN2

A Bank - MAC Address

Additional DIP Switches:
Only A1 and A2 are Enabled

B Bank - Baud Rate

S Bank - Protocol/
Config

PWR

RS485 Bias Jumpers

LEDs
SPL
RUN
ERR
RX
TX
PWR

RS485 Termination
Jumper

6-pin Connector - Host RS485 and Power Connections
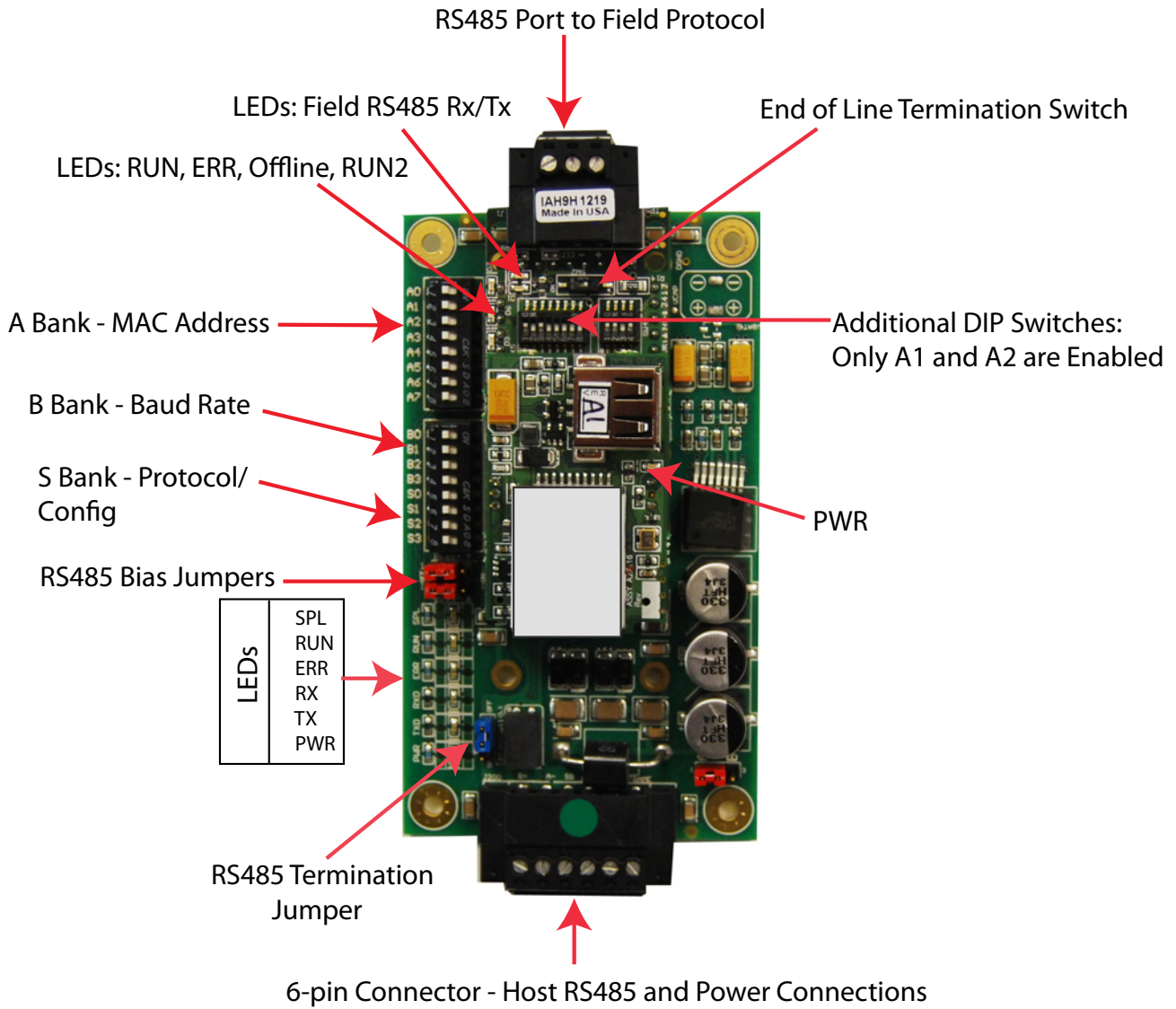
Figure 1.3: ProtoCom Electrical Connections

LonWorks® Field Connection

LonWorks LED

LonWorks Service Pin

A Bank - Node-ID

B Bank - Baud Rate

S Bank - Protocol/ Config

RS485 Bias Jumpers

LEDs
| SPL |
| RUN |
| ERR |
| RX |
| TX |
| PWR |

RUN LED
Additional DIP Switches: Only A1 and A2 are Enabled

LonWorks Rx

RS485 Termination Jumper

6-pin Connector - Host RS485 and Power Connections
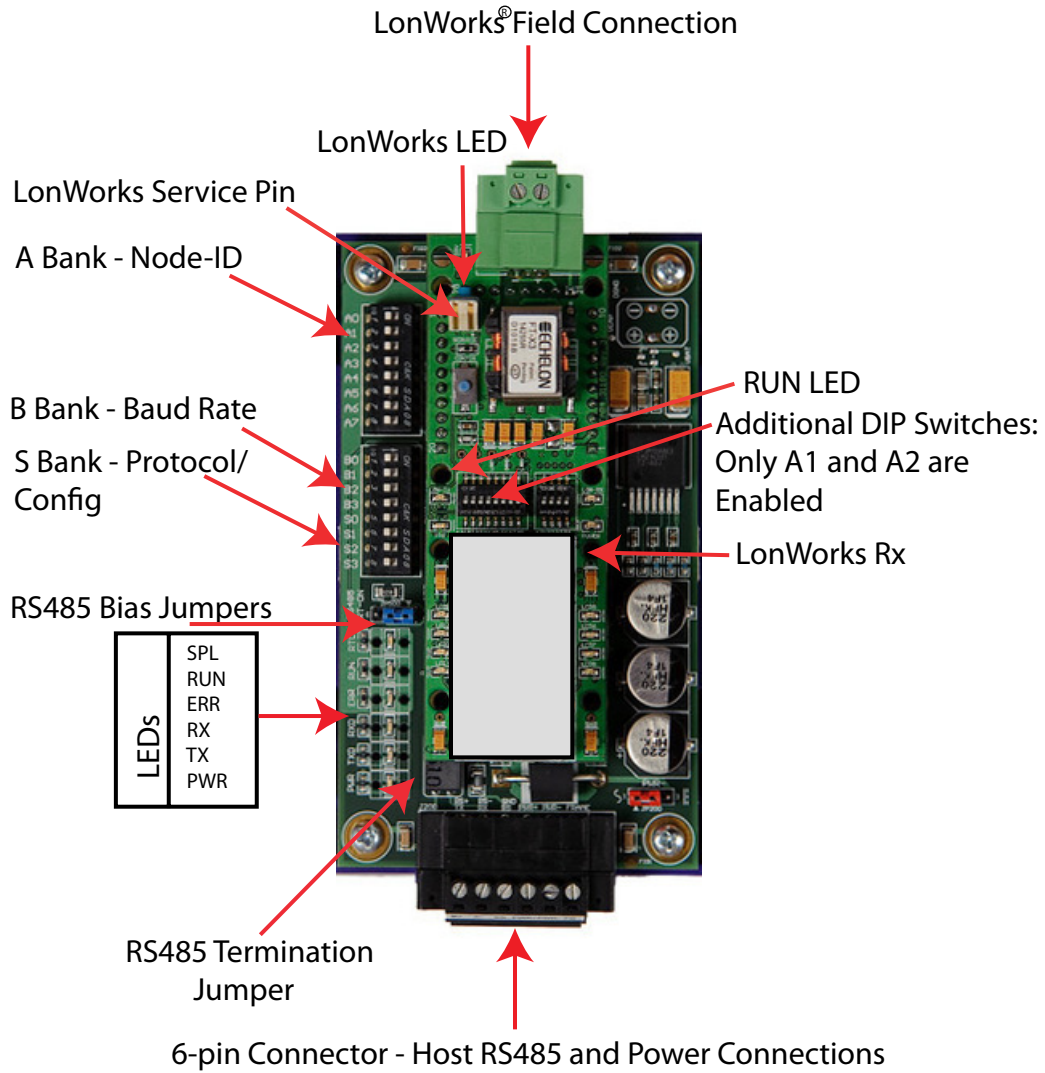
Figure 1.4: ProtoCom-Lon Electrical Connections

1.6: Use of DIP Switches

The ProtoCom/ProtoCom-Lon makes use of DIP Switches for many of its settings. There are 3 banks of DIP Switches on the ProtoCom/ProtoCom-Lon, but on the ProtoCom-Lon the S bank of DIP Switches is disabled, as it is not used. See the figure below.

⚠️ **WARNING!** When setting DIP Switches, ensure that power to the ProtoCom/ProtoCom-Lon is **OFF**. **AVERTISSEMENT!** Lors de la configuration des commutateurs DIP, veiller à ce que l'alimentation au ProtoCom/ProtoCom-Lon est **DÉSACTIVÉE**.
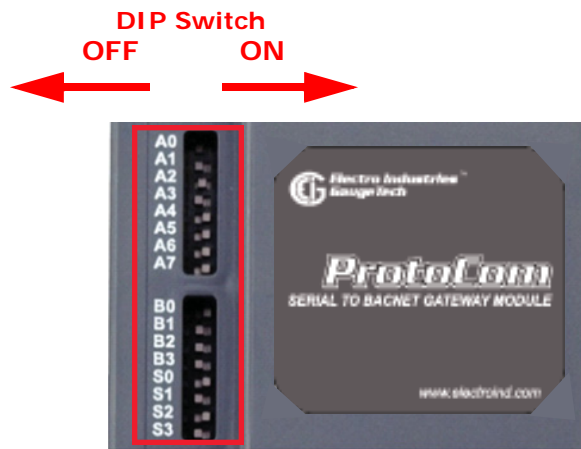
Figure 1.5: DIP Switches

- To set a DIP Switch ON, move it toward the center of the ProtoCom/ProtoCom-Lon.

- To set a DIP Switch OFF, move it toward the outside edge of the ProtoCom/ProtoCom-Lon.

1.7: Removing the Top Cover from the ProtoCom/ProtoCom-Lon (ONLY if Necessary)

There are two situations (biasing and end-of-line termination, described in Chapter 2) in which you may need to adjust internal jumpers. To do so you need to separate the top cover from the main part of the unit.

CAUTION! Be sure the ProtoCom/ProtoCom-Lon is POWERED OFF. ATTENTION! Veiller à ce que l'alimentation au **ProtoCom/ProtoCom-Lon est DÉSACTIVÉE**.

Recommended Procedure to remove the top cover:

Using a flat-sided screw driver or similar tool, gently insert it into the 4 slots in the back of the ProtoCom/ProtoCom-Lon, alternating between slots until the cover is loosened enough to be removed. Refer to the diagram below.

Slots for removing cover (4)
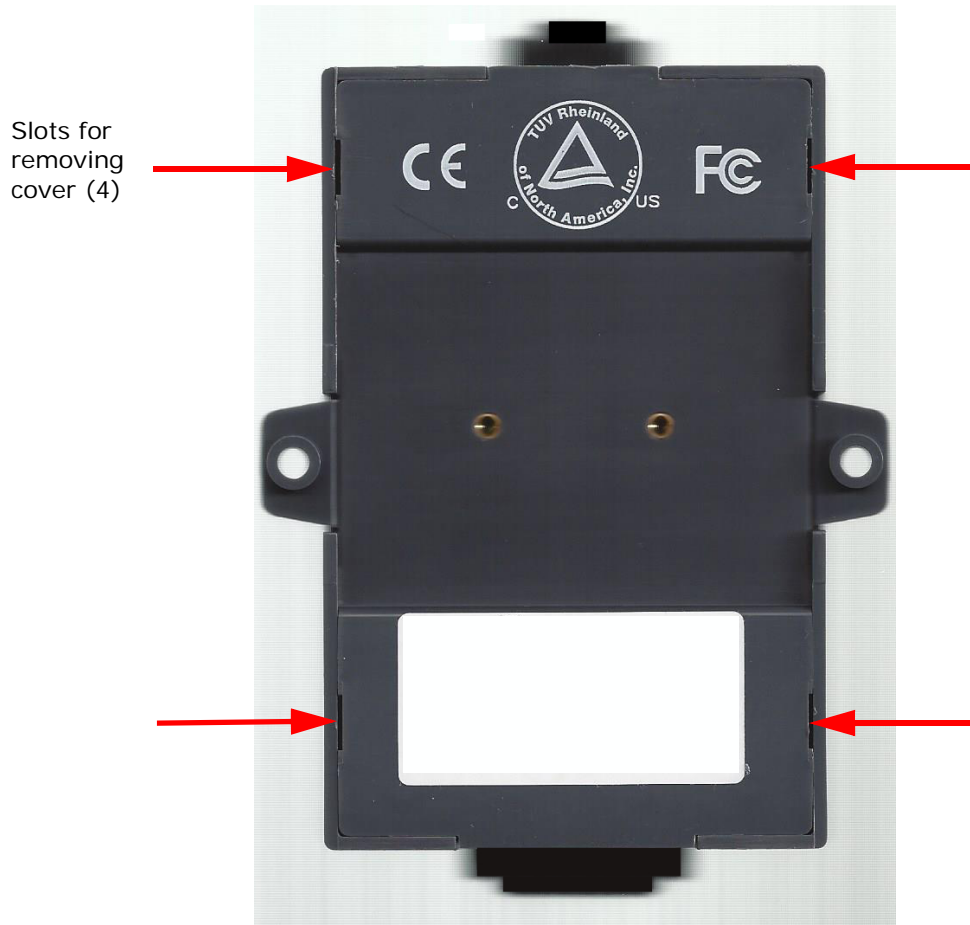
Figure 1.6: Slots in ProtoCom/ProtoCom-Lon Back

Alternate Procedure to remove the top cover:

1. Hold the ProtoCom/ProtoCom-Lon firmly with both hands and turn it over, so that the back is facing you.

2. Position your thumbs as shown in the figure below and press outward on both sides to fractionally move the sides away from the back of the unit.
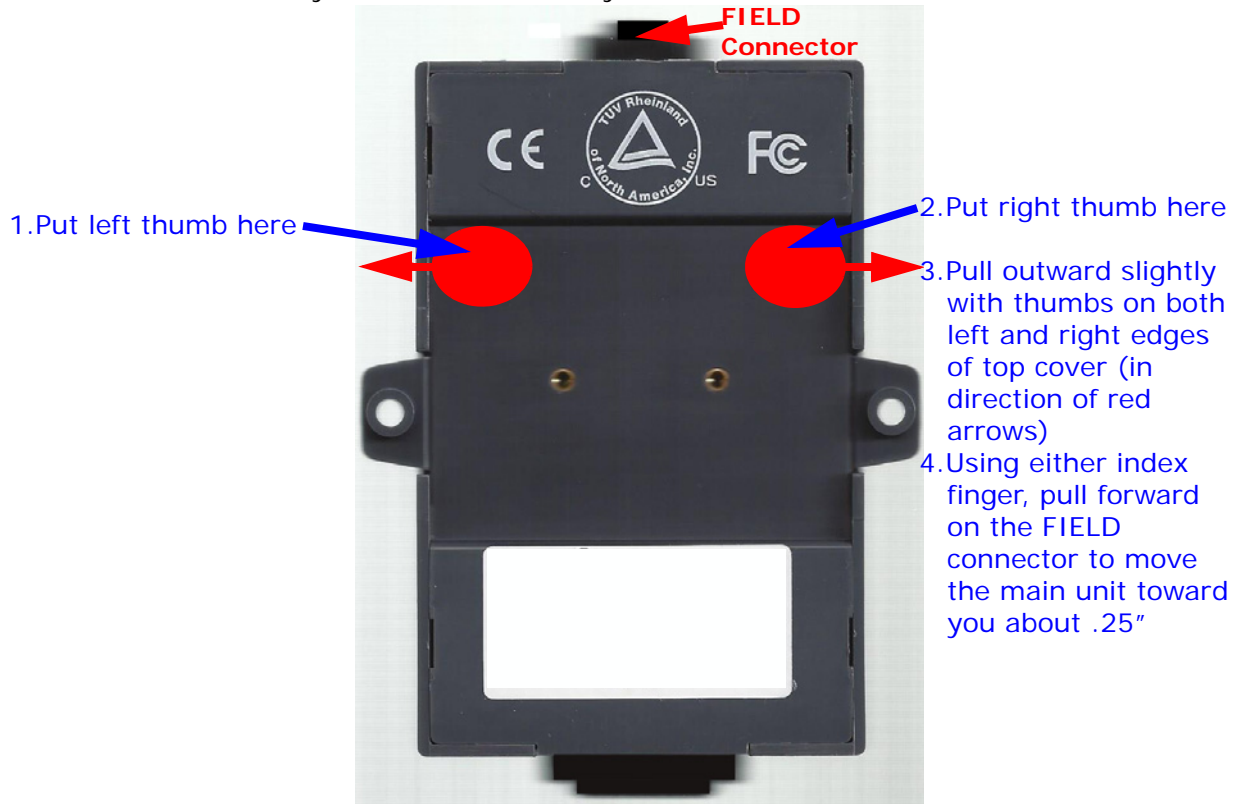
Figure 1.7: Removing the Top Cover, Part 1

3. While keeping your thumbs in this position, use your index finger to pull the top RS485 connector (labeled Field) toward you. The top back of the ProtoCom will be freed from the top cover and move toward you about .25″.

4. Keeping the back of the ProtoCom facing you, turn the unit so that the 6 pin connector (labeled HOST) is at the top. Once again, press outward with your

thumbs as shown in the diagram below and pull the HOST connector toward you. The main part of the ProtoCom/ProtoCom-Lon will be freed from the top cover.

HOST Connector

1. Put left thumb here

2. Put right thumb here

3. Pull outward slightly with thumbs on both left and right edges of top cover (in direction of red arrows)

4. Using either index finger, pull forward on the HOST connector to free the main unit
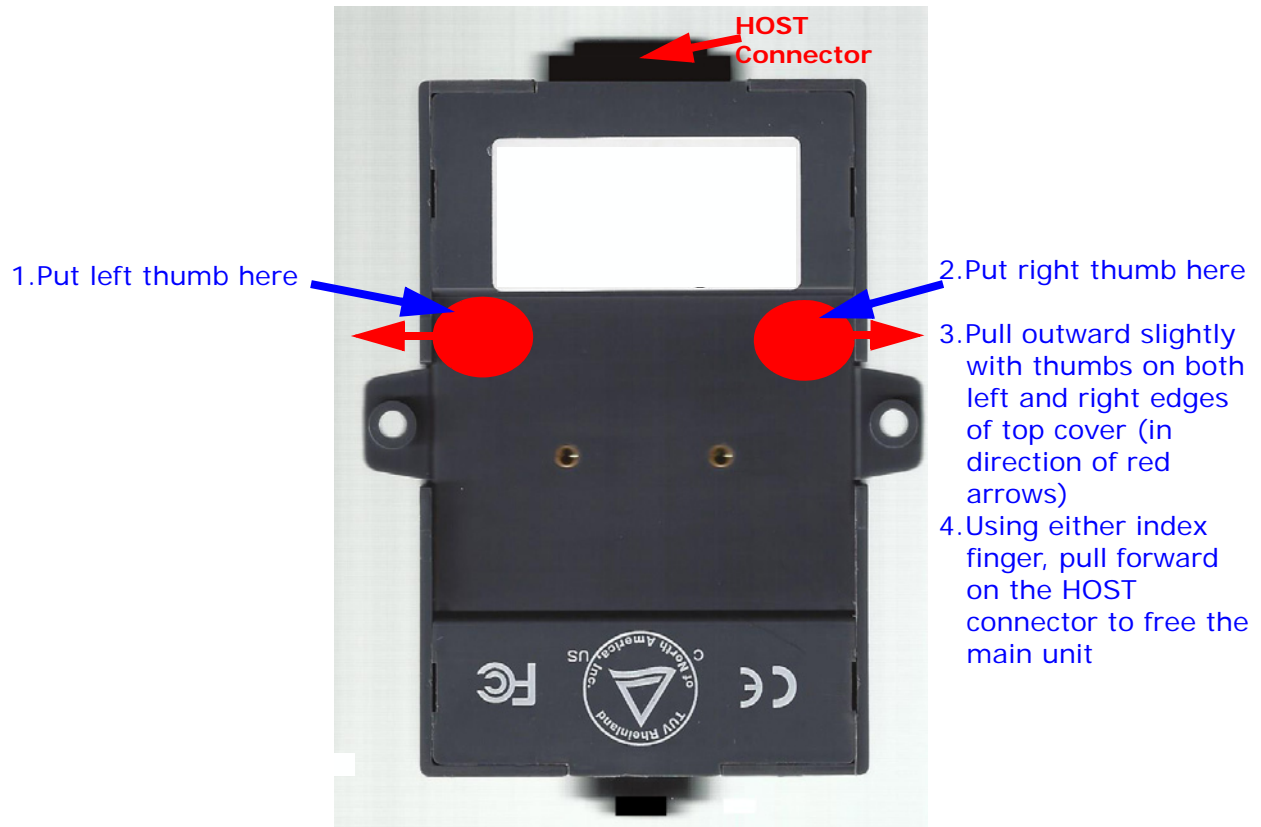
Figure 1.8: Removing the Top Cover, Part 2

NOTE: The plastic LED lens will come loose when the top cover is removed. It must be replaced as shown in 9he drawing below.

Plastic LED Lens fits here
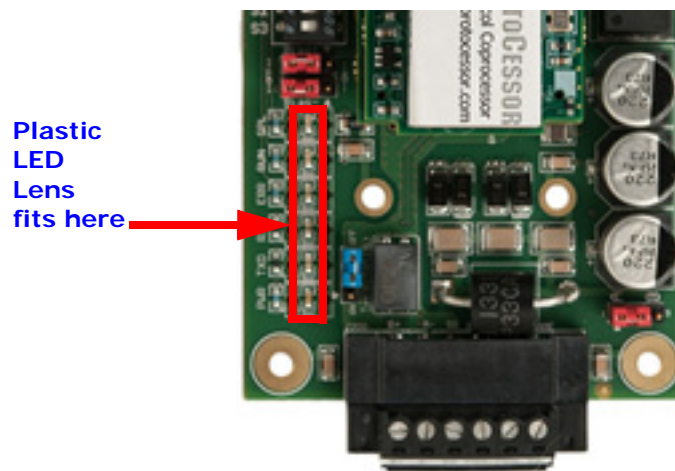
Figure 1.9: Position of the LED Lens

1.7.1: Replacing the Top Cover

To replace the cover:

1. Make sure the LED lens has been returned to its correct position (see Figure 1.8).

2. Carefully position the top cover over the main unit and press gently until it clicks into place.

1.8: Graphical User Interface (GUI) Configurator

The ProtoCom/ProtoCom-Lon has an embedded GUI Configurator which can be used to program the Node Offset or change the IP address (see Section 2.10.1), or to set up a password for the ProtoCom/ProtoCom-Lon (see Section 2.10.2).

To open the GUI Configurator:

1. Connect a standard CAT5 Ethernet cable (straight or crossover) from your PC to the RJ45 Ethernet port on the ProtoCom/ProtoCom-Lon.

Insert the Ethernet cable into the unit's RJ45 port

Figure 1.10: ProtoCom/ProtoCom-Lon Ethernet Port

2. The Default IP Address of ProtoCom/ProtoCom-Lon is **192.168.1.24**, and the Subnet Mask is **255.255.255.0**. If the PC and ProtoCom/ProtoCom-Lon are on different IP Networks, assign a static IP Address to the PC on the 192.168.1.xxx network:

a. Go to **start** > Control Panel > Network Connections

b. Right-click on Local Area Connection > Properties.

c. Highlight ☑ 🖧 Internet Protocol (TCP/IP) > Properties

d. Select: Use the following IP address and enter the information below.

⦿ Use the following IP address:	
IP address:	192 . 168 . 1 . 11
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	. . .

e. Click OK twice.

3. Open a browser application on your PC.

   NOTE: You do not need to be connected to the Internet.

4. Type the ProtoCom/ProtoCom-Lon's default IP address 192.168.1.24 in the browser address bar and press Enter to open the GUI. You will see the screen shown below.

NOTES:

• The example screen above is for a ProtoCom running BACnet MSTP. The screen will look a bit different if you are running another protocol.

• If the IP address of the ProtoCom has been changed by previous configuration, you will need to get the assigned IP address from the network administrator.

1.9: ProtoCom/ProtoCom-Lon Installation

You have two choices for installing the ProtoCom/ProtoCom-Lon:

• Mounting on a DIN rail using the DIN Rail clip that came attached to the unit

• Mounting on a panel using the unit's mounting holes

1.9.1: Mounting on a DIN Rail

The ProtoCom/ProtoCom-Lon comes with an attached DIN Rail clip.
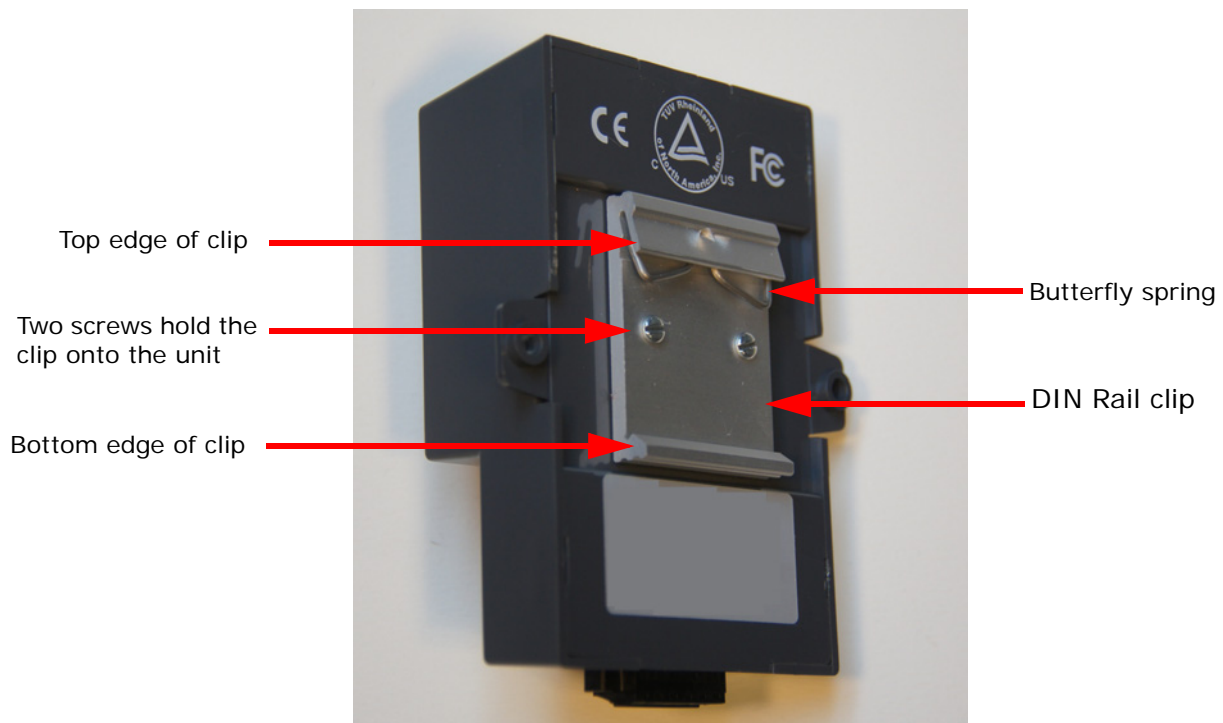
Figure 1.11: DIN Rail Clip

To mount the unit on a DIN Rail:

1. Latch the top edge of the clip onto the DIN Rail and push down on the unit to compress the butterfly spring.

2. Clip the bottom edge of the clip onto the DIN rail and stop pushing down on the unit. The butterfly spring will hold the unit in place.

To remove the unit from the DIN Rail:

1. Push down on the unit to compress the butterfly spring.

2. Pull the bottom of the unit away from the DIN Rail to release the bottom edge of the clip.

3. Unhook the clip from the top of the DIN Rail.

1.9.2: Mounting on a Panel

The ProtoCom/ProtoCom-Lon has mounting holes in its tabs for installation in a panel.
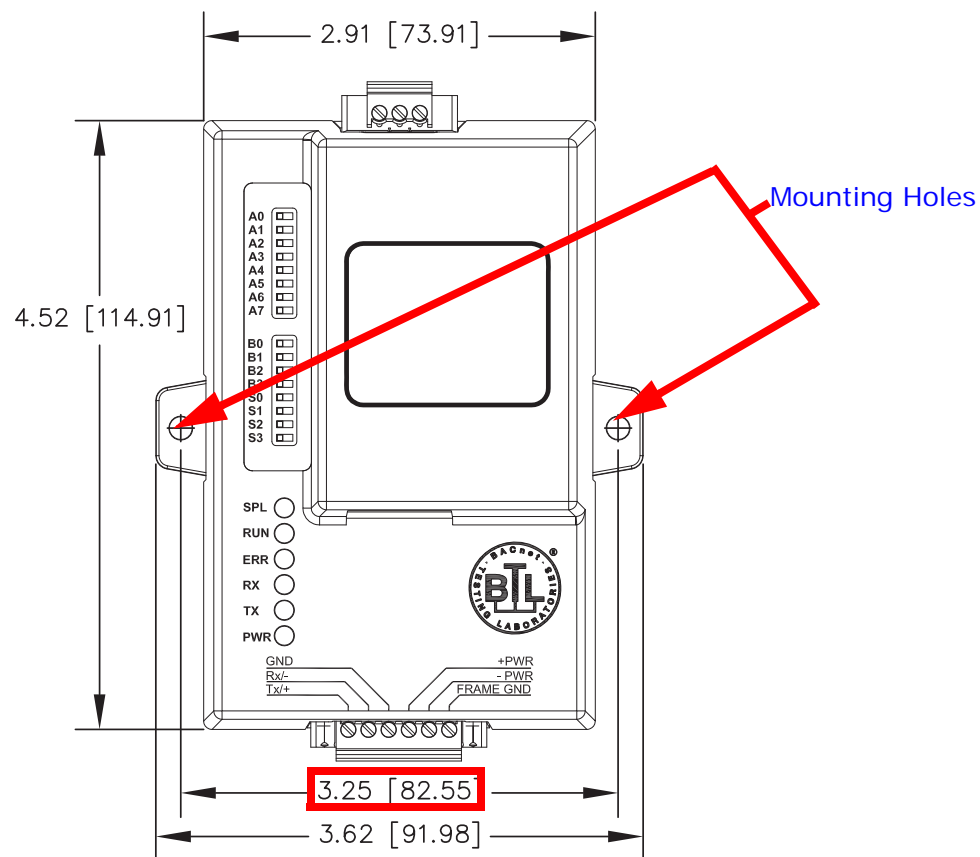
Figure 1.12: Location of Mounting Holes

1. Using a #1 flat-blade screwdriver, unscrew the two screws holding the DIN Rail clip to the back of the ProtoCom/ProtoCom-Lom (see Figure 1.11) and remove the clip.

2. Verify that the area where the unit is to be mounted allows proper clearance for all connections and mount the unit using the holes provided, spaced 3.25" apart.

1.10: Navigating This Manual

Chapter 2 explains how to use the ProtoCom/ProtoCom-Lon with EIG meters, including configuration and wiring.

Chapter 3 contains information on device communication.

Appendix A contains the EIG meters points list for the supported protocols.

Appendix B contains the A Bank DIP Switch settings for MAC address.

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2: Using the ProtoCom/ProtoCom-Lon

This chapter outlines the procedure for setting up communication between the Proto-Com/ProtoCom-Lon and an EIG meter.

2.1: Step One - Configure Modbus Communication Settings

The ProtoCom/ProtoCom-Lon is designed to connect to the RS485 Modbus port of an EIG power meter and to convert the serial communication to the desired protocol. Depending on the meter's point count (see Section 1.2), the ProtoCom/ProtoCom-Lon can communicate with more than one meter. Each meter must have an independent RS485 Modbus address. See the example configuration below.
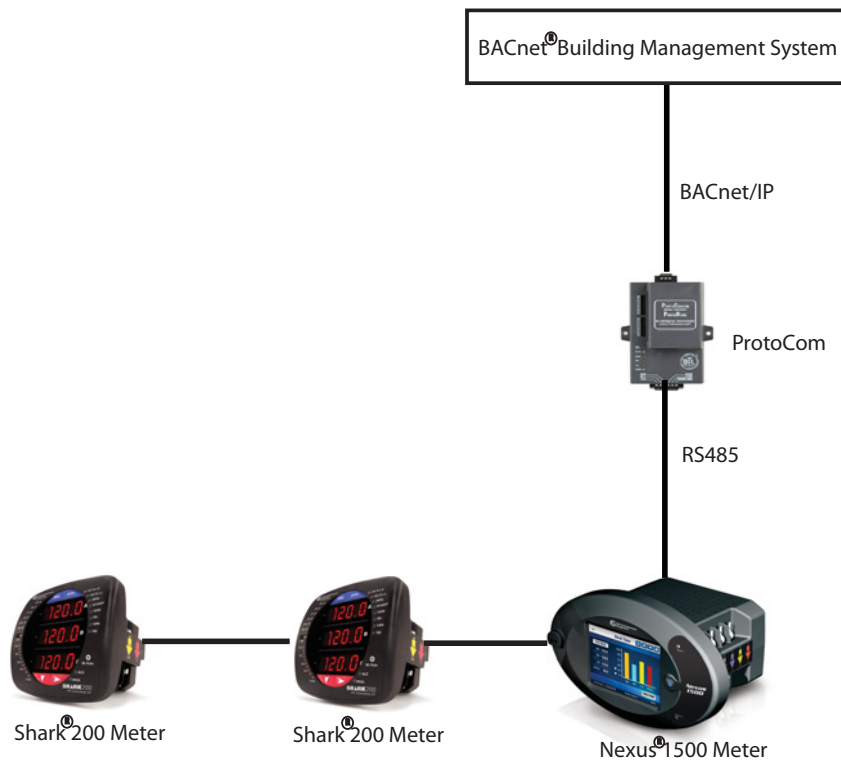
Figure 2.1: Example of Meters, ProtoCom, and Protocol Communication

All devices connected to the ProtoCom/ProtoCom-Lon **MUST** have the same Baud Rate, Data Bits, Stop Bits, and Parity. Refer to the following table, which shows the default communication settings.

Serial Port Setting	Device
Protocol	Modbus RTU
Baud Rate	9600
Parity	None
Data Bits	8
Stop Bits	1

1. Assign a Modbus Address to each of the devices attached to the ProtoCom/Proto-Com-Lon. The Modbus Address needs to be uniquely assigned between 1 and 255.

2. Record the Modbus Address assigned to each device.

2.2: Step Two - Select the Desired Field BAS Protocol (ProtoCom only)

You will use the S Bank Dip Switches to choose from BACnet MS/TP, BACnet/IP, Modbus/TCP, Metasys N2, EtherNet/IP, or DF1 (refer to Section 1.6 for an explanation of the DIP switches). Note that the ProtoCom's default setting enables BACnet, so you don't need to change this setting unless you want to use another protocol.

⚠️ **WARNING!** When setting DIP Switches, please ensure that power to the board is OFF. **AVERTISSEMENT!** Lors de la configuration des commutateurs DIP, veiller à ce que l'alimentation au ProtoCom/ProtoCom-Lon est **DÉSACTIVÉE**.
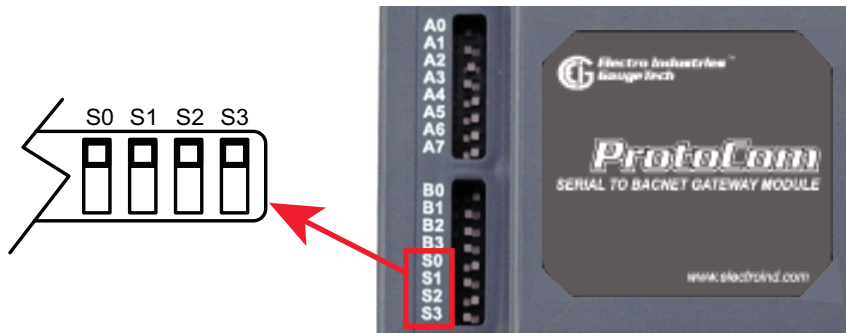
Figure 2.2: S Bank of DIP Switches

- The S bank of DIP switches, S0 - S3 is used to select BACnet MS/TP, BACnet/IP, Modbus/TCP, Metasys N2, EtherNet/IP, or DF1 protocols on ProtoCom.

- The following chart describes S0 - S3 DIP switch configuration settings for the devices to support BACnet MS/TP, BACnet/IP, Modbus TCP, Metasys N2, EtherNet/IP, or DF1 protocols on a ProtoCom.

ProtoCom	S Bank DIP Switches		
Protocol	S0	S1	S2
BACnet IP	Off	Off	Off
BACnet MSTP	On	Off	Off
Metasys N2	Off	On	Off
EtherNet/IP	On	On	Off
DF1	Off	Off	On

NOTES:

- When the S bank of switches are all off (this is the default setting) BACnet/IP is enabled.

- The OFF position is when the DIP switches are set closest to the outside of the box.

- On the ProtoCom-Lon, the S bank DIP switches are disabled, since the Field Protocol is always LonWorks.

2.3: Step Three - Enable Auto-discovery

The ProtoCom/ProtoCom-Lon has an Auto-discovery feature that lets it determine the EIG meter model it is connected to, and automatically load the appropriate points list for the protocol you choose. This makes configuration simple. The ProtoCom/Proto-Com-Lon allows a user to put different EIG meters on the RS485 bus, and have the ProtoCom/ProtoCom-Lon automatically discover them and make them available via the selected protocol.

Auto-discovery is set in the S Dip Switch bank's S3 switch (see DIP Switch figure on the previous page). The setting configuration is shown in the table below.

ProtoCom	S Bank DIP Switches
Auto-Discovery Settings	**S3**
Auto-Discovery ON - Build New Configuration	On
Auto-Discovery OFF - Save Current Configuration	Off

When installing the ProtoCom for the first time, set S3 to the ON position to enable Auto-discovery. The ON position is when the DIP switches are set closest to the inside of the box.

2.4: Step Four - Set MAC Address/Device Instance/Node-ID (Proto-Com only)

The Building Management System (BMS) in use must be able to distinguish the Proto-Com, and the meters attached to it, from all of the other devices in the BMS system. For this reason, the ProtoCom and connected devices must be given a unique ID. The specific ID you need to set depends on the BMS protocol you'll be using.

• MAC Address - used for BACnet MS/TP protocol only (Section 2.4.1): this is an eight bit address used to identify devices on a single RS485 subnet (the devices attached to the ProtoCom when using BACnet MS/TP). It identifies the ProtoCom to the BACnet MS/TP protocol.

• Device Instance - used for both BACnet MS/TP and BACnet/IP (Section 2.4.2): the Device Instance is used to set up a unique identifier for each of the meters attached to the ProtoCom.

• Node-ID - used for Metasys N2, Modbus/TCP, and DF1 (Section 2.4.3): this is the unique identifier for each of the meters attached to the ProtoCom.

2.4.1: Set MAC Address - for BACnet MS/TP Protocol Only

• Note that only 1 MAC address is set for the ProtoCom, regardless of how many devices are connected to it.

• Set the BACnet MS/TP MAC address between 1 and 127 (Master MAC address): this is so that the BMS system can find the ProtoCom via BACnet auto discovery.

• Use DIP switches A0 - A7 to assign the MAC Address for BACnet MS/TP.

Figure 2.2: A Bank of DIP Switches

NOTES:

- Refer to Appendix C.1 for the MAC address DIP switch chart.

- When using Metasys N2, Modbus/TCP, and DF1 the A Bank of DIP switches are disabled and not used. They should be set to the OFF position.

2.4.2: Set the Device Instance - for BACnet MS/TP and BACnet/IP Protocols

The BACnet protocol needs a value called Device Instance for each device in the system. This Device Instance is used to uniquely identify the device in a BACnet system. The BACnet Device Instance is set up by adding a value known as the Node_Offset to the Modbus Address that you assigned to the device in step 1 (Section 2.1).

The BACnet Device Instance can range from 1 to 4,194,303. The default Node_Offset is 50,000.

For example, using the Node_Offset default of 50,000:

a. If Device 1 has a Modbus Address of 1, Device 2 has a Modbus Address of 2, Device 3 has a Modbus Address of 3;

b. The Device Instance for Device 1 is 50,001; for Device 2 it is 50,002; and for Device 3 it is 50,003.

2.4.2.1: Change Node_Offset Value

If you need to, you can change the default Node_Offset from 50,000 to any number between 1 and 4,194,302 using the GUI Configurator (see Section 1.9). Follow these instructions:

1. From the GUI Configurator screen, enter the Node_Offset you want to use. The example screen below is for a ProtoCom configured for BACnet MS/TP protocol.

2. Enter the value you want to use in the Node_Offset field.

3. Click Submit. The BACnet device instances will be set by taking the new Node_Offset and adding it to the Modbus Address that you assigned to the device (Section 2.1).

   For example, using a Node_Offset changed to 20,000:

   • If Device 1 has a Modbus Address of 1, Device 2 has a Modbus Address of 2, Device 3 has a Modbus Address of 3;

   • The Device Instance for Device 1 is 20,001; for Device 2 it is 20,002; and for Device 3 it is 20,003.

2.4.3: Device Node-ID for Metasys N2, Modbus/TCP, and DF1 Protocols

The Modbus Addresses that you assigned to the devices attached to the ProtoCom in Section 2.1 will be the Metasy N2, Modbus TCP, and DF1 Node_ID's for the field protocols. You don't need to set up any other identification.

2.5: Step 5: Set the Baud Rate for BACnet MS/TP and DF1 Protocols

Use DIP Switches B0 - B3 to set the serial baud rate to match the baud rate provided by the BMS for BACnet MS/TP and DF1.
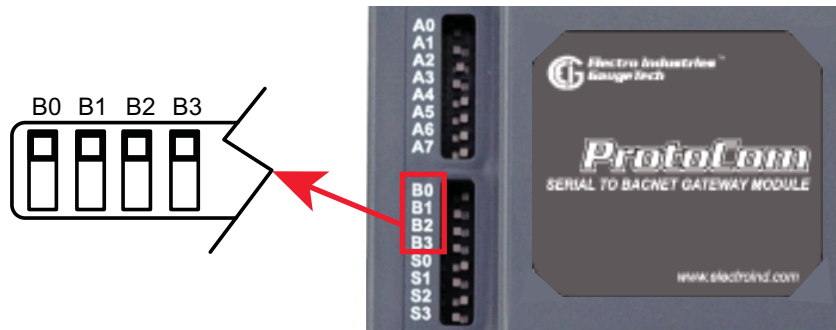
Figure 2.3: B Bank of DIP Switches

NOTES:

• The baud rate for Metasys N2 protocol is set to 9600: the B bank of DIP Switches is disabled for Metasys N2 on ProtoCom, since they are not needed.

• The B bank of DIP switches is disabled for the ProtoCom-Lon.

• The default setting of the ProtoCom is 38400.

The following table shows the Baud Rate DIP Switch selection.

Baud	B0	B1	B2	B3
9600	On	On	On	Off
19200	Off	Off	Off	On
38400	On	On	Off	On
57600	Off	Off	On	On
76800	On	Off	On	On

2.6: Step 6 - Connect the ProtoCom/ProtoCom-Lon to the Meter

The six pin connector at the bottom of the ProtoCom/ProtoCom-Lon (labeled HOST) is used to connect the ProtoCom to the EIG meter and to the power supply. (See Section 1.5 for detailed information on the ProtoCom/ProtoCom-Lon's connections).

• Pins 1 through 3 are for the meter's RS485 connection, though the RS485 GND (Pin 3) is not typically connected.

• Pins 4 through 6 are for power.

CAUTION! DO NOT CONNECT POWER YET.

Device Pins	ProtoCom Pin #	Pin assignment
Pin RS-485 +	Pin 1	RS-485 +
Pin RS-485 -	Pin 2	RS-485 -
Pin GND	Pin 3	RS-485 GND
Power In (+)	Pin 4	V +
Power In (-)	Pin 5	V -
Frame Ground	Pin 6	FRAME GND
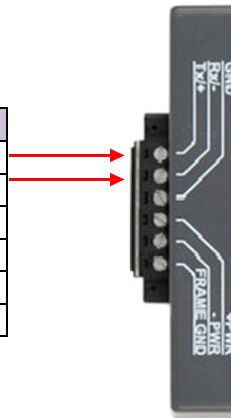
Figure 2.4: HOST RS485 Connections

The EIG meters have the following RS485 connections:

• The Shark® meters, the Nexus® meters, and the MP200 Metering System have a two wire RS485 connection that can connect directly to the ProtoCom's RS485 connections:
1. Connect the meter's B+ to the ProtoCom/ProtoCom-Lon's Tx +/- connection.

2. Connect the meter's A- to the ProtoCom/ProtoCom-Lon's Rx +/- connection.

• The DMMS 425 meter has a four wire RS485 connection.
1. Connect the meter's R + and T+ wires together, and connect the combined wire to the ProtoCom's Tx+/-.

2. Connect the R- and T- wires together and connect the combined wire to the ProtoCom/ProtoCom-Lon's Rx +/-.

See the diagram below.
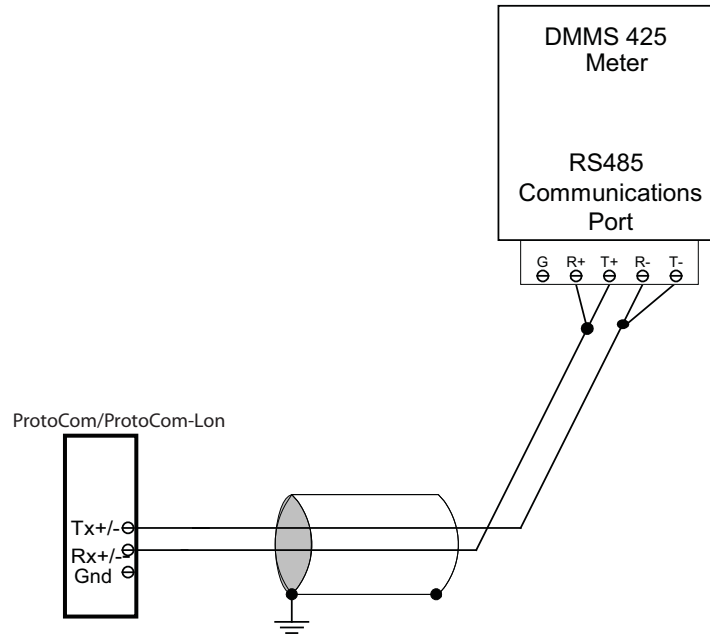
Figure 2.5: Connecting RS485 between DMMS 425 and ProtoCom/ProtoCom-Lon

2.6.1: Biasing the Modbus RS485 Network (only if necessary)

An RS485 network with more than one device needs to have biasing to ensure proper communication. The biasing only needs to be done on one device. If necessary, you can set up biasing on the ProtoCom. Refer to Section 1.8 for instructions on removing and replacing the unit's top cover.

The ProtoCom has 530 Ohm resistors that can be used to set the biasing. The default position of the Biasing jumpers is OFF. The OFF position is when the 2 RED biasing jumpers straddle the 4 pins closest to the outside of the board of the Proto-Com. To turn biasing on, move the jumpers to the right so that they straddle the four inside pins. See the figure below.

To turn biasing ON, move the red jumper to the right so that it covers these 2 pins
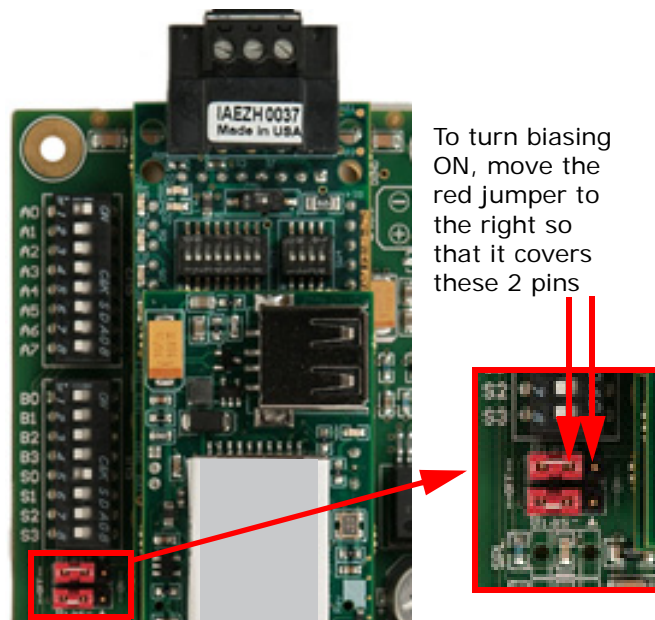
Figure 2.6: Biasing Jumpers

IMPORTANT!

• Only turn biasing ON if the Building Management System (BMS) cannot see more than one device connected to the ProtoCom and you have checked that all of the settings (Modbus COM settings, wiring, and DIP switches) are correct.

• Do not touch any other parts of the main board.

2.6.2: Set End of Line Termination Switch for the Modbus RS485 Port (only if necessary)

On long RS485 cabling runs, the RS485 trunk must be properly terminated at each end. The ProtoCom has a blue End-of-Line (EOL) terminating switch (see the figure below). On short cabling runs the EOL switch does not to need to be turned ON; therefore the default setting for this ProtoCom's EOL switch is OFF. Refer to Section 1.8 for instructions on removing and replacing the unit's top cover.

If the ProtoCom is placed at one of the ends of the trunk on a long RS485 cabling run, turn the Blue RS485 End-of- Line Terminating switch to the ON position.

To turn the EOL switch ON, move the blue jumper down so that it covers these 2 pins
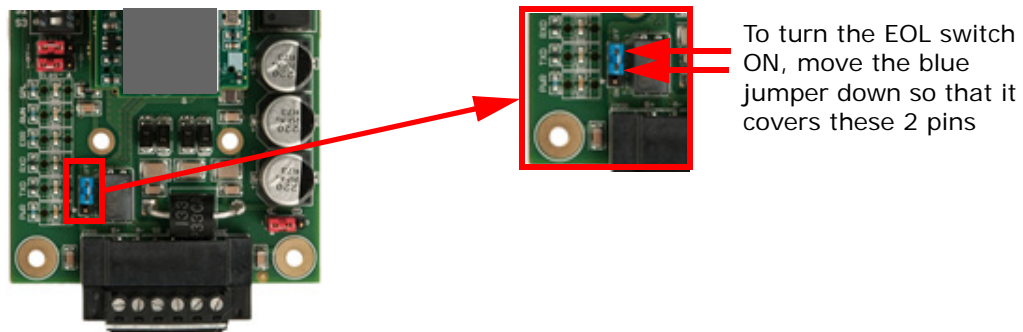
Figure 2.7: EOL Termination Jumpers

IMPORTANT! Do not touch any other parts of the main board.

2.7: Step 7 - Connect to the RS485/LonWorks Network (BACnet MS/TP, Metasys N2, DF1, or LonWorks)

BACnet MS/TP, Metasys N2, or DF1: Wire the Field Port to the RS485 Network

Connect the BACnet MS/TP or Metasys N2 RS485 network wires to the 3-pin RS485 connector (labeled FIELD) on the top of the ProtoCom, as shown below.

BMS RS485 Wiring	ProtoCom Pin #	Pin Assignment
RS485 +	Pin 1	RS-485 +
RS485 -	Pin 2	RS-485 -
-	Pin 3	RS-485 GND
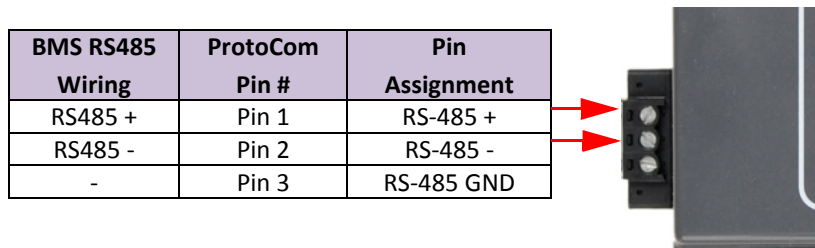
Figure 2.8: FIELD RS485 Wiring

NOTE: The RS485 GND (Pin 3) is not typically connected.

If the ProtoCom is the last device on the BACnet MS/TP, Metasys N2, or DF1 trunk, the End-Of-Line Termination (EOL) Switch needs to be enabled. See Section 1.8 for instructions on removing and replacing the unit's top cover.

To enable the switch: using a thin, pointed tool, move it to the left, as shown in the diagram below.

Push the white rectangle to the left
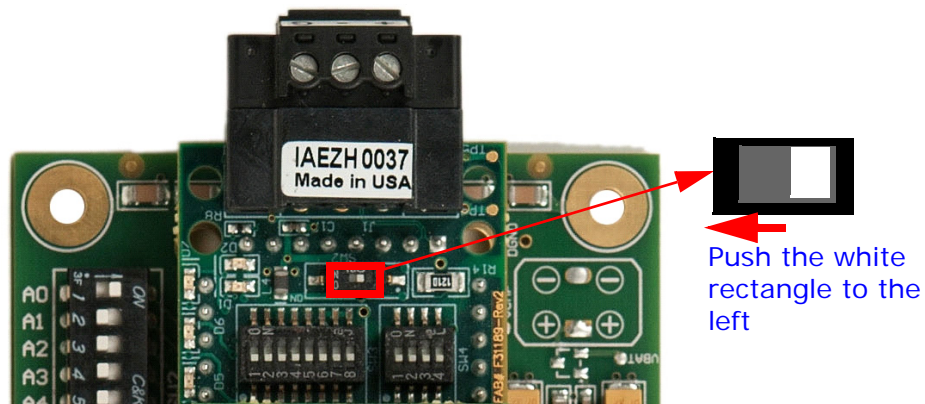
Figure 2.9: EOL Switch Setting

ProtoCom-Lon: Wire the Field Port to the LonWorks Network

Connect the ProtoCom-Lon to the field network with the LonWorks terminal using a twisted pair non-shielded cable. LonWorks has no polarity.

Figure 2.10: LonWorks FIELD Terminal

2.8: Step 8 - Connect Power to the ProtoCom/ProtoCom-Lon

Apply power to the ProtoCom/ProtoCom-Lon as show in the figure below. Ensure that the power supply used complies with the specifications provided in Section 1.4.

The ProtoCom/ProtoCom-Lon accepts either 9-30VDC or 12-24 VAC on pins 4 and 5.

Power Requirement for ProtoCom/ProtoCom-Lon at 9V through 30 VDC or 12-24 VAC			
	Current Draw Type		
ProtoCom Family	12VDC/VAC	24VDC/VAC	30VDC
ProtoCom (Typical)	170mA	100mA	80mA
ProtoCom (Maximum)	240mA	140mA	100mA
ProtoCom-Lon (Typical)	210mA	100mA	90mA
ProtoCom-Lon (Maximum)	250mA	130mA	100mA
Note: These values are 'nominal' and a safety margin should be added to the power supply of the host system. A safety margin of 25% is recommended.			

Power to ProtoCom/ ProtoCom-Lon	ProtoCom/ ProtoCom-Lon Pin #	Pin Assignment
Power In (+)	Pin 4	V +
Power In (-)	Pin 5	V -
Frame Ground	Pin 6	FRAME GND
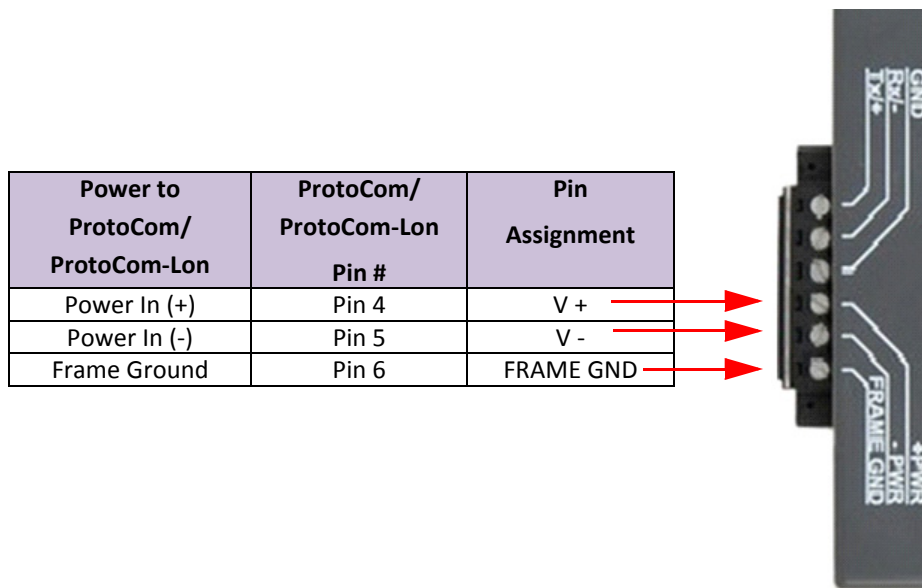
Figure 2.11: Connecting Power to the ProtoCom/ProtoCom-Lon

2.9: Step 9 - Turn Off Auto-discovery After Completion to Save Configuration

The S3 DIP Switch for enabling Auto-discovery was set in step 3, Section 2.3. Once power is applied to a ProtoCom/ProtoCom-Lon that is set to enable Auto-discovery, the unit takes about 3 minutes to complete the discovery of all of the EIG meters attached to the ProtoCom/ProtoCom-Lon and the loading of their data points.

Once the ProtoCom/ProtoCom-Lon has discovered all of the connected EIG meters, set the S3 DIP switch to the OFF position to save the current configuration. The OFF position is when the DIP switches are set closest to the outside of the box.

ProtoCom/ProtoCom-Lon	
S3 DIP Switch Auto-discovery Mode	S3
Auto-discovery ON – Build New Configuration	On
Auto-discovery OFF – Save Current Configuration	Off

2.10: Step 10: Additional Configuration

Depending on the protocol being used and the specific needs of your application, you may use the following configuration instructions.

2.10.1: Use the Web GUI to Configure IP Address for BACnet IP and EtherNet/IP

Follow the instructions in Section 1.9 to connect to the ProtoCom via its Ethernet port and to bring up the Web GUI.

NOTE: Below the Active Profiles heading you should see profiles listed for connected devices. If no profiles are displayed, check the wiring, baud rate, and DIP switch settings, because there is a problem with device communication. All the active profiles must show the correct Addresses before proceeding.

Set the IP Address for Field Network (BACnet/IP, Modbus TCP, and Ethernet/IP Only):

1. From the Web Configurator page, click the Diagnostics & Debugging button in the bottom right side of the page.
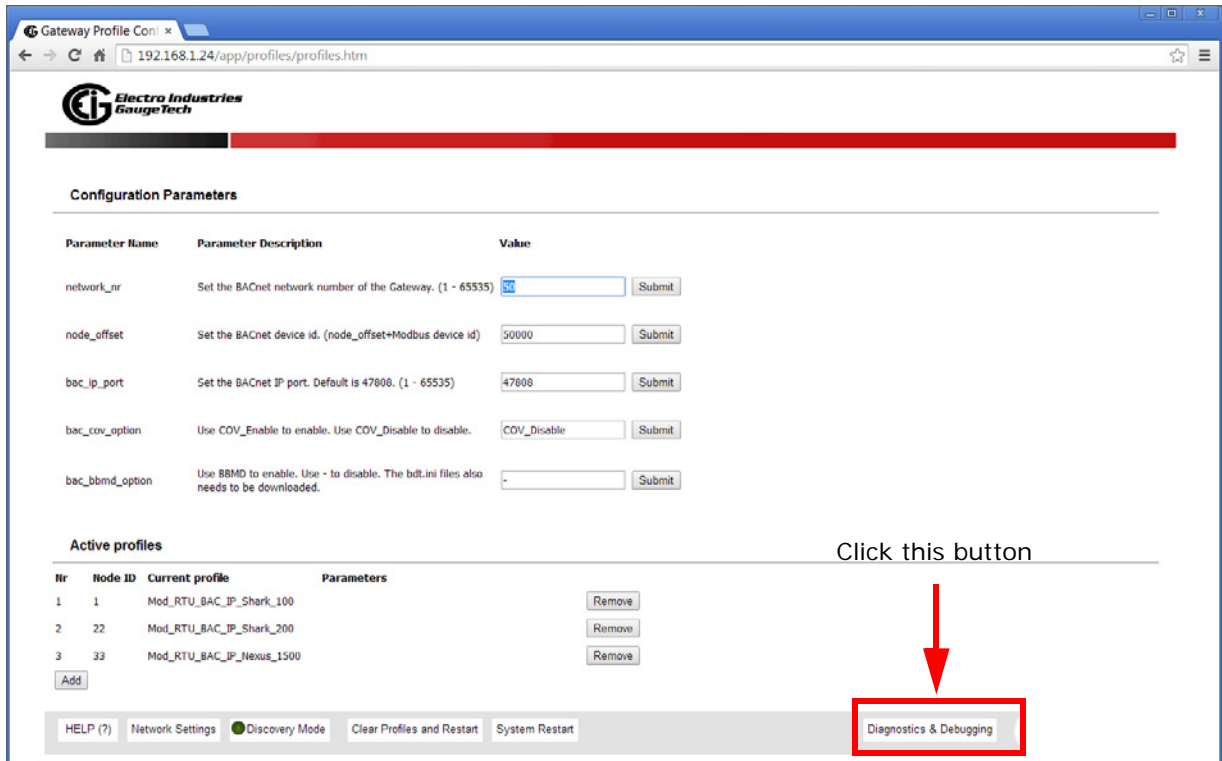
BACnet/IP Configurator Webpage
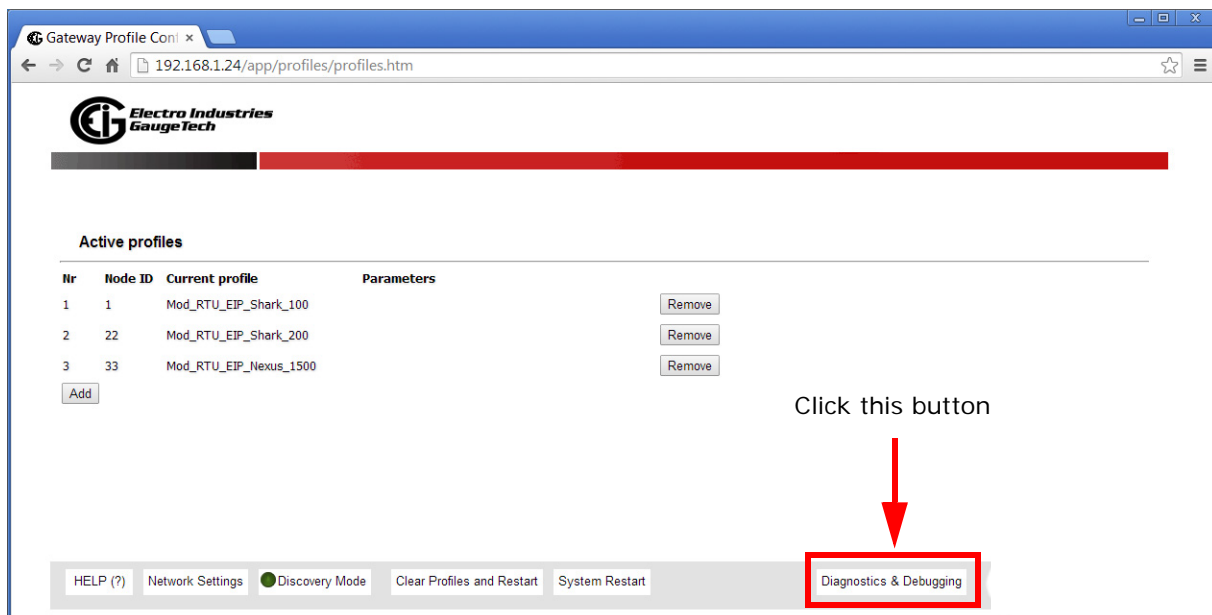
Ethernet/IP Configurator Webpage

2. Under Navigation, on the left side of the screen, click Setup>Network Settings.
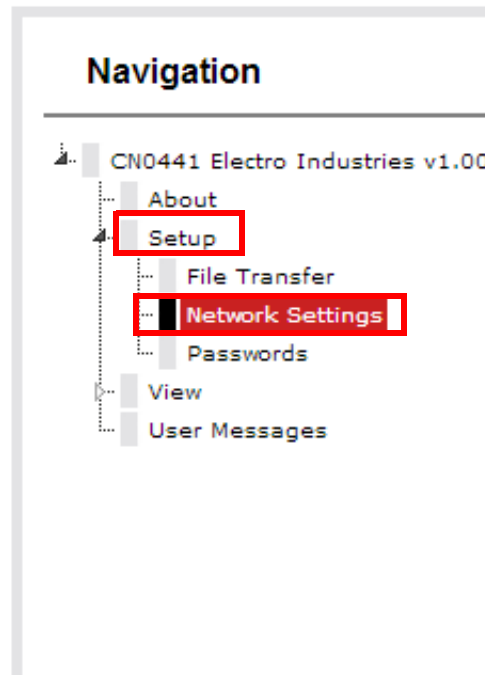
3. The current network settings are shown in the screen.
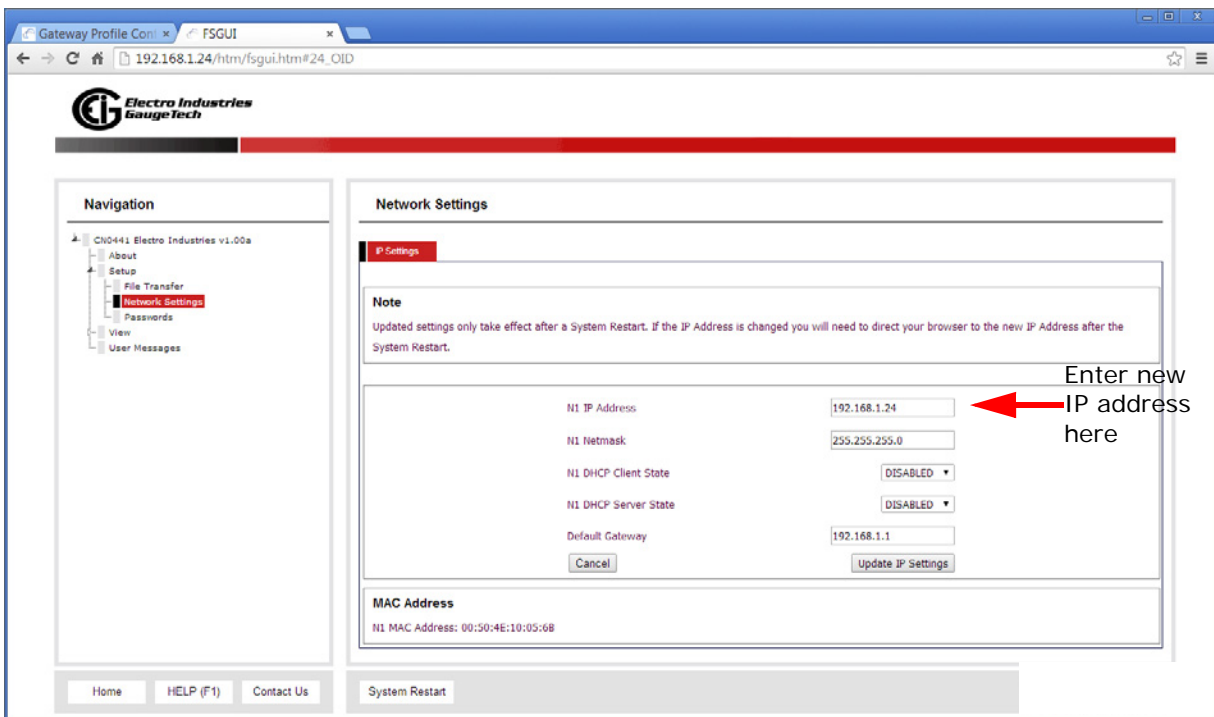
4. Modify the IP address (N1 IP address field) of the ProtoCom's Ethernet port.

5. If necessary, change the Netmask (N1 Netmask field) by entering a new Subnet Mask.

6. If necessary, change the IP Gateway (Default Gateway field) by entering a new IP Gateway.

   NOTE: If the ProtoCom is connected to a router, the IP Gateway of the ProtoCom should be set to the IP address of the router.

7. Reset the ProtoCom by clicking the System Restart button at the bottom of the page.

8. Unplug the Ethernet cable from the PC and connect it to the network hub or router.

9. Record the IP address you assigned to the ProtoCom and store it in a safe place.

2.10.2: Set Up a Password

The ProtoCom/ProtoCom-Lon comes with password disabled, but you can easily configure a password for it.

There are 2 password access levels:

• Admin: the Admin account has unrestricted access to the unit.

• User: the User account can view any ProtoCom/ProtoCom-Lon information, but cannot make any changes to settings or restart the unit.

1. Type the IP address of the ProtoCom/ProtoCom-Lon into your PC's browser.
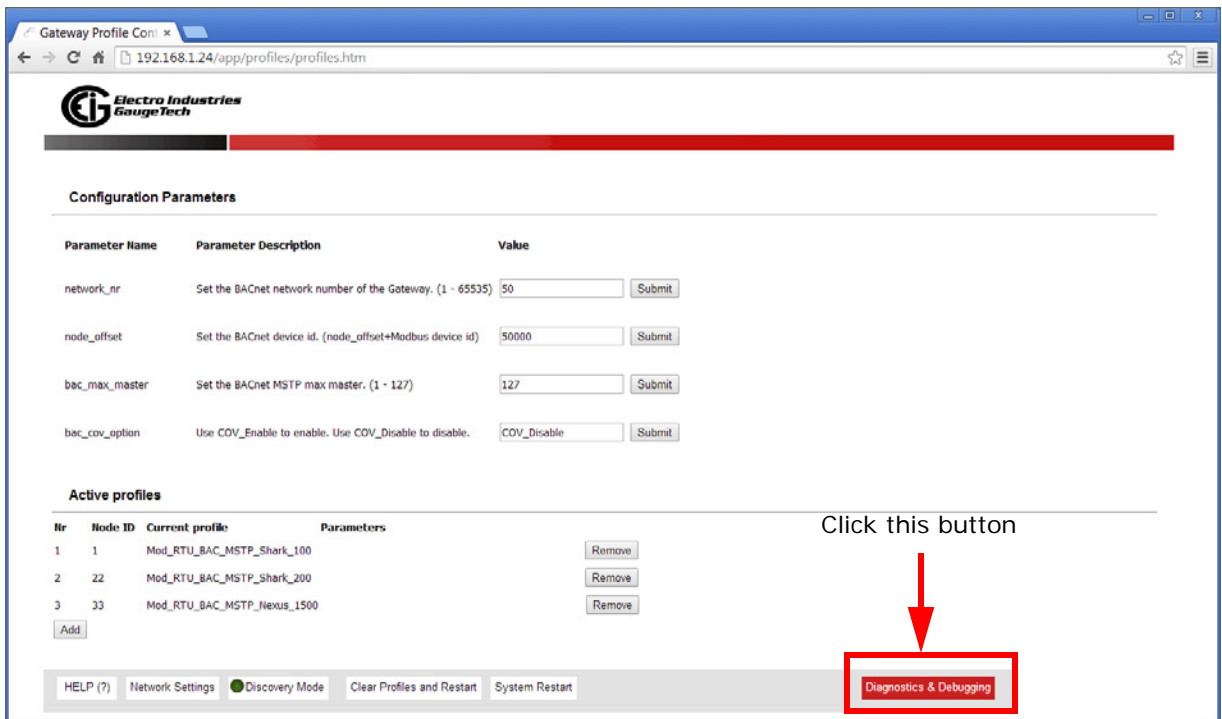
2. From the Web Configurator landing page, click the Diagnostics & Debugging button on the bottom right side of the page to access the FST Web GUI.
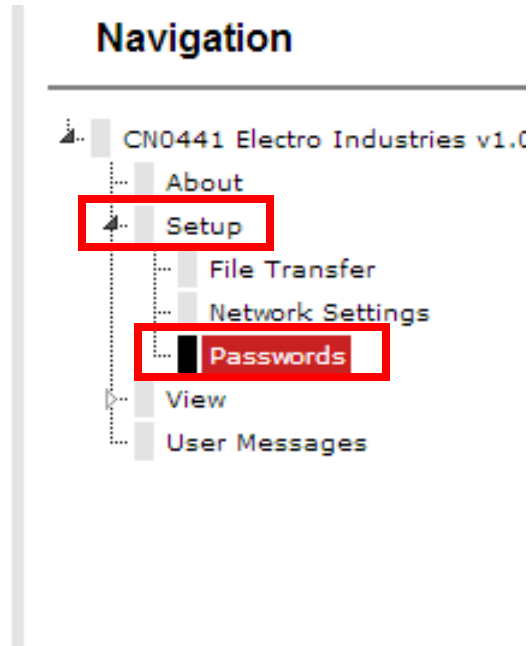
3. From the navigation tree on the left side of the page, click Setup>Passwords.
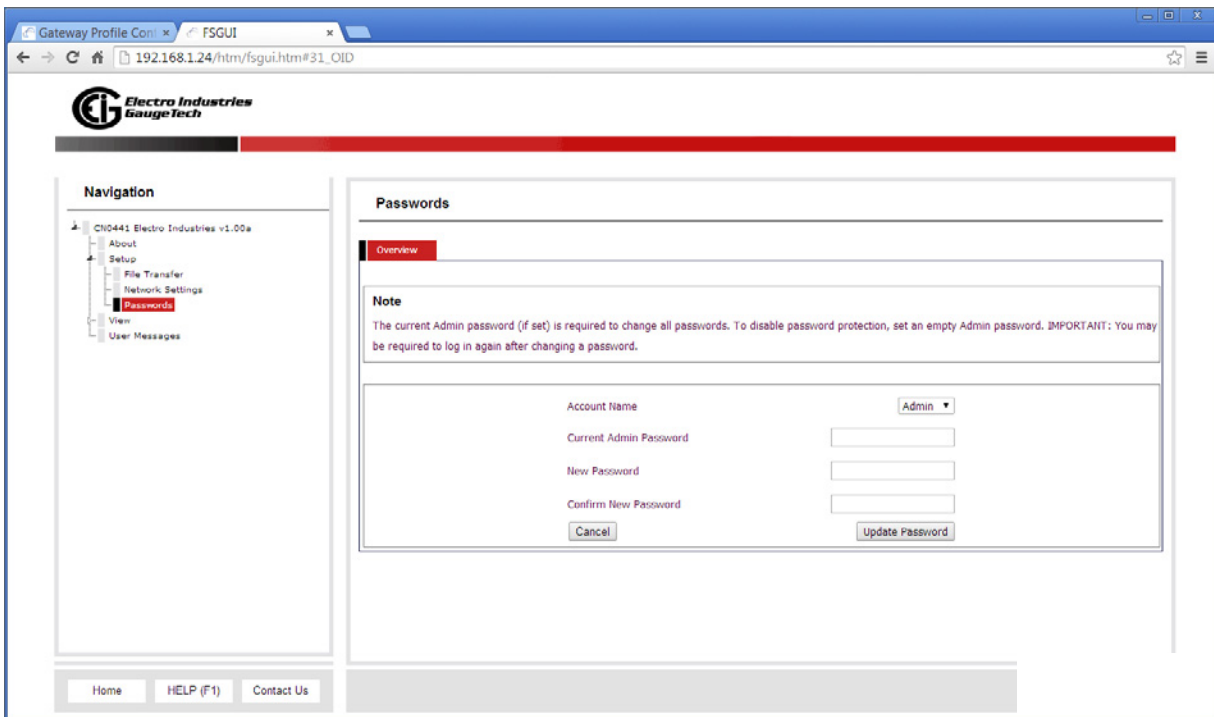
4. From the pull-down menu, select Admin or User to set the password for that account.

5. Enter the current password (if there is one) and the new password in both the New Password and Confirm New Password fields. The password must be a minimum of eight characters; it is case sensitive. Be sure to write down the password and store it in a safe place.

6. Click Update Password to save your changes.

7. Repeat the process for the other account, if desired.

8. You can close the browser window.

NOTE: You can disable an active password by leaving the New Password and Confirm New Password fields blank and then clicking the Update Password button.

2.10.3: Configure the ProtoCom-Lon

Following are instructions specific to the ProtoCom-Lon configuration.

Commission the ProtoCom-Lon on a LonWorks Network

Commissioning can only be performed by the LonWorks administrator. The user will be prompted by the LonWorks Administrator to activate the Service Pin on the Proto-Com-Lon at the correct step of the commissioning process, which varies for each LonWorks Network Management Tool.

Figure 2.12: Location of ProtoCom-Lon Service Pin Instructions

Upload an XIF File from the ProtoCom-Lon Using the Using the Web GUI
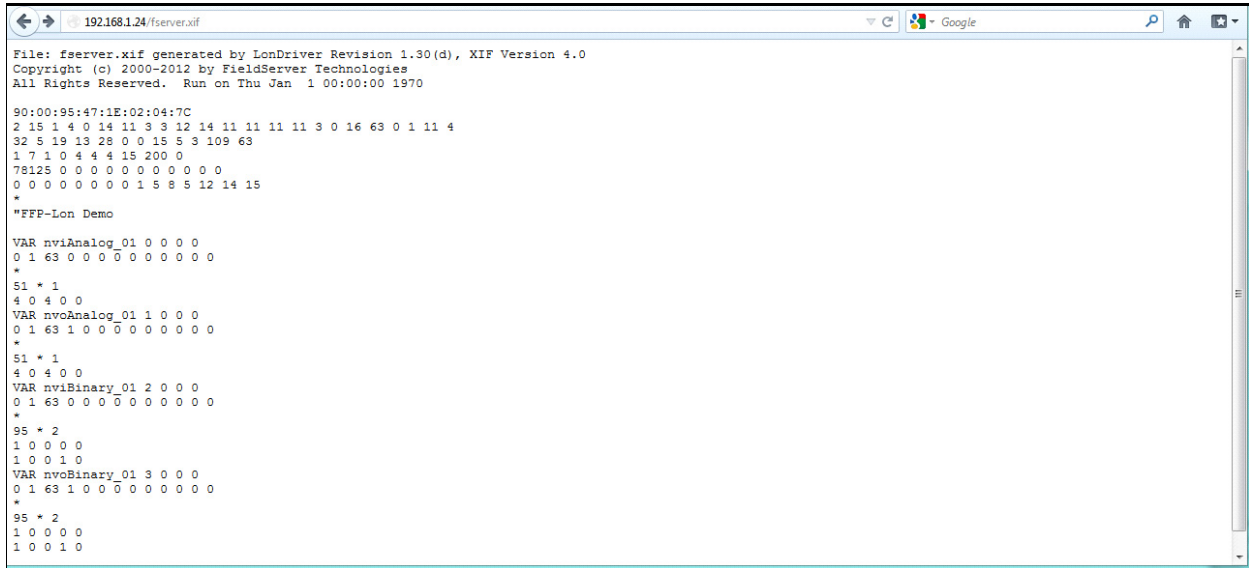
You may need an XIF file. If so, first follow the instructions in Section 1.9 to connect to the ProtoCom-Lon via its Ethernet port.

Open a web browser and go to the following address:
IP address of ProtoCessor/fserver.xif

For example: 192.168.1.24/fserver.xif

If the web browser prompts you to save the file, save it to the PC. If the web browser displays the xif file as a web page (see the example shown below), right-click in the page and save the file to your PC as fserver.xif.

2.11: Step 11 - Use the CAS BACnet Explorer to Validate the ProtoCom in the Field (BACnet MS/TP or BACnet/IP)

When you purchase a ProtoCom from EIG, you receive a complementary 2 week, fully functional copy of CAS BACnet Explorer (through Chipkin Automation) that can be used to validate BACnet MS/TP and/or BACnet/IP communications in the field without having to have the BMS Integrator on site.

NOTE: To test BACnet MS/TP you will need a Serial to RS485 or a USB to RS485 converter.

Download the CAS Explorer and Request an Activation Key

To request the complementary BACnet CAS key:

1. Go to http://app.chipkin.com/activation/twoweek/.

2. Fill in all the information and enter "Electro2013" in the Vendor Code field.

3. The key will be sent to the email address you entered.

4. Once you receive the email with the activation key, go to http://www.chipkin.com/ technical-resources/cas-bacnet-explorer/.

5.. Scroll down until you see the Download icon.

6. Click Executable (dmb) and run the file. A Setup Wizard will step you through downloading the CAS Bacnet Explorer application.

7. Follow the prompts. When you finish installation a window will prompt you to enter a license.

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8. When you click OK, you will see the screen below.
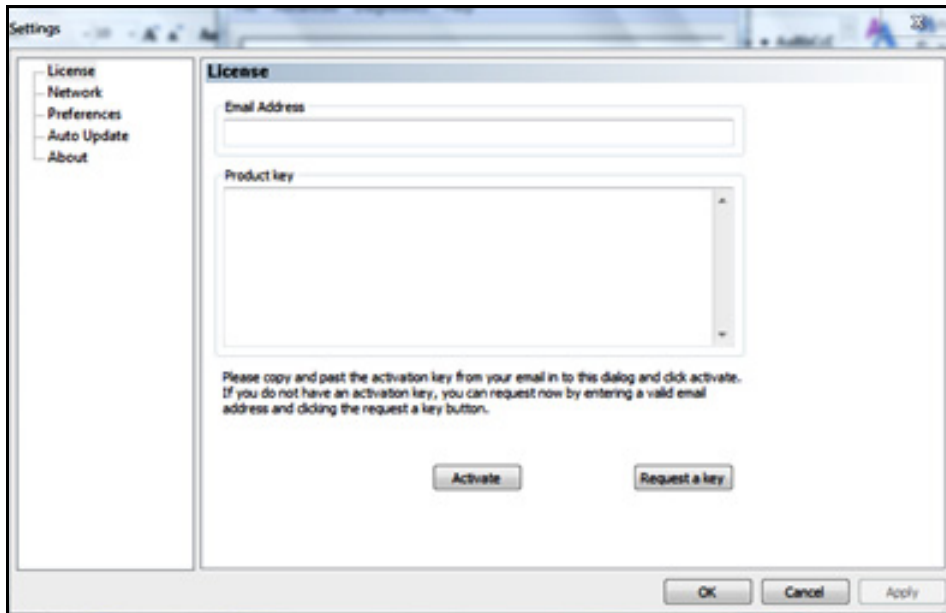
9. Enter your email address and paste the activation key that was sent to your email.

10. Click the Activate button to begin your two week free trial.

2.11.1: CAS BACnet Setup

Following is an example of how to configure the ProtoCom with a BACnet Explorer. The one shown here was developed by Chipkin Automation Systems. It is subject to all of their licenses and restrictions. Please read and follow their license requirements before using.

These are the instructions to set up CAS BACnet Explorer for the first time on BACnet MS/ST and BACnet/IP.

CAS BACnet MS/TP Setup

1. Using the Serial to RS485 or USB to RS485 converter, connect it to your PC and the 3 Pin BACnet MS/TP connector on the ProtoCom (the FIELD connector).

2. Open the CAS BACnet Explorer application to display the main screen.

3. Click on Settings.
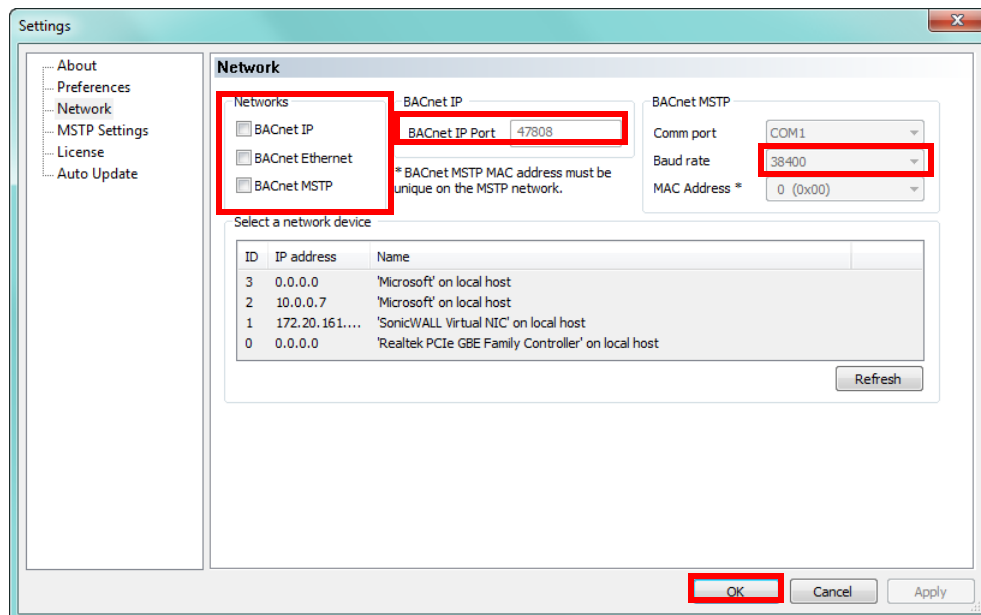
4. In the Networks section, check the BACnet MSTP box and uncheck the BACnet/IP and BACnet Ethernet boxes.

5. Set the BACnet MSTP MAC address to 0.

6. Set the BACnet MSTP Baud Rate to 38400.

7. Click OK.
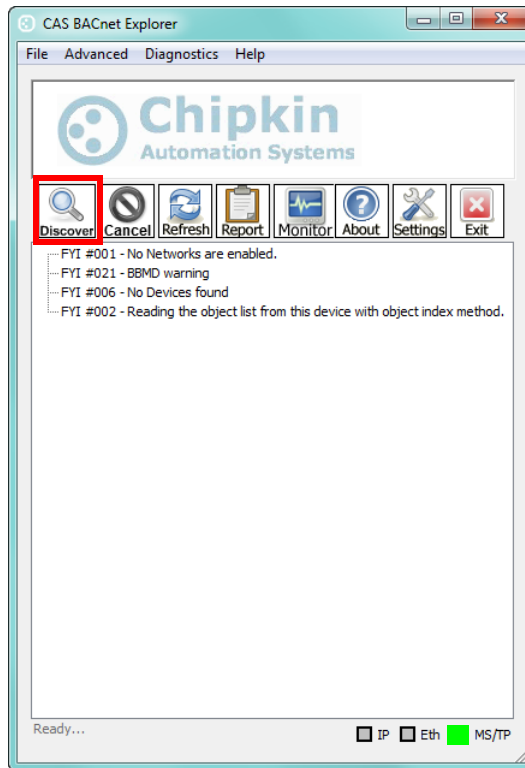
3. In the bottom right-hand corner of the main screen, make sure that the BACnet MSTP box is green.

4. Click on Discover.
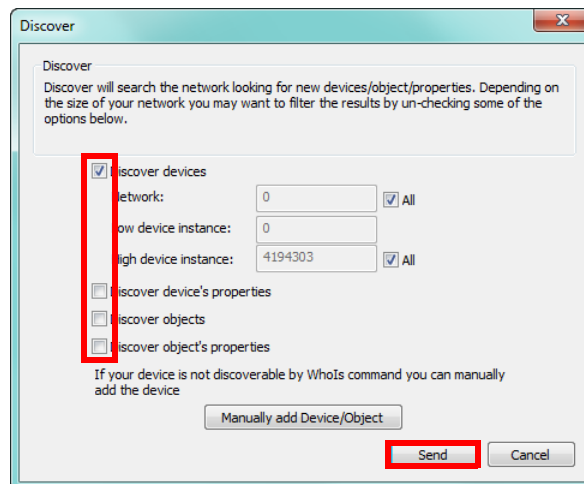
5. Check all 4 boxes.

6. Click Send. The screen will display BACnet network information.

CAS BACnet/IP Setup

1. See Section 1.9 to set the IP address and subnet of the PC that will be running the CAS BACnet Explorer.

2. Connect a straight or crossover Ethernet cable from the PC to the ProtoCom.

3. Open the CAS BACnet Explorer application to display the main screen.

4. Click on Settings.
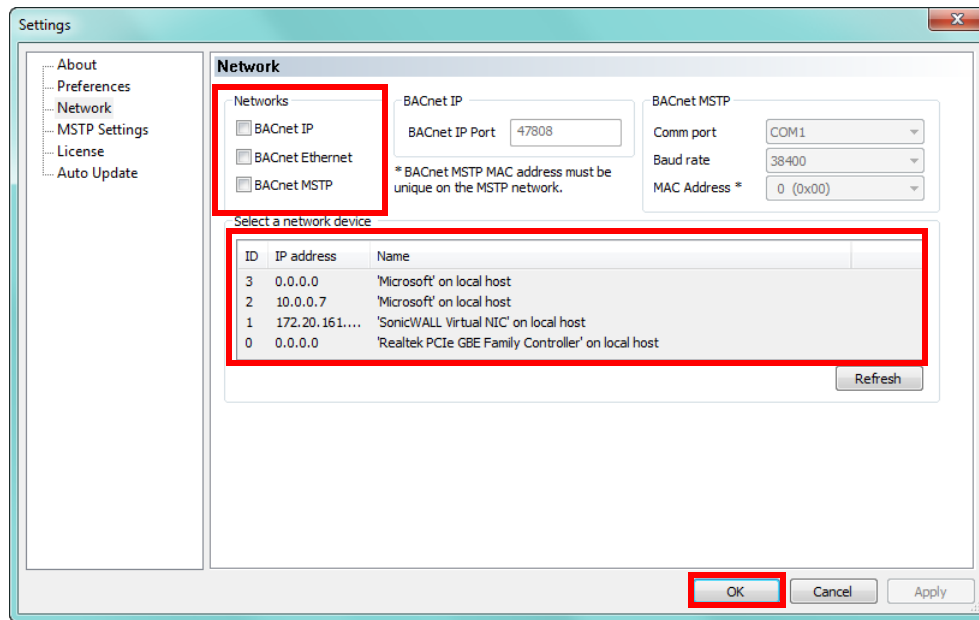
5. In the Networks section, check the BACnet/IP box and uncheck the BACnet MSTP and BACnet Ethernet boxes.

6. In the Select a Network Device box, select the PC's network card by clicking on it.

7. Click OK.
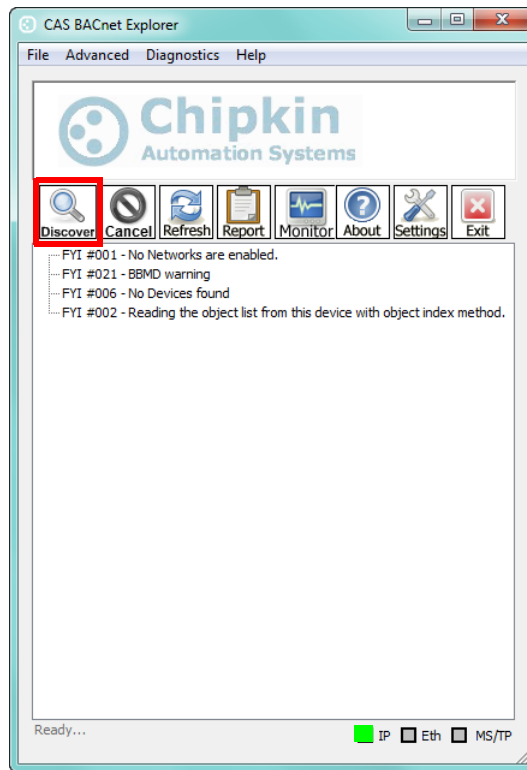
4. In the bottom right-hand corner of the screen, make sure that the BACnet/IP box is green.

5. Click on Discover.
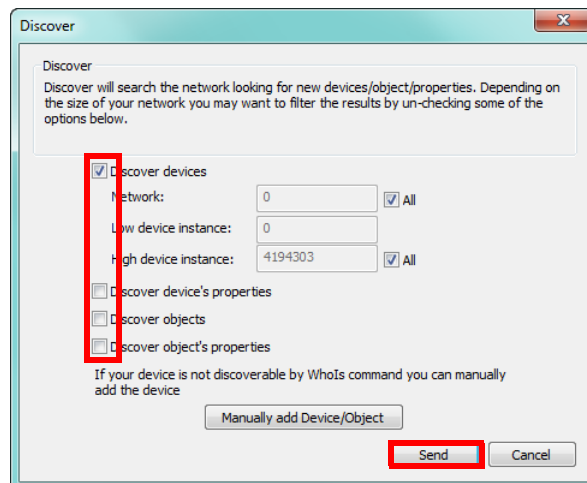
6. Check all 4 boxes.

7. Click Send. The screen will display BACnet network information.

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3: Device Communication

The ProtoCom/ProtoCom-Lon has LEDs that indicate communication between the device and both the EIG meters and other devices it is connected to. The LEDs can be used to diagnose communication problems.

3.1: LED Diagnostics for Modbus RTU Communications Between ProtoCom/ProtoCom-Lon and Devices

The diagram below shows the unit's LED Locations.
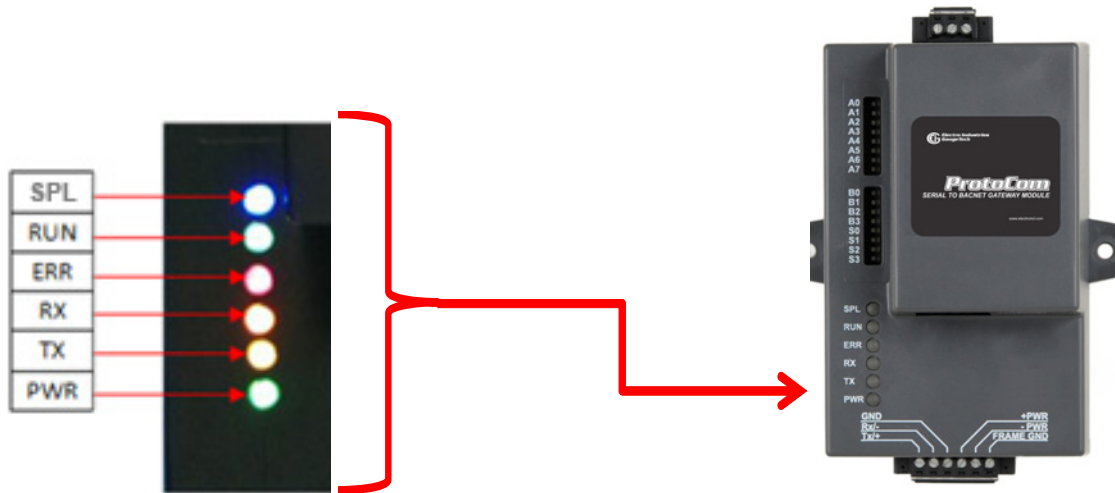
Figure 3.1: ProtoCom/ProtoCom-Lon LEDs

The table below describes the action of the LEDs.

Tag	Description
SPL	The SPL LED is lit if the ProtoCom/ProtoCom-Lon is offline.
RUN	The RUN LED starts flashing 20 seconds after power up, indicating normal operation.
ERR	The SYS ERR LED will be solidly lit 15 seconds after power up, and will turn off after 5 seconds. A steady red light after that time indicates there is a system error on the ProtoCom/ProtoCom-Lon. If this occurs, check the Web GUI Error screen and report the "system error" shown in the screen to EIG's Technical Support for analysis.
RX	The RX LED flashes when a message is received on the Host port.
TX	The TX LED flashes when a message is sent on the Host port.
PWR	This is the power light that should show steady green at all times when the ProtoCom/ProtoCom-Lon is powered on.

3.2: Communication Problems

Communication problems can be either from the side of the meter communication with the ProtoCom/ProtoCom-Lon or the ProtoCom/ProtoCom-Lon's communication with the field device.

3.2.1: No Communication on Modbus RTU (Meter) Side

If the TX/RX LEDs are not flashing rapidly, there is a communication problem on the Modbus (Meter) side. Check the following items:

• The action of the ProtoCom/ProtoCom-Lon LEDs - see the table on page 3-1

• That the baud rate, parity, data bits, and stop bits are set correctly

• That the Modbus device address is correct

• That the wiring is correct - see chapters 1 and 2

• That all of the Modbus RTU devices were discovered in the Web Configurator (see Section 2.10.1)

3.2.2: Field Communication Problems

To diagnose field communication problems, check the following items:

• The action of the ProtoCom/ProtoCom-Lon LEDs - see the table on page 3-1

• That the DIP switch settings for baud rate and device instance are correct - see sections 2.4 and 2.5

• That the IP address setting is correct

• That the wiring is correct - see chapters 1 and 2

A: Protocol Data Points for EIG Meters

Lists of the protocol data points for the supported EIG meters begins on the next page.

A.1: Shark® 100 Meter

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
Volts A-N	AI	1	AI	1	Flt_XXX[0]	F10:0	nvoVoltsAN_XXX	SNVT_count_inc_f
Volts B-N	AI	2	AI	2	Flt_XXX[1]	F10:1	nvoVoltsBN_XXX	SNVT_count_inc_f
Volts C-N	AI	3	AI	3	Flt_XXX[2]	F10:2	nvoVoltsCN_XXX	SNVT_count_inc_f
Volts A-B	AI	4	AI	4	Flt_XXX[3]	F10:3	nvoVoltsAB_XXX	SNVT_count_inc_f
Volts B-C	AI	5	AI	5	Flt_XXX[4]	F10:4	nvoVoltsBC_XXX	SNVT_count_inc_f
Volts C-A	AI	6	AI	6	Flt_XXX[5]	F10:5	nvoVoltsCA_XXX	SNVT_count_inc_f
Amps A	AI	7	AI	7	Flt_XXX[6]	F10:6	nvoAmpsA_XXX	SNVT_count_inc_f
Amps B	AI	8	AI	8	Flt_XXX[7]	F10:7	nvoAmpsB_XXX	SNVT_count_inc_f
Amps C	AI	9	AI	9	Flt_XXX[8]	F10:8	nvoAmpsC_XXX	SNVT_count_inc_f
Watts 3-Ph total	AI	10	AI	10	Flt_XXX[9]	F10:9	nvoWatt3PhTo_XXX	SNVT_count_inc_f
VARs 3-Ph total	AI	11	AI	11	Flt_XXX[10]	F10:10	nvoVAR3PhTot_XXX	SNVT_count_inc_f
VAs 3-Ph total	AI	12	AI	12	Flt_XXX[11]	F10:11	nvoVA3PhTot_XXX	SNVT_count_inc_f
Power Factor 3-Ph total	AI	13	AI	13	Flt_XXX[12]	F10:12	nvoPF3PhTot_XXX	SNVT_count_inc_f
Frequency	AI	14	AI	14	Flt_XXX[13]	F10:13	nvoFreq_XXX	SNVT_count_inc_f
Neutral Current	AI	15	AI	15	Flt_XXX[14]	F10:14	nvoNeutCurr_XXX	SNVT_count_inc_f
W-hours Received	AI	16	AI	16	S32_XXX[0]	F11:0	nvoWh_Rec_XXX	SNVT_count_inc_f
W-hours Delivered	AI	17	AI	17	S32_XXX[1]	F11:1	nvoWh_Del_XXX	SNVT_count_inc_f
W-hours Net	AI	18	AI	18	S32_XXX[2]	F11:2	nvoWh_Net_XXX	SNVT_count_inc_f
W-hours Total	AI	19	AI	19	S32_XXX[3]	F11:3	nvoWh_Tot_XXX	SNVT_count_inc_f
VAR-hours Positive	AI	20	AI	20	S32_XXX[4]	F11:4	nvoVARh_Pos_XXX	SNVT_count_inc_f
VAR-hours Negative	AI	21	AI	21	S32_XXX[5]	F11:5	nvoVARh_Neg_XXX	SNVT_count_inc_f
VAR-hours Net	AI	22	AI	22	S32_XXX[6]	F11:6	nvoVARh_Net_XXX	SNVT_count_inc_f
VAR-hours Total	AI	23	AI	23	S32_XXX[7]	F11:7	nvoVARh_Tot_XXX	SNVT_count_inc_f
VA-hours Total	AI	24	AI	24	S32_XXX[8]	F11:8	nvoVAh_Tot_XXX	SNVT_count_inc_f
Positive Watts 3-Ph Avg	AI	25	AI	25	Flt_XXX[15]	F10:15	nvoPsWt3PhAv_XXX	SNVT_count_inc_f
Positive VARs 3-Ph Avg	AI	26	AI	26	Flt_XXX[16]	F10:16	nvoPsVAR3PhA_XXX	SNVT_count_inc_f
Negative Watts 3-Ph Avg	AI	27	AI	27	Flt_XXX[17]	F10:17	nvoNgWt3PhAv_XXX	SNVT_count_inc_f
Negative VARs 3-Ph Avg	AI	28	AI	28	Flt_XXX[18]	F10:18	nvoNgVAR3PhA_XXX	SNVT_count_inc_f
VAs 3-Ph Avg	AI	29	AI	29	Flt_XXX[19]	F10:19	nvoVA3Ph_Avg_XXX	SNVT_count_inc_f
Positive PF 3-Ph Avg	AI	30	AI	30	Flt_XXX[20]	F10:20	nvoPsPF3PhAv_XXX	SNVT_count_inc_f
Negative PF 3-PF Avg	AI	31	AI	31	Flt_XXX[21]	F10:21	nvoNgPF3PhAv_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
Positive Watts 3-Ph Max Avg Demand	AI	32	AI	32	Flt_XXX[22]	F10:22	nvoPWt3PMADm_XXX	SNVT_count_inc_f
Positive VARs 3-Ph Max Avg Demand	AI	33	AI	33	Flt_XXX[23]	F10:23	nvoPVAR3PMAD_XXX	SNVT_count_inc_f
Negative Watts 3-Ph Max Avg Demand	AI	34	AI	34	Flt_XXX[24]	F10:24	nvoNWt3PMADm_XXX	SNVT_count_inc_f
Negative VARs 3-Ph Max Avg Demand	AI	35	AI	35	Flt_XXX[25]	F10:25	nvoNVAR3PMAD_XXX	SNVT_count_inc_f
Volts A-N %THD	AI	36	AI	36	Dev_XXX[0]	N12:0	nvoVltAN_THD_XXX	SNVT_lev_percent
Volts B-N %THD	AI	37	AI	37	Dev_XXX[1]	N12:1	nvoVltBN_THD_XXX	SNVT_lev_percent
Volts C-N %THD	AI	38	AI	38	Dev_XXX[2]	N12:2	nvoVltCN_THD_XXX	SNVT_lev_percent
Amps A %THD	AI	39	AI	39	Dev_XXX[3]	N12:3	nvoAmpA_THD_XXX	SNVT_lev_percent
Amps B %THD	AI	40	AI	40	Dev_XXX[4]	N12:4	nvoAmpB_THD_XXX	SNVT_lev_percent
Amps C %THD	AI	41	AI	41	Dev_XXX[5]	N12:5	nvoAmpC_THD_XXX	SNVT_lev_percent
Meter Status	AI	42	AI	42	Byt_XXX[0]	N13:0	nvoMtrStat_XXX	SNVT_count
CT multiplier	AI	43	AI	43	Byt_XXX[1]	N13:1	nvoCT_mult_XXX	SNVT_count
CT denominator	AI	44	AI	44	Byt_XXX[2]	N13:2	nvoCT_den_XXX	SNVT_count
CT numerator	AI	45	AI	45	Dev_XXX[8]	N12:8	nvoCT_num_XXX	SNVT_count
PT numerator	AI	46	AI	46	Dev_XXX[9]	N12:9	nvoPT_num_XXX	SNVT_count
PT denominator	AI	47	AI	47	Dev_XXX[10]	N12:10	nvoPT_den_XXX	SNVT_count
PT hookup	AI	48	AI	48	Byt_XXX[3]	N13:3	nvoPT_hookup_XXX	SNVT_count
PT multiplier	AI	49	AI	49	Byt_XXX[4]	N13:4	nvoPT_mult_XXX	SNVT_count
Serial Number Reg 1	AI	50	AI	50	Dev_XXX[12]	N12:12	nvoSerNum1_XXX	SNVT_count
Serial Number Reg 2	AI	51	AI	51	Dev_XXX[13]	N12:13	nvoSerNum2_XXX	SNVT_count
Serial Number Reg 3	AI	52	AI	52	Dev_XXX[14]	N12:14	nvoSerNum3_XXX	SNVT_count
Serial Number Reg 4	AI	53	AI	53	Dev_XXX[15]	N12:15	nvoSerNum4_XXX	SNVT_count
Serial Number Reg 5	AI	54	AI	54	Dev_XXX[16]	N12:16	nvoSerNum5_XXX	SNVT_count
Serial Number Reg 6	AI	55	AI	55	Dev_XXX[17]	N12:17	nvoSerNum6_XXX	SNVT_count
Serial Number Reg 7	AI	56	AI	56	Dev_XXX[18]	N12:18	nvoSerNum7_XXX	SNVT_count
Serial Number Reg 8	AI	57	AI	57	Dev_XXX[19]	N12:19	nvoSerNum8_XXX	SNVT_count
Password for Reset in use	BI	58	DI	58	Byt_XXX[5]	N13:5	nvoPswdReset_XXX	SNVT_count
Password for Configuration in use	BI	59	DI	59	Byt_XXX[6]	N13:6	nvoPswdCnfg_XXX	SNVT_count

A.2: Shark® 200 Meter

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
Volts A-N	AI	1	AI	1	Flt_XXX[0]	F10:0	nvoVolts_AN_XXX	SNVT_count_inc_f
Volts B-N	AI	2	AI	2	Flt_XXX[1]	F10:1	nvoVolts_BN_XXX	SNVT_count_inc_f
Volts C-N	AI	3	AI	3	Flt_XXX[2]	F10:2	nvoVolts_CN_XXX	SNVT_count_inc_f
Volts A-B	AI	4	AI	4	Flt_XXX[3]	F10:3	nvoVolts_AB_XXX	SNVT_count_inc_f
Volts B-C	AI	5	AI	5	Flt_XXX[4]	F10:4	nvoVolts_BC_XXX	SNVT_count_inc_f
Volts C-A	AI	6	AI	6	Flt_XXX[5]	F10:5	nvoVolts_CA_XXX	SNVT_count_inc_f
Amps A	AI	7	AI	7	Flt_XXX[6]	F10:6	nvoAmps_A_XXX	SNVT_count_inc_f
Amps B	AI	8	AI	8	Flt_XXX[7]	F10:7	nvoAmps_B_XXX	SNVT_count_inc_f
Amps C	AI	9	AI	9	Flt_XXX[8]	F10:8	nvoAmps_C_XXX	SNVT_count_inc_f
Watts 3-Ph total	AI	10	AI	10	Flt_XXX[9]	F10:9	nvoWatt3PhTo_XXX	SNVT_count_inc_f
VARs 3-Ph total	AI	11	AI	11	Flt_XXX[10]	F10:10	nvoVAR3PhTot_XXX	SNVT_count_inc_f
VAs 3-Ph total	AI	12	AI	12	Flt_XXX[11]	F10:11	nvoVA_3PhTot_XXX	SNVT_count_inc_f
Power Factor 3-Ph total	AI	13	AI	13	Flt_XXX[12]	F10:12	nvoPF_3PhTot_XXX	SNVT_count_inc_f
Frequency	AI	14	AI	14	Flt_XXX[13]	F10:13	nvoFreq_XXX	SNVT_count_inc_f
Neutral Current	AI	15	AI	15	Flt_XXX[14]	F10:14	nvoNeut_Crnt_XXX	SNVT_count_inc_f
Watts Phase A	AI	16	AI	16	Flt_XXX[15]	F10:15	nvoWatts_PhA_XXX	SNVT_count_inc_f
Watts Phase B	AI	17	AI	17	Flt_XXX[16]	F10:16	nvoWatts_PhB_XXX	SNVT_count_inc_f
Watts Phase C	AI	18	AI	18	Flt_XXX[17]	F10:17	nvoWatts_PhC_XXX	SNVT_count_inc_f
VARs Phase A	AI	19	AI	19	Flt_XXX[18]	F10:18	nvoVARs_PhA_XXX	SNVT_count_inc_f
VARs Phase B	AI	20	AI	20	Flt_XXX[19]	F10:19	nvoVARs_PhB_XXX	SNVT_count_inc_f
VARs Phase C	AI	21	AI	21	Flt_XXX[20]	F10:20	nvoVARs_PhC_XXX	SNVT_count_inc_f
VAs Phase A	AI	22	AI	22	Flt_XXX[21]	F10:21	nvoVAs_PhA_XXX	SNVT_count_inc_f
VAs Phase B	AI	23	AI	23	Flt_XXX[22]	F10:22	nvoVAs_PhB_XXX	SNVT_count_inc_f
VAs Phase C	AI	24	AI	24	Flt_XXX[23]	F10:23	nvoVAs_PhC_XXX	SNVT_count_inc_f
Power Factor Phase A	AI	25	AI	25	Flt_XXX[24]	F10:24	nvoPF_PhA_XXX	SNVT_count_inc_f
Power Factor Phase B	AI	26	AI	26	Flt_XXX[25]	F10:25	nvoPF_PhB_XXX	SNVT_count_inc_f
Power Factor Phase C	AI	27	AI	27	Flt_XXX[26]	F10:26	nvoPF_PhC_XXX	SNVT_count_inc_f
W-hours Received	AI	28	AI	28	S32_XXX[0]	F11:0	nvoWh_Rec_XXX	SNVT_count_inc_f
W-hours Delivered	AI	29	AI	29	S32_XXX[1]	F11:1	nvoWh_Del_XXX	SNVT_count_inc_f
W-hours Net	AI	30	AI	30	S32_XXX[2]	F11:2	nvoWh_Net_XXX	SNVT_count_inc_f
W-hours Total	AI	31	AI	31	S32_XXX[3]	F11:3	nvoWh_Tot_XXX	SNVT_count_inc_f
VAR-hours Positive	AI	32	AI	32	S32_XXX[4]	F11:4	nvoVARh_Pos_XXX	SNVT_count_inc_f
VAR-hours Negative	AI	33	AI	33	S32_XXX[5]	F11:5	nvoVARh_Neg_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
VAR-hours Net	AI	34	AI	34	S32_XXX[6]	F11:6	nvoVARh_Net_XXX	SNVT_count_inc_f
VAR-hours Total	AI	35	AI	35	S32_XXX[7]	F11:7	nvoVARh_Tot_XXX	SNVT_count_inc_f
Amps A Avg	AI	36	AI	36	Flt_XXX[27]	F10:27	nvoAmpA_Avg_XXX	SNVT_count_inc_f
Amps B Avg	AI	37	AI	37	Flt_XXX[28]	F10:28	nvoAmpB_Avg_XXX	SNVT_count_inc_f
Amps C Avg	AI	38	AI	38	Flt_XXX[29]	F10:29	nvoAmpC_Avg_XXX	SNVT_count_inc_f
Positive Watts 3-Ph Avg	AI	39	AI	39	Flt_XXX[30]	F10:30	nvoPsWat3PAv_XXX	SNVT_count_inc_f
Positive VARs 3-Ph Avg	AI	40	AI	40	Flt_XXX[31]	F10:31	nvoPsVAR3PAv_XXX	SNVT_count_inc_f
Negative Watts 3-Ph Avg	AI	41	AI	41	Flt_XXX[32]	F10:32	nvoNgWat3PAv_XXX	SNVT_count_inc_f
Negative VARs 3-Ph Avg	AI	42	AI	42	Flt_XXX[33]	F10:33	nvoNgVAR3PAv_XXX	SNVT_count_inc_f
VAs 3-Ph Avg	AI	43	AI	43	Flt_XXX[34]	F10:34	nvoVA_3PhAvg_XXX	SNVT_count_inc_f
Positive PF 3-Ph Avg	AI	44	AI	44	Flt_XXX[35]	F10:35	nvoPsPF3PhAv_XXX	SNVT_count_inc_f
Negative PF 3-PF Avg	AI	45	AI	45	Flt_XXX[36]	F10:36	nvoNgPF3PhAv_XXX	SNVT_count_inc_f
VA-hours Total	AI	46	AI	46	S32_XXX[8]	F11:8	nvoVAh_Tot_XXX	SNVT_count_inc_f
Meter Status	AI	47	AI	47	Byt_XXX[0]	N14:0	nvoMtr_Stat_XXX	SNVT_count
Current Date & Time Reg 1	AI	48	AI	48	Dev1_XXX[0]	N12:0	nvoCurDatTm1_XXX	SNVT_count
Current Date & Time Reg 2	AI	49	AI	49	Dev1_XXX[1]	N12:1	nvoCurDatTm2_XXX	SNVT_count
Current Date & Time Reg 3	AI	50	AI	50	Dev1_XXX[2]	N12:2	nvoCurDatTm3_XXX	SNVT_count
Positive Watts 3-Ph Max Avg Demand	AI	51	AI	51	Flt_XXX[37]	F10:37	nvoPWt3PMADm_XXX	SNVT_count_inc_f
Positive VARs 3-Ph Max Avg Demand	AI	52	AI	52	Flt_XXX[38]	F10:38	nvoPVr3PMADm_XXX	SNVT_count_inc_f
Negative Watts 3-Ph Max Avg Demand	AI	53	AI	53	Flt_XXX[39]	F10:39	nvoNWt3PMADm_XXX	SNVT_count_inc_f
Negative VARs 3-Ph Max Avg Demand	AI	54	AI	54	Flt_XXX[40]	F10:40	nvoNVr3PMADm_XXX	SNVT_count_inc_f
CT multiplier	AI	55	AI	55	Byt_XXX[1]	N14:1	nvoCT_mult_XXX	SNVT_count
CT denominator	AI	56	AI	56	Byt_XXX[2]	N14:2	nvoCT_den_XXX	SNVT_count
CT numerator	AI	57	AI	57	Dev2_XXX[0]	N13:0	nvoCT_num_XXX	SNVT_count
PT numerator	AI	58	AI	58	Dev2_XXX[1]	N13:1	nvoPT_num_XXX	SNVT_count
PT denominator	AI	59	AI	59	Dev2_XXX[2]	N13:2	nvoPT_den_XXX	SNVT_count
PT hookup	AI	60	AI	60	Byt_XXX[3]	N14:3	nvoPT_hookup_XXX	SNVT_count
PT multiplier	AI	61	AI	61	Byt_XXX[4]	N14:4	nvoPT_mult_XXX	SNVT_count
Serial Number Reg 1	AI	62	AI	62	Dev2_XXX[4]	N13:4	nvoSerNum1_XXX	SNVT_count
Serial Number Reg 2	AI	63	AI	63	Dev2_XXX[5]	N13:5	nvoSerNum2_XXX	SNVT_count
Serial Number Reg 3	AI	64	AI	64	Dev2_XXX[6]	N13:6	nvoSerNum3_XXX	SNVT_count
Serial Number Reg 4	AI	65	AI	65	Dev2_XXX[7]	N13:7	nvoSerNum4_XXX	SNVT_count
Serial Number Reg 5	AI	66	AI	66	Dev2_XXX[8]	N13:8	nvoSerNum5_XXX	SNVT_count
Serial Number Reg 6	AI	67	AI	67	Dev2_XXX[9]	N13:9	nvoSerNum6_XXX	SNVT_count

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
Serial Number Reg 7	AI	68	AI	68	Dev2_XXX[10]	N13:10	nvoSerNum7_XXX	SNVT_count
Serial Number Reg 8	AI	69	AI	69	Dev2_XXX[11]	N13:11	nvoSerNum8_XXX	SNVT_count
Password for Reset in use	BI	70	DI	70	Byt_XXX[5]	N14:5	nvoPswdReset_XXX	SNVT_count
Password for Configuration in use	BI	71	DI	71	Byt_XXX[6]	N14:6	nvoPswdCnfg_XXX	SNVT_count

A.3: Nexus® 1252/1262/1272 Meters

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
Current Time Reg 1	AI	1	AI	1	Dev1_XXX[0]	N12:0	nvoCurTime1_XXX	SNVT_count
Current Time Reg 2	AI	2	AI	2	Dev1_XXX[1]	N12:1	nvoCurTime2_XXX	SNVT_count
Current Time Reg 3	AI	3	AI	3	Dev1_XXX[2]	N12:2	nvoCurTime3_XXX	SNVT_count
Current Time Reg 4	AI	4	AI	4	Dev1_XXX[3]	N12:3	nvoCurTime4_XXX	SNVT_count
One sec Phase A-N Voltage	AI	5	AI	5	S32_XXX[0]	F10:0	nvoPhAN_Volt_XXX	SNVT_count_inc_f
One sec Phase B-N Voltage	AI	6	AI	6	S32_XXX[1]	F10:1	nvoPhBN_Volt_XXX	SNVT_count_inc_f
One sec Phase C-N Voltage	AI	7	AI	7	S32_XXX[2]	F10:2	nvoPhCN_Volt_XXX	SNVT_count_inc_f
One sec Phase A Current	AI	8	AI	8	S32_XXX[3]	F10:3	nvoPhA_Curr_XXX	SNVT_count_inc_f
One sec Phase B Current	AI	9	AI	9	S32_XXX[4]	F10:4	nvoPhB_Curr_XXX	SNVT_count_inc_f
One sec Phase C Current	AI	10	AI	10	S32_XXX[5]	F10:5	nvoPhC_Curr_XXX	SNVT_count_inc_f
One sec Neutral Current Measured	AI	11	AI	11	S32_XXX[6]	F10:6	nvoNtCurMeas_XXX	SNVT_count_inc_f
One sec Neutral Current Calculated	AI	12	AI	12	S32_XXX[7]	F10:7	nvoNtCurMalc_XXX	SNVT_count_inc_f
One sec Phase A-B Voltage	AI	13	AI	13	S32_XXX[8]	F10:8	nvoPhAB_Volt_XXX	SNVT_count_inc_f
One sec Phase B-C Voltage	AI	14	AI	14	S32_XXX[9]	F10:9	nvoPhBC_Volt_XXX	SNVT_count_inc_f
One sec Phase C-A Voltage	AI	15	AI	15	S32_XXX[10]	F10:10	nvoPhCA_Volt_XXX	SNVT_count_inc_f
One sec Three Phase VA	AI	16	AI	16	S32_XXX[11]	F10:11	nvo3PhVA_XXX	SNVT_count_inc_f
One sec Three Phase VAR	AI	17	AI	17	S32_XXX[12]	F10:12	nvo3PhVAR_XXX	SNVT_count_inc_f
One sec Watts	AI	18	AI	18	S32_XXX[13]	F10:13	nvoWatts_XXX	SNVT_count_inc_f
One sec Frequency	AI	19	AI	19	S32_XXX[14]	F10:14	nvo1Freq_XXX	SNVT_count_inc_f
One sec Three Phase PF	AI	20	AI	20	Dev2_XXX[0]	N13:0	nvo3PhPF_XXX	SNVT_count_inc_f
Phase A-N Voltage THD	AI	21	AI	21	Dev2_XXX[1]	N13:1	nvoVoltANTHD_XXX	SNVT_count_inc_f
Phase B-N Voltage THD	AI	22	AI	22	Dev2_XXX[2]	N13:2	nvoVoltBNTHD_XXX	SNVT_count_inc_f
Phase C-N Voltage THD	AI	23	AI	23	Dev2_XXX[3]	N13:3	nvoVoltCNTHD_XXX	SNVT_count_inc_f
Phase A Current THD	AI	24	AI	24	Dev2_XXX[4]	N13:4	nvoCurrATHD_XXX	SNVT_count_inc_f
Phase B Current THD	AI	25	AI	25	Dev2_XXX[5]	N13:5	nvoCurrBTHD_XXX	SNVT_count_inc_f
Phase C Current THD	AI	26	AI	26	Dev2_XXX[6]	N13:6	nvoCurrCTHD_XXX	SNVT_count_inc_f
Block Window Avg VA	AI	27	AI	27	S32_XXX[15]	F10:15	nvoBlWdAvVA_XXX	SNVT_count_inc_f
Block Window Avg VAR	AI	28	AI	28	S32_XXX[16]	F10:16	nvoBlWdAvVAR_XXX	SNVT_count_inc_f
Block Window Avg Watt	AI	29	AI	29	S32_XXX[17]	F10:17	nvoBlWdAvWat_XXX	SNVT_count_inc_f
Max Block Window Avg Pos VA	AI	30	AI	30	S32_XXX[18]	F10:18	nvoMBlWdAvVA_XXX	SNVT_count_inc_f
Max Block Window Avg Pos VAR	AI	31	AI	31	S32_XXX[19]	F10:19	nvoMBWAvPVAR_XXX	SNVT_count_inc_f
Max Block Window Avg Neg VAR	AI	32	AI	32	S32_XXX[20]	F10:20	nvoMBWAvNVAR_XXX	SNVT_count_inc_f
Max Block Window Avg Pos Watt	AI	33	AI	33	S32_XXX[21]	F10:21	nvoMBWAvPWat_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
Max Block Window Avg Neg Watt	AI	34	AI	34	S32_XXX[22]	F10:22	nvoMBWAvNWat_XXX	SNVT_count_inc_f
Total VAh (Quad 1-4) Scaled Primary	AI	35	AI	35	S32_XXX[23]	F10:23	nvoTVAhQ14SP_XXX	SNVT_count_inc_f
Pos VARh (Quad 1+2) Scaled Primary	AI	36	AI	36	S32_XXX[24]	F10:24	nvoPVARQ12SP_XXX	SNVT_count_inc_f
Neg VARh (Quad 3+4) Scaled Primary	AI	37	AI	37	S32_XXX[25]	F10:25	nvoNVARQ34SP_XXX	SNVT_count_inc_f
Pos Wh (Quad 1+4) Scaled Primary	AI	38	AI	38	S32_XXX[26]	F10:26	nvoPWhQ14ScP_XXX	SNVT_count_inc_f
Neg Wh (Quad 2+3) Scaled Primary	AI	39	AI	39	S32_XXX[27]	F10:27	nvoNWhQ23ScP_XXX	SNVT_count_inc_f
CT Numerator	AI	40	AI	40	S32_XXX[27]	F10:27	nvoCT_num_XXX	SNVT_count
CT Denominator	AI	41	AI	41	S32_XXX[28]	F10:28	nvoCT_den_XXX	SNVT_count
PT Numerator	AI	42	AI	42	S32_XXX[29]	F10:29	nvoPT_num_XXX	SNVT_count
PT Denominator	AI	43	AI	43	S32_XXX[30]	F10:30	nvoPT_den_XXX	SNVT_count
System Hookup	AI	44	AI	44	Dev3_XXX[0]	N14:0	nvoSysHookup_XXX	SNVT_count
Password State	AI	45	AI	45	Dev3_XXX[1]	N14:1	nvoPass_Stat_XXX	SNVT_count
Comm Device Status	AI	46	AI	46	Dev3_XXX[2]	N14:2	nvoComDevSt_XXX	SNVT_count
DSP Device Status	AI	47	AI	47	Dev3_XXX[3]	N14:3	nvoDSPDevSt_XXX	SNVT_count
Serial Number	AI	48	AI	48	U32_XXX[0]	F11:0	nvoSerNum_XXX	SNVT_count_inc_f

A.4: DMMS 425 Meter

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
Inst Volt AN	AI	1	AI	1	S16_XXX[0]	N10:0	nvoVolt_AN_XXX	SNVT_count_inc_f
Inst Volt BN	AI	2	AI	2	S16_XXX[1]	N10:1	nvoVolt_BN_XXX	SNVT_count_inc_f
Inst Volt CN	AI	3	AI	3	S16_XXX[2]	N10:2	nvoVolt_CN_XXX	SNVT_count_inc_f
Inst Volt AB	AI	4	AI	4	S16_XXX[3]	N10:3	nvoVolt_AB_XXX	SNVT_count_inc_f
Inst Volt BC	AI	5	AI	5	S16_XXX[4]	N10:4	nvoVolt_BC_XXX	SNVT_count_inc_f
Inst Volt CA	AI	6	AI	6	S16_XXX[5]	N10:5	nvoVolt_CA_XXX	SNVT_count_inc_f
Inst Amp A	AI	7	AI	7	S16_XXX[6]	N10:6	nvoAmp_A_XXX	SNVT_count_inc_f
Inst Amp B	AI	8	AI	8	S16_XXX[7]	N10:7	nvoAmp_B_XXX	SNVT_count_inc_f
Inst Amp C	AI	9	AI	9	S16_XXX[8]	N10:8	nvoAmp_C_XXX	SNVT_count_inc_f
Inst Watt	AI	10	AI	10	S16_XXX[9]	N10:9	nvoWatt_XXX	SNVT_count_inc_f
Inst Var	AI	11	AI	11	S16_XXX[10]	N10:10	nvoVar_XXX	SNVT_count_inc_f
Inst Va	AI	12	AI	12	S16_XXX[11]	N10:11	nvoVa_XXX	SNVT_count_inc_f
Inst Pf	AI	13	AI	13	S16_XXX[12]	N10:12	nvoPf_XXX	SNVT_count_inc_f
Inst Freq	AI	14	AI	14	S16_XXX[13]	N10:13	nvoFreq_XXX	SNVT_count_inc_f
Max Volt AN	AI	15	AI	15	S16_XXX[14]	N10:14	nvoMaxVoltAN_XXX	SNVT_count_inc_f
Max Volt BN	AI	16	AI	16	S16_XXX[15]	N10:15	nvoMaxVoltBN_XXX	SNVT_count_inc_f
Max Volt CN	AI	17	AI	17	S16_XXX[16]	N10:16	nvoMaxVoltCN_XXX	SNVT_count_inc_f
Max Volt AB	AI	18	AI	18	S16_XXX[17]	N10:17	nvoMaxVoltAB_XXX	SNVT_count_inc_f
Max Volt BC	AI	19	AI	19	S16_XXX[18]	N10:18	nvoMaxVoltBC_XXX	SNVT_count_inc_f
Max Volt CA	AI	20	AI	20	S16_XXX[19]	N10:19	nvoMaxVoltCA_XXX	SNVT_count_inc_f
Max Amp A	AI	21	AI	21	S16_XXX[20]	N10:20	nvoMaxAmp_A_XXX	SNVT_count_inc_f
Max Amp B	AI	22	AI	22	S16_XXX[21]	N10:21	nvoMaxAmp_B_XXX	SNVT_count_inc_f
Max Amp C	AI	23	AI	23	S16_XXX[22]	N10:22	nvoMaxAmp_C_XXX	SNVT_count_inc_f
Max Watt	AI	24	AI	24	S16_XXX[23]	N10:23	nvoMaxWatt_XXX	SNVT_count_inc_f
Max Var	AI	25	AI	25	S16_XXX[24]	N10:24	nvoMaxVar_XXX	SNVT_count_inc_f
Max Va	AI	26	AI	26	S16_XXX[25]	N10:25	nvoMaxVa_XXX	SNVT_count_inc_f
Max Pf	AI	27	AI	27	S16_XXX[26]	N10:26	nvoMaxPf_XXX	SNVT_count_inc_f
Max Freq	AI	28	AI	28	S16_XXX[27]	N10:27	nvoMaxFreq_XXX	SNVT_count_inc_f
Watt Hour Block 1	AI	29	AI	29	Dev_XXX[0]	N11:0	nvoWh_Blk1_XXX	SNVT_count
Watt Hour Block 2	AI	30	AI	30	Dev_XXX[1]	N11:1	nvoWh_Blk2_XXX	SNVT_count
Watt Hour Block 3	AI	31	AI	31	Dev_XXX[2]	N11:2	nvoWh_Blk3_XXX	SNVT_count
Watt Hour Block 4	AI	32	AI	32	Dev_XXX[3]	N11:3	nvoWh_Blk4_XXX	SNVT_count
Watt Hour Block 5	AI	33	AI	33	Dev_XXX[4]	N11:4	nvoWh_Blk5_XXX	SNVT_count

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
Watt Hour Block 6	AI	34	AI	34	Dev_XXX[5]	N11:5	nvoWh_Blk6_XXX	SNVT_count
Watt Hour Block 7	AI	35	AI	35	Dev_XXX[6]	N11:6	nvoWh_Blk7_XXX	SNVT_count
Watt Hour Block 8	AI	36	AI	36	Dev_XXX[7]	N11:7	nvoWh_Blk8_XXX	SNVT_count
Var Hour Block 1	AI	37	AI	37	Dev_XXX[8]	N11:8	nvoVARh_Blk1_XXX	SNVT_count
Var Hour Block 2	AI	38	AI	38	Dev_XXX[9]	N11:9	nvoVARh_Blk2_XXX	SNVT_count
Var Hour Block 3	AI	39	AI	39	Dev_XXX[10]	N11:10	nvoVARh_Blk3_XXX	SNVT_count
Var Hour Block 4	AI	40	AI	40	Dev_XXX[11]	N11:11	nvoVARh_Blk4_XXX	SNVT_count
Var Hour Block 5	AI	41	AI	41	Dev_XXX[12]	N11:12	nvoVARh_Blk5_XXX	SNVT_count
Var Hour Block 6	AI	42	AI	42	Dev_XXX[13]	N11:13	nvoVARh_Blk6_XXX	SNVT_count
Var Hour Block 7	AI	43	AI	43	Dev_XXX[14]	N11:14	nvoVARh_Blk7_XXX	SNVT_count
Var Hour Block 8	AI	44	AI	44	Dev_XXX[15]	N11:15	nvoVARh_Blk8_XXX	SNVT_count
CT Ratio	AI	45	AI	45	Dev_XXX[16]	N11:16	nvoCT_Ratio_XXX	SNVT_count
PT Ratio	AI	46	AI	46	Dev_XXX[17]	N11:17	nvoPT_Ratio_XXX	SNVT_count

A.5: Nexus® 1500 Meter

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
Current Time Reg 1	AI	1	AI	1	Dev1_XXX[0]	N13:0	nvoCurTime1_XXX	SNVT_count
Current Time Reg 2	AI	2	AI	2	Dev1_XXX[1]	N13:1	nvoCurTime2_XXX	SNVT_count
Current Time Reg 3	AI	3	AI	3	Dev1_XXX[2]	N13:2	nvoCurTime3_XXX	SNVT_count
Current Time Reg 4	AI	4	AI	4	Dev1_XXX[3]	N13:3	nvoCurTime4_XXX	SNVT_count
1 sec Ph A-N Voltage	AI	5	AI	5	S32_XXX[0]	F10:0	nvoAN_Volt_XXX	SNVT_count_inc_f
1 sec Ph B-N Voltage	AI	6	AI	6	S32_XXX[1]	F10:1	nvoBN_Volt_XXX	SNVT_count_inc_f
1 sec Ph C-N Voltage	AI	7	AI	7	S32_XXX[2]	F10:2	nvoCN_Volt_XXX	SNVT_count_inc_f
1 sec Vaux Voltage	AI	8	AI	8	S32_XXX[3]	F10:3	nvoVaux_Volt_XXX	SNVT_count_inc_f
1 sec Ph A Current	AI	9	AI	9	S32_XXX[4]	F10:4	nvoA_Crnt_XXX	SNVT_count_inc_f
1 sec Ph B Current	AI	10	AI	10	S32_XXX[5]	F10:5	nvoB_Crnt_XXX	SNVT_count_inc_f
1 sec Ph C Current	AI	11	AI	11	S32_XXX[6]	F10:6	nvoC_Crnt_XXX	SNVT_count_inc_f
1 sec Measured Neutral Current	AI	12	AI	12	S32_XXX[7]	F10:7	nvoMeasNtCrn_XXX	SNVT_count_inc_f
1 sec Calculated Neutral Current	AI	13	AI	13	S32_XXX[8]	F10:8	nvoCalcNtCrn_XXX	SNVT_count_inc_f
1 sec Ph A-B Voltage	AI	14	AI	14	S32_XXX[9]	F10:9	nvoAB_Volt_XXX	SNVT_count_inc_f
1 sec Ph B-C Voltage	AI	15	AI	15	S32_XXX[10]	F10:10	nvoBC_Volt_XXX	SNVT_count_inc_f
1 sec Ph C-A Voltage	AI	16	AI	16	S32_XXX[11]	F10:11	nvoCA_Volt_XXX	SNVT_count_inc_f
1 sec VA	AI	17	AI	17	S32_XXX[12]	F10:12	nvoVA_XXX	SNVT_count_inc_f
1 sec Three VAR	AI	18	AI	18	S32_XXX[13]	F10:13	nvo3_VAR_XXX	SNVT_count_inc_f
1 sec Watts	AI	19	AI	19	S32_XXX[14]	F10:14	nvoWatts_XXX	SNVT_count_inc_f
1 sec Frequency	AI	20	AI	20	S32_XXX[15]	F10:15	nvoFreq_XXX	SNVT_count_inc_f
1 sec Three Ph Power Factor	AI	21	AI	21	Dev2_XXX[0]	N14:0	nvo3_PF_XXX	SNVT_count_inc_f
Ph A-N / Ph A-B Voltage THD	AI	22	AI	22	S16_XXX[0]	N11:0	nvoANABVlTHD_XXX	SNVT_count_inc_f
Ph B-N / Ph B-C Voltage THD	AI	23	AI	23	S16_XXX[1]	N11:1	nvoBNBCVlTHD_XXX	SNVT_count_inc_f
Ph C-N / Ph C-A Voltage THD	AI	24	AI	24	S16_XXX[2]	N11:2	nvoCNCAVlTHD_XXX	SNVT_count_inc_f
Ph A Current THD	AI	25	AI	25	S16_XXX[3]	N11:3	nvoA_CurTHD_XXX	SNVT_count_inc_f
Ph B Current THD	AI	26	AI	26	S16_XXX[4]	N11:4	nvoB_CurTHD_XXX	SNVT_count_inc_f
Ph C Current THD	AI	27	AI	27	S16_XXX[5]	N11:5	nvoC_CurTHD_XXX	SNVT_count_inc_f
Blk Window Avg VA	AI	28	AI	28	S32_XXX[16]	F10:16	nvoBlWndAvVA_XXX	SNVT_count_inc_f
Blk Window Avg VAR	AI	29	AI	29	S32_XXX[17]	F10:17	nvoBlWndAVAR_XXX	SNVT_count_inc_f
Blk Window Avg Watt	AI	30	AI	30	S32_XXX[18]	F10:18	nvoBlWndAvWt_XXX	SNVT_count_inc_f
Max Blk Window Avg VA	AI	31	AI	31	S32_XXX[19]	F10:19	nvoMxBlWdAVA_XXX	SNVT_count_inc_f
Max Blk Window Avg Pos VAR	AI	32	AI	32	S32_XXX[20]	F10:20	nvoMBWdAPVAR_XXX	SNVT_count_inc_f
Max Blk Window Avg Neg VAR	AI	33	AI	33	S32_XXX[21]	F10:21	nvoMBWdANVAR_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
Max Blk Window Avg Pos Watt	AI	34	AI	34	S32_XXX[22]	F10:22	nvoMBWdAvPWT_XXX	SNVT_count_inc_f
Max Blk Window Avg Neg Watt	AI	35	AI	35	S32_XXX[23]	F10:23	nvoMBWdAvNWT_XXX	SNVT_count_inc_f
Total VAh (Quad 1+2+3+4) Scaled Pri	AI	36	AI	36	Flt_XXX[0]	F12:0	nvoTVAh1234P_XXX	SNVT_count_inc_f
Pos VARh (Quad 1+2) Scaled Pri	AI	37	AI	37	Flt_XXX[1]	F12:1	nvoPVARhQ12P_XXX	SNVT_count_inc_f
Neg VARh (Quad 3+4) Scaled Pri	AI	38	AI	38	Flt_XXX[2]	F12:2	nvoNVARhQ34P_XXX	SNVT_count_inc_f
Pos Wh (Quad 1+4) Scaled Pri	AI	39	AI	39	Flt_XXX[3]	F12:3	nvoPWhQ14ScP_XXX	SNVT_count_inc_f
Neg Wh (Quad 2+3) Scaled Pri	AI	40	AI	40	Flt_XXX[4]	F12:4	nvoNWhQd23SP_XXX	SNVT_count_inc_f
Ph Current CT Ratio Numerator	AI	41	AI	41	S32_XXX[29]	F10:29	nvoCrtCTRtNm_XXX	SNVT_count_inc_f
Ph Current CT Ratio Denominator	AI	42	AI	42	S32_XXX[30]	F10:30	nvoCrtCTRtDn_XXX	SNVT_count_inc_f
Measured Neutral Current CT Ratio Num	AI	43	AI	43	S32_XXX[31]	F10:31	nvoMsNtCTRtN_XXX	SNVT_count_inc_f
Measured Neutral Current CT Ratio Den	AI	44	AI	44	S32_XXX[32]	F10:32	nvoMsNtCTRtD_XXX	SNVT_count_inc_f
Ph Voltage PT Ratio Numerator	AI	45	AI	45	S32_XXX[33]	F10:33	nvoVtPTRtNum_XXX	SNVT_count_inc_f
Ph Voltage PT Ratio Denominator	AI	46	AI	46	S32_XXX[34]	F10:34	nvoVtPTRtDen_XXX	SNVT_count_inc_f
Aux Voltage PT Ratio Numerator	AI	47	AI	47	S32_XXX[35]	F10:35	nvoAxVtPTRtN_XXX	SNVT_count_inc_f
Aux Voltage PT Ration Denominator	AI	48	AI	48	S32_XXX[36]	F10:36	nvoAxVtPTRtD_XXX	SNVT_count_inc_f
System Hookup	AI	49	AI	49	Dev3_XXX[0]	N15:0	nvoSysHookup_XXX	SNVT_count
Level 1/Level 2 Password State	AI	50	AI	50	Dev3_XXX[2]	N15:2	nvoLv1_2PsSt_XXX	SNVT_count_inc_f
Sealing Switch State	AI	51	AI	51	Dev3_XXX[3]	N15:3	nvoSlSwState_XXX	SNVT_count_inc_f
Device Status	AI	52	AI	52	Dev3_XXX[4]	N15:4	nvoDevStat_XXX	SNVT_count
Serial Number Reg 1	AI	53	AI	53	Dev3_XXX[5]	N15:5	nvoSerNum1_XXX	SNVT_count
Serial Number Reg 2	AI	54	AI	54	Dev3_XXX[6]	N15:6	nvoSerNum2_XXX	SNVT_count
Serial Number Reg 3	AI	55	AI	55	Dev3_XXX[7]	N15:7	nvoSerNum3_XXX	SNVT_count
Serial Number Reg 4	AI	56	AI	56	Dev3_XXX[8]	N15:8	nvoSerNum4_XXX	SNVT_count

A.6: MP200-Y Metering System

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
Volts A-N	AI	1	AI	1	Flt_XXX[000]	F10:000	nvoVoltsAN_XXX	SNVT_count_inc_f
Volts B-N	AI	2	AI	2	Flt_XXX[001]	F10:001	nvoVoltsBN_XXX	SNVT_count_inc_f
Volts C-N	AI	3	AI	3	Flt_XXX[002]	F10:002	nvoVoltsCN_XXX	SNVT_count_inc_f
Volts A-B	AI	4	AI	4	Flt_XXX[003]	F10:003	nvoVoltsAB_XXX	SNVT_count_inc_f
Volts B-C	AI	5	AI	5	Flt_XXX[004]	F10:004	nvoVoltsBC_XXX	SNVT_count_inc_f
Volts C-A	AI	6	AI	6	Flt_XXX[005]	F10:005	nvoVoltsCA_XXX	SNVT_count_inc_f
Frequency	AI	7	AI	7	Flt_XXX[006]	F10:006	nvoFrequency_XXX	SNVT_count_inc_f
MTR01 Amps A	AI	8	AI	8	Flt_XXX[007]	F10:007	nvoM1AmpsA_XXX	SNVT_count_inc_f
MTR01 Amps B	AI	9	AI	9	Flt_XXX[008]	F10:008	nvoM1AmpsB_XXX	SNVT_count_inc_f
MTR01 Amps C	AI	10	AI	10	Flt_XXX[009]	F10:009	nvoM1AmpsC_XXX	SNVT_count_inc_f
MTR01 Watts 3-Ph total	AI	11	AI	11	Flt_XXX[010]	F10:010	nvoM1WattTot_XXX	SNVT_count_inc_f
MTR01 VARs 3-Ph total	AI	12	AI	12	Flt_XXX[011]	F10:011	nvoM1VARsTot_XXX	SNVT_count_inc_f
MTR01 VAs 3-Ph total	AI	13	AI	13	Flt_XXX[012]	F10:012	nvoM1VAsTot_XXX	SNVT_count_inc_f
MTR01 Power Factor 3-Ph total	AI	14	AI	14	Flt_XXX[013]	F10:013	nvoM1PFTot_XXX	SNVT_count_inc_f
MTR01 Neutral Current	AI	15	AI	15	Flt_XXX[014]	F10:014	nvoM1NeutCur_XXX	SNVT_count_inc_f
MTR02 Amps A	AI	16	AI	16	Flt_XXX[015]	F10:015	nvoM2AmpsA_XXX	SNVT_count_inc_f
MTR02 Amps B	AI	17	AI	17	Flt_XXX[016]	F10:016	nvoM2AmpsB_XXX	SNVT_count_inc_f
MTR02 Amps C	AI	18	AI	18	Flt_XXX[017]	F10:017	nvoM2AmpsC_XXX	SNVT_count_inc_f
MTR02 Watts 3-Ph total	AI	19	AI	19	Flt_XXX[018]	F10:018	nvoM2WattTot_XXX	SNVT_count_inc_f
MTR02 VARs 3-Ph total	AI	20	AI	20	Flt_XXX[019]	F10:019	nvoM2VARsTot_XXX	SNVT_count_inc_f
MTR02 VAs 3-Ph total	AI	21	AI	21	Flt_XXX[020]	F10:020	nvoM2VAsTot_XXX	SNVT_count_inc_f
MTR02 Power Factor 3-Ph total	AI	22	AI	22	Flt_XXX[021]	F10:021	nvoM2PFTot_XXX	SNVT_count_inc_f
MTR02 Neutral Current	AI	23	AI	23	Flt_XXX[022]	F10:022	nvoM2NeutCur_XXX	SNVT_count_inc_f
MTR03 Amps A	AI	24	AI	24	Flt_XXX[023]	F10:023	nvoM3AmpsA_XXX	SNVT_count_inc_f
MTR03 Amps B	AI	25	AI	25	Flt_XXX[024]	F10:024	nvoM3AmpsB_XXX	SNVT_count_inc_f
MTR03 Amps C	AI	26	AI	26	Flt_XXX[025]	F10:025	nvoM3AmpsC_XXX	SNVT_count_inc_f
MTR03 Watts 3-Ph total	AI	27	AI	27	Flt_XXX[026]	F10:026	nvoM3WattTot_XXX	SNVT_count_inc_f
MTR03 VARs 3-Ph total	AI	28	AI	28	Flt_XXX[027]	F10:027	nvoM3VARsTot_XXX	SNVT_count_inc_f
MTR03 VAs 3-Ph total	AI	29	AI	29	Flt_XXX[028]	F10:028	nvoM3VAsTot_XXX	SNVT_count_inc_f
MTR03 Power Factor 3-Ph total	AI	30	AI	30	Flt_XXX[029]	F10:029	nvoM3PFTot_XXX	SNVT_count_inc_f
MTR03 Neutral Current	AI	31	AI	31	Flt_XXX[030]	F10:030	nvoM3NeutCur_XXX	SNVT_count_inc_f
MTR04 Amps A	AI	32	AI	32	Flt_XXX[031]	F10:031	nvoM4AmpsA_XXX	SNVT_count_inc_f
MTR04 Amps B	AI	33	AI	33	Flt_XXX[032]	F10:032	nvoM4AmpsB_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
MTR04 Amps C	AI	34	AI	34	Flt_XXX[033]	F10:033	nvoM4AmpsC_XXX	SNVT_count_inc_f
MTR04 Watts 3-Ph total	AI	35	AI	35	Flt_XXX[034]	F10:034	nvoM4WattTot_XXX	SNVT_count_inc_f
MTR04 VARs 3-Ph total	AI	36	AI	36	Flt_XXX[035]	F10:035	nvoM4VARsTot_XXX	SNVT_count_inc_f
MTR04 VAs 3-Ph total	AI	37	AI	37	Flt_XXX[036]	F10:036	nvoM4VAsTot_XXX	SNVT_count_inc_f
MTR04 Power Factor 3-Ph total	AI	38	AI	38	Flt_XXX[037]	F10:037	nvoM4PFTot_XXX	SNVT_count_inc_f
MTR04 Neutral Current	AI	39	AI	39	Flt_XXX[038]	F10:038	nvoM4NeutCur_XXX	SNVT_count_inc_f
MTR05 Amps A	AI	40	AI	40	Flt_XXX[039]	F10:039	nvoM5AmpsA_XXX	SNVT_count_inc_f
MTR05 Amps B	AI	41	AI	41	Flt_XXX[040]	F10:040	nvoM5AmpsB_XXX	SNVT_count_inc_f
MTR05 Amps C	AI	42	AI	42	Flt_XXX[041]	F10:041	nvoM5AmpsC_XXX	SNVT_count_inc_f
MTR05 Watts 3-Ph total	AI	43	AI	43	Flt_XXX[042]	F10:042	nvoM5WattTot_XXX	SNVT_count_inc_f
MTR05 VARs 3-Ph total	AI	44	AI	44	Flt_XXX[043]	F10:043	nvoM5VARsTot_XXX	SNVT_count_inc_f
MTR05 VAs 3-Ph total	AI	45	AI	45	Flt_XXX[044]	F10:044	nvoM5VAsTot_XXX	SNVT_count_inc_f
MTR05 Power Factor 3-Ph total	AI	46	AI	46	Flt_XXX[045]	F10:045	nvoM5PFTot_XXX	SNVT_count_inc_f
MTR05 Neutral Current	AI	47	AI	47	Flt_XXX[046]	F10:046	nvoM5NeutCur_XXX	SNVT_count_inc_f
MTR06 Amps A	AI	48	AI	48	Flt_XXX[047]	F10:047	nvoM6AmpsA_XXX	SNVT_count_inc_f
MTR06 Amps B	AI	49	AI	49	Flt_XXX[048]	F10:048	nvoM6AmpsB_XXX	SNVT_count_inc_f
MTR06 Amps C	AI	50	AI	50	Flt_XXX[049]	F10:049	nvoM6AmpsC_XXX	SNVT_count_inc_f
MTR06 Watts 3-Ph total	AI	51	AI	51	Flt_XXX[050]	F10:050	nvoM6WattTot_XXX	SNVT_count_inc_f
MTR06 VARs 3-Ph total	AI	52	AI	52	Flt_XXX[051]	F10:051	nvoM6VARsTot_XXX	SNVT_count_inc_f
MTR06 VAs 3-Ph total	AI	53	AI	53	Flt_XXX[052]	F10:052	nvoM6VAsTot_XXX	SNVT_count_inc_f
MTR06 Power Factor 3-Ph total	AI	54	AI	54	Flt_XXX[053]	F10:053	nvoM6PFTot_XXX	SNVT_count_inc_f
MTR06 Neutral Current	AI	55	AI	55	Flt_XXX[054]	F10:054	nvoM6NeutCur_XXX	SNVT_count_inc_f
MTR07 Amps A	AI	56	AI	56	Flt_XXX[055]	F10:055	nvoM7AmpsA_XXX	SNVT_count_inc_f
MTR07 Amps B	AI	57	AI	57	Flt_XXX[056]	F10:056	nvoM7AmpsB_XXX	SNVT_count_inc_f
MTR07 Amps C	AI	58	AI	58	Flt_XXX[057]	F10:057	nvoM7AmpsC_XXX	SNVT_count_inc_f
MTR07 Watts 3-Ph total	AI	59	AI	59	Flt_XXX[058]	F10:058	nvoM7WattTot_XXX	SNVT_count_inc_f
MTR07 VARs 3-Ph total	AI	60	AI	60	Flt_XXX[059]	F10:059	nvoM7VARsTot_XXX	SNVT_count_inc_f
MTR07 VAs 3-Ph total	AI	61	AI	61	Flt_XXX[060]	F10:060	nvoM7VAsTot_XXX	SNVT_count_inc_f
MTR07 Power Factor 3-Ph total	AI	62	AI	62	Flt_XXX[061]	F10:061	nvoM7PFTot_XXX	SNVT_count_inc_f
MTR07 Neutral Current	AI	63	AI	63	Flt_XXX[062]	F10:062	nvoM7NeutCur_XXX	SNVT_count_inc_f
MTR08 Amps A	AI	64	AI	64	Flt_XXX[063]	F10:063	nvoM8AmpsA_XXX	SNVT_count_inc_f
MTR08 Amps B	AI	65	AI	65	Flt_XXX[064]	F10:064	nvoM8AmpsB_XXX	SNVT_count_inc_f
MTR08 Amps C	AI	66	AI	66	Flt_XXX[065]	F10:065	nvoM8AmpsC_XXX	SNVT_count_inc_f
MTR08 Watts 3-Ph total	AI	67	AI	67	Flt_XXX[066]	F10:066	nvoM8WattTot_XXX	SNVT_count_inc_f
MTR08 VARs 3-Ph total	AI	68	AI	68	Flt_XXX[067]	F10:067	nvoM8VARsTot_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
MTR08 VAs 3-Ph total	AI	69	AI	69	Flt_XXX[068]	F10:068	nvoM8VAsTot_XXX	SNVT_count_inc_f
MTR08 Power Factor 3-Ph total	AI	70	AI	70	Flt_XXX[069]	F10:069	nvoM8PFTot_XXX	SNVT_count_inc_f
MTR08 Neutral Current	AI	71	AI	71	Flt_XXX[070]	F10:070	nvoM8NeutCur_XXX	SNVT_count_inc_f
MTR01 W-hours Received	AI	72	AI	72	S32_XXX[000]	F11:000	nvoM1WHRec_XXX	SNVT_count_inc_f
MTR01 W-hours Delivered	AI	73	AI	73	S32_XXX[001]	F11:001	nvoM1WHDel_XXX	SNVT_count_inc_f
MTR01 W-hours Net	AI	74	AI	74	S32_XXX[002]	F11:002	nvoM1WHNet_XXX	SNVT_count_inc_f
MTR01 W-hours Total	AI	75	AI	75	S32_XXX[003]	F11:003	nvoM1WHTot_XXX	SNVT_count_inc_f
MTR01 VAR-hours Positive	AI	76	AI	76	S32_XXX[004]	F11:004	nvoM1VARHPos_XXX	SNVT_count_inc_f
MTR01 VAR-hours Negative	AI	77	AI	77	S32_XXX[005]	F11:005	nvoM1VARHNeg_XXX	SNVT_count_inc_f
MTR01 VAR-hours Net	AI	78	AI	78	S32_XXX[006]	F11:006	nvoM1VARHNet_XXX	SNVT_count_inc_f
MTR01 VAR-hours Total	AI	79	AI	79	S32_XXX[007]	F11:007	nvoM1VARHTot_XXX	SNVT_count_inc_f
MTR01 VA-hours Total	AI	80	AI	80	S32_XXX[008]	F11:008	nvoM1VAHTot_XXX	SNVT_count_inc_f
MTR02 W-hours Received	AI	81	AI	81	S32_XXX[009]	F11:009	nvoM2WHRec_XXX	SNVT_count_inc_f
MTR02 W-hours Delivered	AI	82	AI	82	S32_XXX[010]	F11:010	nvoM2WHDel_XXX	SNVT_count_inc_f
MTR02 W-hours Net	AI	83	AI	83	S32_XXX[011]	F11:011	nvoM2WHNet_XXX	SNVT_count_inc_f
MTR02 W-hours Total	AI	84	AI	84	S32_XXX[012]	F11:012	nvoM2WHTot_XXX	SNVT_count_inc_f
MTR02 VAR-hours Positive	AI	85	AI	85	S32_XXX[013]	F11:013	nvoM2VARHPos_XXX	SNVT_count_inc_f
MTR02 VAR-hours Negative	AI	86	AI	86	S32_XXX[014]	F11:014	nvoM2VARHNeg_XXX	SNVT_count_inc_f
MTR02 VAR-hours Net	AI	87	AI	87	S32_XXX[015]	F11:015	nvoM2VARHNet_XXX	SNVT_count_inc_f
MTR02 VAR-hours Total	AI	88	AI	88	S32_XXX[016]	F11:016	nvoM2VARHTot_XXX	SNVT_count_inc_f
MTR02 VA-hours Total	AI	89	AI	89	S32_XXX[017]	F11:017	nvoM2VAHTot_XXX	SNVT_count_inc_f
MTR03 W-hours Received	AI	90	AI	90	S32_XXX[018]	F11:018	nvoM3WHRec_XXX	SNVT_count_inc_f
MTR03 W-hours Delivered	AI	91	AI	91	S32_XXX[019]	F11:019	nvoM3WHDel_XXX	SNVT_count_inc_f
MTR03 W-hours Net	AI	92	AI	92	S32_XXX[020]	F11:020	nvoM3WHNet_XXX	SNVT_count_inc_f
MTR03 W-hours Total	AI	93	AI	93	S32_XXX[021]	F11:021	nvoM3WHTot_XXX	SNVT_count_inc_f
MTR03 VAR-hours Positive	AI	94	AI	94	S32_XXX[022]	F11:022	nvoM3VARHPos_XXX	SNVT_count_inc_f
MTR03 VAR-hours Negative	AI	95	AI	95	S32_XXX[023]	F11:023	nvoM3VARHNeg_XXX	SNVT_count_inc_f
MTR03 VAR-hours Net	AI	96	AI	96	S32_XXX[024]	F11:024	nvoM3VARHNet_XXX	SNVT_count_inc_f
MTR03 VAR-hours Total	AI	97	AI	97	S32_XXX[025]	F11:025	nvoM3VARHTot_XXX	SNVT_count_inc_f
MTR03 VA-hours Total	AI	98	AI	98	S32_XXX[026]	F11:026	nvoM3VAHTot_XXX	SNVT_count_inc_f
MTR04 W-hours Received	AI	99	AI	99	S32_XXX[027]	F11:027	nvoM4WHRec_XXX	SNVT_count_inc_f
MTR04 W-hours Delivered	AI	100	AI	100	S32_XXX[028]	F11:028	nvoM4WHDel_XXX	SNVT_count_inc_f
MTR04 W-hours Net	AI	101	AI	101	S32_XXX[029]	F11:029	nvoM4WHNet_XXX	SNVT_count_inc_f
MTR04 W-hours Total	AI	102	AI	102	S32_XXX[030]	F11:030	nvoM4WHTot_XXX	SNVT_count_inc_f
MTR04 VAR-hours Positive	AI	103	AI	103	S32_XXX[031]	F11:031	nvoM4VARHPos_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
MTR04 VAR-hours Negative	AI	104	AI	104	S32_XXX[032]	F11:032	nvoM4VARHNeg_XXX	SNVT_count_inc_f
MTR04 VAR-hours Net	AI	105	AI	105	S32_XXX[033]	F11:033	nvoM4VARHNet_XXX	SNVT_count_inc_f
MTR04 VAR-hours Total	AI	106	AI	106	S32_XXX[034]	F11:034	nvoM4VARHTot_XXX	SNVT_count_inc_f
MTR04 VA-hours Total	AI	107	AI	107	S32_XXX[035]	F11:035	nvoM4VAHTot_XXX	SNVT_count_inc_f
MTR05 W-hours Received	AI	108	AI	108	S32_XXX[036]	F11:036	nvoM5WHRec_XXX	SNVT_count_inc_f
MTR05 W-hours Delivered	AI	109	AI	109	S32_XXX[037]	F11:037	nvoM5WHDel_XXX	SNVT_count_inc_f
MTR05 W-hours Net	AI	110	AI	110	S32_XXX[038]	F11:038	nvoM5WHNet_XXX	SNVT_count_inc_f
MTR05 W-hours Total	AI	111	AI	111	S32_XXX[039]	F11:039	nvoM5WHTot_XXX	SNVT_count_inc_f
MTR05 VAR-hours Positive	AI	112	AI	112	S32_XXX[040]	F11:040	nvoM5VARHPos_XXX	SNVT_count_inc_f
MTR05 VAR-hours Negative	AI	113	AI	113	S32_XXX[041]	F11:041	nvoM5VARHNeg_XXX	SNVT_count_inc_f
MTR05 VAR-hours Net	AI	114	AI	114	S32_XXX[042]	F11:042	nvoM5VARHNet_XXX	SNVT_count_inc_f
MTR05 VAR-hours Total	AI	115	AI	115	S32_XXX[043]	F11:043	nvoM5VARHTot_XXX	SNVT_count_inc_f
MTR05 VA-hours Total	AI	116	AI	116	S32_XXX[044]	F11:044	nvoM5VAHTot_XXX	SNVT_count_inc_f
MTR06 W-hours Received	AI	117	AI	117	S32_XXX[045]	F11:045	nvoM6WHRec_XXX	SNVT_count_inc_f
MTR06 W-hours Delivered	AI	118	AI	118	S32_XXX[046]	F11:046	nvoM6WHDel_XXX	SNVT_count_inc_f
MTR06 W-hours Net	AI	119	AI	119	S32_XXX[047]	F11:047	nvoM6WHNet_XXX	SNVT_count_inc_f
MTR06 W-hours Total	AI	120	AI	120	S32_XXX[048]	F11:048	nvoM6WHTot_XXX	SNVT_count_inc_f
MTR06 VAR-hours Positive	AI	121	AI	121	S32_XXX[049]	F11:049	nvoM6VARHPos_XXX	SNVT_count_inc_f
MTR06 VAR-hours Negative	AI	122	AI	122	S32_XXX[050]	F11:050	nvoM6VARHNeg_XXX	SNVT_count_inc_f
MTR06 VAR-hours Net	AI	123	AI	123	S32_XXX[051]	F11:051	nvoM6VARHNet_XXX	SNVT_count_inc_f
MTR06 VAR-hours Total	AI	124	AI	124	S32_XXX[052]	F11:052	nvoM6VARHTot_XXX	SNVT_count_inc_f
MTR06 VA-hours Total	AI	125	AI	125	S32_XXX[053]	F11:053	nvoM6VAHTot_XXX	SNVT_count_inc_f
MTR07 W-hours Received	AI	126	AI	126	S32_XXX[054]	F11:054	nvoM7WHRec_XXX	SNVT_count_inc_f
MTR07 W-hours Delivered	AI	127	AI	127	S32_XXX[055]	F11:055	nvoM7WHDel_XXX	SNVT_count_inc_f
MTR07 W-hours Net	AI	128	AI	128	S32_XXX[056]	F11:056	nvoM7WHNet_XXX	SNVT_count_inc_f
MTR07 W-hours Total	AI	129	AI	129	S32_XXX[057]	F11:057	nvoM7WHTot_XXX	SNVT_count_inc_f
MTR07 VAR-hours Positive	AI	130	AI	130	S32_XXX[058]	F11:058	nvoM7VARHPos_XXX	SNVT_count_inc_f
MTR07 VAR-hours Negative	AI	131	AI	131	S32_XXX[059]	F11:059	nvoM7VARHNeg_XXX	SNVT_count_inc_f
MTR07 VAR-hours Net	AI	132	AI	132	S32_XXX[060]	F11:060	nvoM7VARHNet_XXX	SNVT_count_inc_f
MTR07 VAR-hours Total	AI	133	AI	133	S32_XXX[061]	F11:061	nvoM7VARHTot_XXX	SNVT_count_inc_f
MTR07 VA-hours Total	AI	134	AI	134	S32_XXX[062]	F11:062	nvoM7VAHTot_XXX	SNVT_count_inc_f
MTR08 W-hours Received	AI	135	AI	135	S32_XXX[063]	F11:063	nvoM8WHRec_XXX	SNVT_count_inc_f
MTR08 W-hours Delivered	AI	136	AI	136	S32_XXX[064]	F11:064	nvoM8WHDel_XXX	SNVT_count_inc_f
MTR08 W-hours Net	AI	137	AI	137	S32_XXX[065]	F11:065	nvoM8WHNet_XXX	SNVT_count_inc_f
MTR08 W-hours Total	AI	138	AI	138	S32_XXX[066]	F11:066	nvoM8WHTot_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
MTR08 VAR-hours Positive	AI	139	AI	139	S32_XXX[067]	F11:067	nvoM8VARHPos_XXX	SNVT_count_inc_f
MTR08 VAR-hours Negative	AI	140	AI	140	S32_XXX[068]	F11:068	nvoM8VARHNeg_XXX	SNVT_count_inc_f
MTR08 VAR-hours Net	AI	141	AI	141	S32_XXX[069]	F11:069	nvoM8VARHNet_XXX	SNVT_count_inc_f
MTR08 VAR-hours Total	AI	142	AI	142	S32_XXX[070]	F11:070	nvoM8VARHTot_XXX	SNVT_count_inc_f
MTR08 VA-hours Total	AI	143	AI	143	S32_XXX[071]	F11:071	nvoM8VAHTot_XXX	SNVT_count_inc_f
MTR01 Positive Watts 3-Ph Avg	AI	144	AI	144	Flt_XXX[071]	F10:071	nvoM1PsWtAvg_XXX	SNVT_count_inc_f
MTR01 Positive VARs 3-Ph Avg	AI	145	AI	145	Flt_XXX[072]	F10:072	nvoM1PsVARAv_XXX	SNVT_count_inc_f
MTR01 Negative Watts 3-Ph Avg	AI	146	AI	146	Flt_XXX[073]	F10:073	nvoM1NgWtAvg_XXX	SNVT_count_inc_f
MTR01 Negative VARs 3-Ph Avg	AI	147	AI	147	Flt_XXX[074]	F10:074	nvoM1NgVARAv_XXX	SNVT_count_inc_f
MTR01 VAs 3-Ph Avg	AI	148	AI	148	Flt_XXX[075]	F10:075	nvoM1VAsAvg_XXX	SNVT_count_inc_f
MTR02 Positive Watts 3-Ph Avg	AI	149	AI	149	Flt_XXX[076]	F10:076	nvoM2PsWtAvg_XXX	SNVT_count_inc_f
MTR02 Positive VARs 3-Ph Avg	AI	150	AI	150	Flt_XXX[077]	F10:077	nvoM2PsVARAv_XXX	SNVT_count_inc_f
MTR02 Negative Watts 3-Ph Avg	AI	151	AI	151	Flt_XXX[078]	F10:078	nvoM2NgWtAvg_XXX	SNVT_count_inc_f
MTR02 Negative VARs 3-Ph Avg	AI	152	AI	152	Flt_XXX[079]	F10:079	nvoM2NgVARAv_XXX	SNVT_count_inc_f
MTR02 VAs 3-Ph Avg	AI	153	AI	153	Flt_XXX[080]	F10:080	nvoM2VAsAvg_XXX	SNVT_count_inc_f
MTR03 Positive Watts 3-Ph Avg	AI	154	AI	154	Flt_XXX[081]	F10:081	nvoM3PsWtAvg_XXX	SNVT_count_inc_f
MTR03 Positive VARs 3-Ph Avg	AI	155	AI	155	Flt_XXX[082]	F10:082	nvoM3PsVARAv_XXX	SNVT_count_inc_f
MTR03 Negative Watts 3-Ph Avg	AI	156	AI	156	Flt_XXX[083]	F10:083	nvoM3NgWtAvg_XXX	SNVT_count_inc_f
MTR03 Negative VARs 3-Ph Avg	AI	157	AI	157	Flt_XXX[084]	F10:084	nvoM3NgVARAv_XXX	SNVT_count_inc_f
MTR03 VAs 3-Ph Avg	AI	158	AI	158	Flt_XXX[085]	F10:085	nvoM3VAsAvg_XXX	SNVT_count_inc_f
MTR04 Positive Watts 3-Ph Avg	AI	159	AI	159	Flt_XXX[086]	F10:086	nvoM4PsWtAvg_XXX	SNVT_count_inc_f
MTR04 Positive VARs 3-Ph Avg	AI	160	AI	160	Flt_XXX[087]	F10:087	nvoM4PsVARAv_XXX	SNVT_count_inc_f
MTR04 Negative Watts 3-Ph Avg	AI	161	AI	161	Flt_XXX[088]	F10:088	nvoM4NgWtAvg_XXX	SNVT_count_inc_f
MTR04 Negative VARs 3-Ph Avg	AI	162	AI	162	Flt_XXX[089]	F10:089	nvoM4NgVARAv_XXX	SNVT_count_inc_f
MTR04 VAs 3-Ph Avg	AI	163	AI	163	Flt_XXX[090]	F10:090	nvoM4VAsAvg_XXX	SNVT_count_inc_f
MTR05 Positive Watts 3-Ph Avg	AI	164	AI	164	Flt_XXX[091]	F10:091	nvoM5PsWtAvg_XXX	SNVT_count_inc_f
MTR05 Positive VARs 3-Ph Avg	AI	165	AI	165	Flt_XXX[092]	F10:092	nvoM5PsVARAv_XXX	SNVT_count_inc_f
MTR05 Negative Watts 3-Ph Avg	AI	166	AI	166	Flt_XXX[093]	F10:093	nvoM5NgWtAvg_XXX	SNVT_count_inc_f
MTR05 Negative VARs 3-Ph Avg	AI	167	AI	167	Flt_XXX[094]	F10:094	nvoM5NgVARAv_XXX	SNVT_count_inc_f
MTR05 VAs 3-Ph Avg	AI	168	AI	168	Flt_XXX[095]	F10:095	nvoM5VAsAvg_XXX	SNVT_count_inc_f
MTR06 Positive Watts 3-Ph Avg	AI	169	AI	169	Flt_XXX[096]	F10:096	nvoM6PsWtAvg_XXX	SNVT_count_inc_f
MTR06 Positive VARs 3-Ph Avg	AI	170	AI	170	Flt_XXX[097]	F10:097	nvoM6PsVARAv_XXX	SNVT_count_inc_f
MTR06 Negative Watts 3-Ph Avg	AI	171	AI	171	Flt_XXX[098]	F10:098	nvoM6NgWtAvg_XXX	SNVT_count_inc_f
MTR06 Negative VARs 3-Ph Avg	AI	172	AI	172	Flt_XXX[099]	F10:099	nvoM6NgVARAv_XXX	SNVT_count_inc_f
MTR06 VAs 3-Ph Avg	AI	173	AI	173	Flt_XXX[100]	F10:100	nvoM6VAsAvg_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
MTR07 Positive Watts 3-Ph Avg	AI	174	AI	174	Flt_XXX[101]	F10:101	nvoM7PsWtAvg_XXX	SNVT_count_inc_f
MTR07 Positive VARs 3-Ph Avg	AI	175	AI	175	Flt_XXX[102]	F10:102	nvoM7PsVARAv_XXX	SNVT_count_inc_f
MTR07 Negative Watts 3-Ph Avg	AI	176	AI	176	Flt_XXX[103]	F10:103	nvoM7NgWtAvg_XXX	SNVT_count_inc_f
MTR07 Negative VARs 3-Ph Avg	AI	177	AI	177	Flt_XXX[104]	F10:104	nvoM7NgVARAv_XXX	SNVT_count_inc_f
MTR07 VAs 3-Ph Avg	AI	178	AI	178	Flt_XXX[105]	F10:105	nvoM7VAsAvg_XXX	SNVT_count_inc_f
MTR08 Positive Watts 3-Ph Avg	AI	179	AI	179	Flt_XXX[106]	F10:106	nvoM8PsWtAvg_XXX	SNVT_count_inc_f
MTR08 Positive VARs 3-Ph Avg	AI	180	AI	180	Flt_XXX[107]	F10:107	nvoM8PsVARAv_XXX	SNVT_count_inc_f
MTR08 Negative Watts 3-Ph Avg	AI	181	AI	181	Flt_XXX[108]	F10:108	nvoM8NgWtAvg_XXX	SNVT_count_inc_f
MTR08 Negative VARs 3-Ph Avg	AI	182	AI	182	Flt_XXX[109]	F10:109	nvoM8NgVARAv_XXX	SNVT_count_inc_f
MTR08 VAs 3-Ph Avg	AI	183	AI	183	Flt_XXX[110]	F10:110	nvoM8VAsAvg_XXX	SNVT_count_inc_f
CPU Status	AI	184	AI	184	Dev1_XXX[000]	N12:000	nvoCPUStatus_XXX	SNVT_count_inc_f
Current Time Reg 1	AI	185	AI	185	Dev1_XXX[001]	N12:001	nvoCurTime1_XXX	SNVT_count_inc_f
Current Time Reg 2	AI	186	AI	186	Dev1_XXX[002]	N12:002	nvoCurTime2_XXX	SNVT_count_inc_f
Current Time Reg 3	AI	187	AI	187	Dev1_XXX[003]	N12:003	nvoCurTime3_XXX	SNVT_count_inc_f
MTR01 Positive Watts 3-Ph Max Avg Dem	AI	188	AI	188	Flt_XXX[111]	F10:111	nvo1PWtMxAvD_XXX	SNVT_count_inc_f
MTR01 Positive VARs 3-Ph Max Avg Dem	AI	189	AI	189	Flt_XXX[112]	F10:112	nvo1PVARMxAv_XXX	SNVT_count_inc_f
MTR01 Negative Watts 3-Ph Max Avg Dem	AI	190	AI	190	Flt_XXX[113]	F10:113	nvo1NWtMxAvD_XXX	SNVT_count_inc_f
MTR01 Negative VARs 3-Ph Max Avg Dem	AI	191	AI	191	Flt_XXX[114]	F10:114	nvo1NVARMxAv_XXX	SNVT_count_inc_f
MTR02 Positive Watts 3-Ph Max Avg Dem	AI	192	AI	192	Flt_XXX[115]	F10:115	nvo2PWtMxAvD_XXX	SNVT_count_inc_f
MTR02 Positive VARs 3-Ph Max Avg Dem	AI	193	AI	193	Flt_XXX[116]	F10:116	nvo2PVARMxAv_XXX	SNVT_count_inc_f
MTR02 Negative Watts 3-Ph Max Avg Dem	AI	194	AI	194	Flt_XXX[117]	F10:117	nvo2NWtMxAvD_XXX	SNVT_count_inc_f
MTR02 Negative VARs 3-Ph Max Avg Dem	AI	195	AI	195	Flt_XXX[118]	F10:118	nvo2NVARMxAv_XXX	SNVT_count_inc_f
MTR03 Positive Watts 3-Ph Max Avg Dem	AI	196	AI	196	Flt_XXX[119]	F10:119	nvo3PWtMxAvD_XXX	SNVT_count_inc_f
MTR03 Positive VARs 3-Ph Max Avg Dem	AI	197	AI	197	Flt_XXX[120]	F10:120	nvo3PVARMxAv_XXX	SNVT_count_inc_f
MTR03 Negative Watts 3-Ph Max Avg Dem	AI	198	AI	198	Flt_XXX[121]	F10:121	nvo3NWtMxAvD_XXX	SNVT_count_inc_f
MTR03 Negative VARs 3-Ph Max Avg Dem	AI	199	AI	199	Flt_XXX[122]	F10:122	nvo3NVARMxAv_XXX	SNVT_count_inc_f
MTR04 Positive Watts 3-Ph Max Avg Dem	AI	200	AI	200	Flt_XXX[123]	F10:123	nvo4PWtMxAvD_XXX	SNVT_count_inc_f
MTR04 Positive VARs 3-Ph Max Avg Dem	AI	201	AI	201	Flt_XXX[124]	F10:124	nvo4PVARMxAv_XXX	SNVT_count_inc_f
MTR04 Negative Watts 3-Ph Max Avg Dem	AI	202	AI	202	Flt_XXX[125]	F10:125	nvo4NWtMxAvD_XXX	SNVT_count_inc_f
MTR04 Negative VARs 3-Ph Max Avg Dem	AI	203	AI	203	Flt_XXX[126]	F10:126	nvo4NVARMxAv_XXX	SNVT_count_inc_f
MTR05 Positive Watts 3-Ph Max Avg Dem	AI	204	AI	204	Flt_XXX[127]	F10:127	nvo5PWtMxAvD_XXX	SNVT_count_inc_f
MTR05 Positive VARs 3-Ph Max Avg Dem	AI	205	AI	205	Flt_XXX[128]	F10:128	nvo5PVARMxAv_XXX	SNVT_count_inc_f
MTR05 Negative Watts 3-Ph Max Avg Dem	AI	206	AI	206	Flt_XXX[129]	F10:129	nvo5NWtMxAvD_XXX	SNVT_count_inc_f
MTR05 Negative VARs 3-Ph Max Avg Dem	AI	207	AI	207	Flt_XXX[130]	F10:130	nvo5NVARMxAv_XXX	SNVT_count_inc_f
MTR06 Positive Watts 3-Ph Max Avg Dem	AI	208	AI	208	Flt_XXX[131]	F10:131	nvo6PWtMxAvD_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
MTR06 Positive VARs 3-Ph Max Avg Dem	AI	209	AI	209	Flt_XXX[132]	F10:132	nvo6PVARMxAv_XXX	SNVT_count_inc_f
MTR06 Negative Watts 3-Ph Max Avg Dem	AI	210	AI	210	Flt_XXX[133]	F10:133	nvo6NWtMxAvD_XXX	SNVT_count_inc_f
MTR06 Negative VARs 3-Ph Max Avg Dem	AI	211	AI	211	Flt_XXX[134]	F10:134	nvo6NVARMxAv_XXX	SNVT_count_inc_f
MTR07 Positive Watts 3-Ph Max Avg Dem	AI	212	AI	212	Flt_XXX[135]	F10:135	nvo7PWtMxAvD_XXX	SNVT_count_inc_f
MTR07 Positive VARs 3-Ph Max Avg Dem	AI	213	AI	213	Flt_XXX[136]	F10:136	nvo7PVARMxAv_XXX	SNVT_count_inc_f
MTR07 Negative Watts 3-Ph Max Avg Dem	AI	214	AI	214	Flt_XXX[137]	F10:137	nvo7NWtMxAvD_XXX	SNVT_count_inc_f
MTR07 Negative VARs 3-Ph Max Avg Dem	AI	215	AI	215	Flt_XXX[138]	F10:138	nvo7NVARMxAv_XXX	SNVT_count_inc_f
MTR08 Positive Watts 3-Ph Max Avg Dem	AI	216	AI	216	Flt_XXX[139]	F10:139	nvo8PWtMxAvD_XXX	SNVT_count_inc_f
MTR08 Positive VARs 3-Ph Max Avg Dem	AI	217	AI	217	Flt_XXX[140]	F10:140	nvo8PVARMxAv_XXX	SNVT_count_inc_f
MTR08 Negative Watts 3-Ph Max Avg Dem	AI	218	AI	218	Flt_XXX[141]	F10:141	nvo8NWtMxAvD_XXX	SNVT_count_inc_f
MTR08 Negative VARs 3-Ph Max Avg Dem	AI	219	AI	219	Flt_XXX[142]	F10:142	nvo8NVARMxAv_XXX	SNVT_count_inc_f
Serial Number Reg 1	AI	220	AI	220	Dev2_XXX[000]	N13:000	nvoSerNum1_XXX	SNVT_count_inc
Serial Number Reg 2	AI	221	AI	221	Dev2_XXX[001]	N13:001	nvoSerNum2_XXX	SNVT_count_inc
Serial Number Reg 3	AI	222	AI	222	Dev2_XXX[002]	N13:002	nvoSerNum3_XXX	SNVT_count_inc
Serial Number Reg 4	AI	223	AI	223	Dev2_XXX[003]	N13:003	nvoSerNum4_XXX	SNVT_count_inc
Serial Number Reg 5	AI	224	AI	224	Dev2_XXX[004]	N13:004	nvoSerNum5_XXX	SNVT_count_inc
Serial Number Reg 6	AI	225	AI	225	Dev2_XXX[005]	N13:005	nvoSerNum6_XXX	SNVT_count_inc
Serial Number Reg 7	AI	226	AI	226	Dev2_XXX[006]	N13:006	nvoSerNum7_XXX	SNVT_count_inc
Serial Number Reg 8	AI	227	AI	227	Dev2_XXX[007]	N13:007	nvoSerNum8_XXX	SNVT_count_inc
CT denominator	AI	228	AI	228	Dev2_XXX[008]	N13:008	nvoCT_den_XXX	SNVT_count_inc
MTR01 CT Numerator	AI	229	AI	229	Dev2_XXX[009]	N13:009	nvoM1CT_num_XXX	SNVT_count_inc
MTR02 CT Numerator	AI	230	AI	230	Dev2_XXX[010]	N13:010	nvoM2CT_num_XXX	SNVT_count_inc
MTR03 CT Numerator	AI	231	AI	231	Dev2_XXX[011]	N13:011	nvoM3CT_num_XXX	SNVT_count_inc
MTR04 CT Numerator	AI	232	AI	232	Dev2_XXX[012]	N13:012	nvoM4CT_num_XXX	SNVT_count_inc
MTR05 CT Numerator	AI	233	AI	233	Dev2_XXX[013]	N13:013	nvoM5CT_num_XXX	SNVT_count_inc
MTR06 CT Numerator	AI	234	AI	234	Dev2_XXX[014]	N13:014	nvoM6CT_num_XXX	SNVT_count_inc
MTR07 CT Numerator	AI	235	AI	235	Dev2_XXX[015]	N13:015	nvoM7CT_num_XXX	SNVT_count_inc
MTR08 CT Numerator	AI	236	AI	236	Dev2_XXX[016]	N13:016	nvoM8CT_num_XXX	SNVT_count_inc
PT Numerator	AI	237	AI	237	Dev2_XXX[017]	N13:017	nvoPT_num_XXX	SNVT_count_inc
PT denominator	AI	238	AI	238	Dev2_XXX[018]	N13:018	nvoPT_den_XXX	SNVT_count_inc
System Hookup	AI	239	AI	239	Dev2_XXX[019]	N13:019	nvoSysHookup_XXX	SNVT_count_inc
Password for Reset in use	BI	240	DI	240	Byt_XXX[0]	N14:0	nvoPswdReset_XXX	SNVT_count_inc
Password for Configuration in use	BI	241	DI	241	Byt_XXX[1]	N14:1	nvoPswdCnfg_XXX	SNVT_count_inc

A.7: MP200-S Metering System

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
Volts	AI	1	AI	1	Flt_XXX[000]	F10:000	nvoVolts_XXX	SNVT_count_inc_f
Frequency	AI	2	AI	2	Flt_XXX[001]	F10:001	nvoFrequency_XXX	SNVT_count_inc_f
Amps Meter 01	AI	3	AI	3	Flt_XXX[002]	F10:002	nvoAmpsM1_XXX	SNVT_count_inc_f
Amps Meter 02	AI	4	AI	4	Flt_XXX[003]	F10:003	nvoAmpsM2_XXX	SNVT_count_inc_f
Amps Meter 03	AI	5	AI	5	Flt_XXX[004]	F10:004	nvoAmpsM3_XXX	SNVT_count_inc_f
Watts Meter 01	AI	6	AI	6	Flt_XXX[005]	F10:005	nvoWattsM1_XXX	SNVT_count_inc_f
Watts Meter 02	AI	7	AI	7	Flt_XXX[006]	F10:006	nvoWattsM2_XXX	SNVT_count_inc_f
Watts Meter 03	AI	8	AI	8	Flt_XXX[007]	F10:007	nvoWattsM3_XXX	SNVT_count_inc_f
VARs Meter 01	AI	9	AI	9	Flt_XXX[008]	F10:008	nvoVARsM1_XXX	SNVT_count_inc_f
VARs Meter 02	AI	10	AI	10	Flt_XXX[009]	F10:009	nvoVARsM2_XXX	SNVT_count_inc_f
VARs Meter 03	AI	11	AI	11	Flt_XXX[010]	F10:010	nvoVARsM3_XXX	SNVT_count_inc_f
VAs Meter 01	AI	12	AI	12	Flt_XXX[011]	F10:011	nvoVAsM1_XXX	SNVT_count_inc_f
VAs Meter 02	AI	13	AI	13	Flt_XXX[012]	F10:012	nvoVAsM2_XXX	SNVT_count_inc_f
VAs Meter 03	AI	14	AI	14	Flt_XXX[013]	F10:013	nvoVAsM3_XXX	SNVT_count_inc_f
Power Factor Meter 01	AI	15	AI	15	Flt_XXX[014]	F10:014	nvoPFM1_XXX	SNVT_count_inc_f
Power Factor Meter 02	AI	16	AI	16	Flt_XXX[015]	F10:015	nvoPFM2_XXX	SNVT_count_inc_f
Power Factor Meter 03	AI	17	AI	17	Flt_XXX[016]	F10:016	nvoPFM3_XXX	SNVT_count_inc_f
Amps Meter 04	AI	18	AI	18	Flt_XXX[017]	F10:017	nvoAmpsM4_XXX	SNVT_count_inc_f
Amps Meter 05	AI	19	AI	19	Flt_XXX[018]	F10:018	nvoAmpsM5_XXX	SNVT_count_inc_f
Amps Meter 06	AI	20	AI	20	Flt_XXX[019]	F10:019	nvoAmpsM6_XXX	SNVT_count_inc_f
Watts Meter 04	AI	21	AI	21	Flt_XXX[020]	F10:020	nvoWattsM4_XXX	SNVT_count_inc_f
Watts Meter 05	AI	22	AI	22	Flt_XXX[021]	F10:021	nvoWattsM5_XXX	SNVT_count_inc_f
Watts Meter 06	AI	23	AI	23	Flt_XXX[022]	F10:022	nvoWattsM6_XXX	SNVT_count_inc_f
VARs Meter 04	AI	24	AI	24	Flt_XXX[023]	F10:023	nvoVARsM4_XXX	SNVT_count_inc_f
VARs Meter 05	AI	25	AI	25	Flt_XXX[024]	F10:024	nvoVARsM5_XXX	SNVT_count_inc_f
VARs Meter 06	AI	26	AI	26	Flt_XXX[025]	F10:025	nvoVARsM6_XXX	SNVT_count_inc_f
VAs Meter 04	AI	27	AI	27	Flt_XXX[026]	F10:026	nvoVAsM4_XXX	SNVT_count_inc_f
VAs Meter 05	AI	28	AI	28	Flt_XXX[027]	F10:027	nvoVAsM5_XXX	SNVT_count_inc_f
VAs Meter 06	AI	29	AI	29	Flt_XXX[028]	F10:028	nvoVAsM6_XXX	SNVT_count_inc_f
Power Factor Meter 04	AI	30	AI	30	Flt_XXX[029]	F10:029	nvoPFM4_XXX	SNVT_count_inc_f
Power Factor Meter 05	AI	31	AI	31	Flt_XXX[030]	F10:030	nvoPFM5_XXX	SNVT_count_inc_f
Power Factor Meter 06	AI	32	AI	32	Flt_XXX[031]	F10:031	nvoPFM6_XXX	SNVT_count_inc_f
Amps Meter 07	AI	33	AI	33	Flt_XXX[032]	F10:032	nvoAmpsM7_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
Amps Meter 08	AI	34	AI	34	Flt_XXX[033]	F10:033	nvoAmpsM8_XXX	SNVT_count_inc_f
Amps Meter 09	AI	35	AI	35	Flt_XXX[034]	F10:034	nvoAmpsM9_XXX	SNVT_count_inc_f
Watts Meter 07	AI	36	AI	36	Flt_XXX[035]	F10:035	nvoWattsM7_XXX	SNVT_count_inc_f
Watts Meter 08	AI	37	AI	37	Flt_XXX[036]	F10:036	nvoWattsM8_XXX	SNVT_count_inc_f
Watts Meter 09	AI	38	AI	38	Flt_XXX[037]	F10:037	nvoWattsM9_XXX	SNVT_count_inc_f
VARs Meter 07	AI	39	AI	39	Flt_XXX[038]	F10:038	nvoVARsM7_XXX	SNVT_count_inc_f
VARs Meter 08	AI	40	AI	40	Flt_XXX[039]	F10:039	nvoVARsM8_XXX	SNVT_count_inc_f
VARs Meter 09	AI	41	AI	41	Flt_XXX[040]	F10:040	nvoVARsM9_XXX	SNVT_count_inc_f
VAs Meter 07	AI	42	AI	42	Flt_XXX[041]	F10:041	nvoVAsM7_XXX	SNVT_count_inc_f
VAs Meter 08	AI	43	AI	43	Flt_XXX[042]	F10:042	nvoVAsM8_XXX	SNVT_count_inc_f
VAs Meter 09	AI	44	AI	44	Flt_XXX[043]	F10:043	nvoVAsM9_XXX	SNVT_count_inc_f
Power Factor Meter 07	AI	45	AI	45	Flt_XXX[044]	F10:044	nvoPFM7_XXX	SNVT_count_inc_f
Power Factor Meter 08	AI	46	AI	46	Flt_XXX[045]	F10:045	nvoPFM8_XXX	SNVT_count_inc_f
Power Factor Meter 09	AI	47	AI	47	Flt_XXX[046]	F10:046	nvoPFM9_XXX	SNVT_count_inc_f
Amps Meter 10	AI	48	AI	48	Flt_XXX[047]	F10:047	nvoAmpsM10_XXX	SNVT_count_inc_f
Amps Meter 11	AI	49	AI	49	Flt_XXX[048]	F10:048	nvoAmpsM11_XXX	SNVT_count_inc_f
Amps Meter 12	AI	50	AI	50	Flt_XXX[049]	F10:049	nvoAmpsM12_XXX	SNVT_count_inc_f
Watts Meter 10	AI	51	AI	51	Flt_XXX[050]	F10:050	nvoWattsM10_XXX	SNVT_count_inc_f
Watts Meter 11	AI	52	AI	52	Flt_XXX[051]	F10:051	nvoWattsM11_XXX	SNVT_count_inc_f
Watts Meter 12	AI	53	AI	53	Flt_XXX[052]	F10:052	nvoWattsM12_XXX	SNVT_count_inc_f
VARs Meter 10	AI	54	AI	54	Flt_XXX[053]	F10:053	nvoVARsM10_XXX	SNVT_count_inc_f
VARs Meter 11	AI	55	AI	55	Flt_XXX[054]	F10:054	nvoVARsM11_XXX	SNVT_count_inc_f
VARs Meter 12	AI	56	AI	56	Flt_XXX[055]	F10:055	nvoVARsM12_XXX	SNVT_count_inc_f
VAs Meter 10	AI	57	AI	57	Flt_XXX[056]	F10:056	nvoVAsM10_XXX	SNVT_count_inc_f
VAs Meter 11	AI	58	AI	58	Flt_XXX[057]	F10:057	nvoVAsM11_XXX	SNVT_count_inc_f
VAs Meter 12	AI	59	AI	59	Flt_XXX[058]	F10:058	nvoVAsM12_XXX	SNVT_count_inc_f
Power Factor Meter 10	AI	60	AI	60	Flt_XXX[059]	F10:059	nvoPFM10_XXX	SNVT_count_inc_f
Power Factor Meter 11	AI	61	AI	61	Flt_XXX[060]	F10:060	nvoPFM11_XXX	SNVT_count_inc_f
Power Factor Meter 12	AI	62	AI	62	Flt_XXX[061]	F10:061	nvoPFM12_XXX	SNVT_count_inc_f
Amps Meter 13	AI	63	AI	63	Flt_XXX[062]	F10:062	nvoAmpsM13_XXX	SNVT_count_inc_f
Amps Meter 14	AI	64	AI	64	Flt_XXX[063]	F10:063	nvoAmpsM14_XXX	SNVT_count_inc_f
Amps Meter 15	AI	65	AI	65	Flt_XXX[064]	F10:064	nvoAmpsM15_XXX	SNVT_count_inc_f
Watts Meter 13	AI	66	AI	66	Flt_XXX[065]	F10:065	nvoWattsM13_XXX	SNVT_count_inc_f
Watts Meter 14	AI	67	AI	67	Flt_XXX[066]	F10:066	nvoWattsM14_XXX	SNVT_count_inc_f
Watts Meter 15	AI	68	AI	68	Flt_XXX[067]	F10:067	nvoWattsM15_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
VARs Meter 13	AI	69	AI	69	Flt_XXX[068]	F10:068	nvoVARsM13_XXX	SNVT_count_inc_f
VARs Meter 14	AI	70	AI	70	Flt_XXX[069]	F10:069	nvoVARsM14_XXX	SNVT_count_inc_f
VARs Meter 15	AI	71	AI	71	Flt_XXX[070]	F10:070	nvoVARsM15_XXX	SNVT_count_inc_f
VAs Meter 13	AI	72	AI	72	Flt_XXX[071]	F10:071	nvoVAsM13_XXX	SNVT_count_inc_f
VAs Meter 14	AI	73	AI	73	Flt_XXX[072]	F10:072	nvoVAsM14_XXX	SNVT_count_inc_f
VAs Meter 15	AI	74	AI	74	Flt_XXX[073]	F10:073	nvoVAsM15_XXX	SNVT_count_inc_f
Power Factor Meter 13	AI	75	AI	75	Flt_XXX[074]	F10:074	nvoPFM13_XXX	SNVT_count_inc_f
Power Factor Meter 14	AI	76	AI	76	Flt_XXX[075]	F10:075	nvoPFM14_XXX	SNVT_count_inc_f
Power Factor Meter 15	AI	77	AI	77	Flt_XXX[076]	F10:076	nvoPFM15_XXX	SNVT_count_inc_f
Amps Meter 16	AI	78	AI	78	Flt_XXX[077]	F10:077	nvoAmpsM16_XXX	SNVT_count_inc_f
Amps Meter 17	AI	79	AI	79	Flt_XXX[078]	F10:078	nvoAmpsM17_XXX	SNVT_count_inc_f
Amps Meter 18	AI	80	AI	80	Flt_XXX[079]	F10:079	nvoAmpsM18_XXX	SNVT_count_inc_f
Watts Meter 16	AI	81	AI	81	Flt_XXX[080]	F10:080	nvoWattsM16_XXX	SNVT_count_inc_f
Watts Meter 17	AI	82	AI	82	Flt_XXX[081]	F10:081	nvoWattsM17_XXX	SNVT_count_inc_f
Watts Meter 18	AI	83	AI	83	Flt_XXX[082]	F10:082	nvoWattsM18_XXX	SNVT_count_inc_f
VARs Meter 16	AI	84	AI	84	Flt_XXX[083]	F10:083	nvoVARsM16_XXX	SNVT_count_inc_f
VARs Meter 17	AI	85	AI	85	Flt_XXX[084]	F10:084	nvoVARsM17_XXX	SNVT_count_inc_f
VARs Meter 18	AI	86	AI	86	Flt_XXX[085]	F10:085	nvoVARsM18_XXX	SNVT_count_inc_f
VAs Meter 16	AI	87	AI	87	Flt_XXX[086]	F10:086	nvoVAsM16_XXX	SNVT_count_inc_f
VAs Meter 17	AI	88	AI	88	Flt_XXX[087]	F10:087	nvoVAsM17_XXX	SNVT_count_inc_f
VAs Meter 18	AI	89	AI	89	Flt_XXX[088]	F10:088	nvoVAsM18_XXX	SNVT_count_inc_f
Power Factor Meter 16	AI	90	AI	90	Flt_XXX[089]	F10:089	nvoPFM16_XXX	SNVT_count_inc_f
Power Factor Meter 17	AI	91	AI	91	Flt_XXX[090]	F10:090	nvoPFM17_XXX	SNVT_count_inc_f
Power Factor Meter 18	AI	92	AI	92	Flt_XXX[091]	F10:091	nvoPFM18_XXX	SNVT_count_inc_f
Amps Meter 19	AI	93	AI	93	Flt_XXX[092]	F10:092	nvoAmpsM19_XXX	SNVT_count_inc_f
Amps Meter 20	AI	94	AI	94	Flt_XXX[093]	F10:093	nvoAmpsM20_XXX	SNVT_count_inc_f
Amps Meter 21	AI	95	AI	95	Flt_XXX[094]	F10:094	nvoAmpsM21_XXX	SNVT_count_inc_f
Watts Meter 19	AI	96	AI	96	Flt_XXX[095]	F10:095	nvoWattsM19_XXX	SNVT_count_inc_f
Watts Meter 20	AI	97	AI	97	Flt_XXX[096]	F10:096	nvoWattsM20_XXX	SNVT_count_inc_f
Watts Meter 21	AI	98	AI	98	Flt_XXX[097]	F10:097	nvoWattsM21_XXX	SNVT_count_inc_f
VARs Meter 19	AI	99	AI	99	Flt_XXX[098]	F10:098	nvoVARsM19_XXX	SNVT_count_inc_f
VARs Meter 20	AI	100	AI	100	Flt_XXX[099]	F10:099	nvoVARsM20_XXX	SNVT_count_inc_f
VARs Meter 21	AI	101	AI	101	Flt_XXX[100]	F10:100	nvoVARsM21_XXX	SNVT_count_inc_f
VAs Meter 19	AI	102	AI	102	Flt_XXX[101]	F10:101	nvoVAsM19_XXX	SNVT_count_inc_f
VAs Meter 20	AI	103	AI	103	Flt_XXX[102]	F10:102	nvoVAsM20_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
VAs Meter 21	AI	104	AI	104	Flt_XXX[103]	F10:103	nvoVAsM21_XXX	SNVT_count_inc_f
Power Factor Meter 19	AI	105	AI	105	Flt_XXX[104]	F10:104	nvoPFM19_XXX	SNVT_count_inc_f
Power Factor Meter 20	AI	106	AI	106	Flt_XXX[105]	F10:105	nvoPFM20_XXX	SNVT_count_inc_f
Power Factor Meter 21	AI	107	AI	107	Flt_XXX[106]	F10:106	nvoPFM21_XXX	SNVT_count_inc_f
Amps Meter 22	AI	108	AI	108	Flt_XXX[107]	F10:107	nvoAmpsM22_XXX	SNVT_count_inc_f
Amps Meter 23	AI	109	AI	109	Flt_XXX[108]	F10:108	nvoAmpsM23_XXX	SNVT_count_inc_f
Amps Meter 24	AI	110	AI	110	Flt_XXX[109]	F10:109	nvoAmpsM24_XXX	SNVT_count_inc_f
Watts Meter 22	AI	111	AI	111	Flt_XXX[110]	F10:110	nvoWattsM22_XXX	SNVT_count_inc_f
Watts Meter 23	AI	112	AI	112	Flt_XXX[111]	F10:111	nvoWattsM23_XXX	SNVT_count_inc_f
Watts Meter 24	AI	113	AI	113	Flt_XXX[112]	F10:112	nvoWattsM24_XXX	SNVT_count_inc_f
VARs Meter 22	AI	114	AI	114	Flt_XXX[113]	F10:113	nvoVARsM22_XXX	SNVT_count_inc_f
VARs Meter 23	AI	115	AI	115	Flt_XXX[114]	F10:114	nvoVARsM23_XXX	SNVT_count_inc_f
VARs Meter 24	AI	116	AI	116	Flt_XXX[115]	F10:115	nvoVARsM24_XXX	SNVT_count_inc_f
VAs Meter 22	AI	117	AI	117	Flt_XXX[116]	F10:116	nvoVAsM22_XXX	SNVT_count_inc_f
VAs Meter 23	AI	118	AI	118	Flt_XXX[117]	F10:117	nvoVAsM23_XXX	SNVT_count_inc_f
VAs Meter 24	AI	119	AI	119	Flt_XXX[118]	F10:118	nvoVAsM24_XXX	SNVT_count_inc_f
Power Factor Meter 22	AI	120	AI	120	Flt_XXX[119]	F10:119	nvoPFM22_XXX	SNVT_count_inc_f
Power Factor Meter 23	AI	121	AI	121	Flt_XXX[120]	F10:120	nvoPFM23_XXX	SNVT_count_inc_f
Power Factor Meter 24	AI	122	AI	122	Flt_XXX[121]	F10:121	nvoPFM24_XXX	SNVT_count_inc_f
W-hours Received Meter 01	AI	123	AI	123	S32_XXX[000]	F12:000	nvoWHRecM1_XXX	SNVT_count_inc_f
W-hours Received Meter 02	AI	124	AI	124	S32_XXX[001]	F12:001	nvoWHRecM2_XXX	SNVT_count_inc_f
W-hours Received Meter 03	AI	125	AI	125	S32_XXX[002]	F12:002	nvoWHRecM3_XXX	SNVT_count_inc_f
W-hours Delivered Meter 01	AI	126	AI	126	S32_XXX[003]	F12:003	nvoWHDelM1_XXX	SNVT_count_inc_f
W-hours Delivered Meter 02	AI	127	AI	127	S32_XXX[004]	F12:004	nvoWHDelM2_XXX	SNVT_count_inc_f
W-hours Delivered Meter 03	AI	128	AI	128	S32_XXX[005]	F12:005	nvoWHDelM3_XXX	SNVT_count_inc_f
W-hours Net Meter 01	AI	129	AI	129	S32_XXX[006]	F12:006	nvoWHNetM1_XXX	SNVT_count_inc_f
W-hours Net Meter 02	AI	130	AI	130	S32_XXX[007]	F12:007	nvoWHNetM2_XXX	SNVT_count_inc_f
W-hours Net Meter 03	AI	131	AI	131	S32_XXX[008]	F12:008	nvoWHNetM3_XXX	SNVT_count_inc_f
W-hours Total Meter 01	AI	132	AI	132	S32_XXX[009]	F12:009	nvoWHTotM1_XXX	SNVT_count_inc_f
W-hours Total Meter 02	AI	133	AI	133	S32_XXX[010]	F12:010	nvoWHTotM2_XXX	SNVT_count_inc_f
W-hours Total Meter 03	AI	134	AI	134	S32_XXX[011]	F12:011	nvoWHTotM3_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 01	AI	135	AI	135	S32_XXX[012]	F12:012	nvoVARhPosM1_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 02	AI	136	AI	136	S32_XXX[013]	F12:013	nvoVARhPosM2_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 03	AI	137	AI	137	S32_XXX[014]	F12:014	nvoVARhPosM3_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 01	AI	138	AI	138	S32_XXX[015]	F12:015	nvoVARhNegM1_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
VAR-hours Negative Meter 02	AI	139	AI	139	S32_XXX[016]	F12:016	nvoVARhNegM2_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 03	AI	140	AI	140	S32_XXX[017]	F12:017	nvoVARhNegM3_XXX	SNVT_count_inc_f
VAR-hours Net Meter 01	AI	141	AI	141	S32_XXX[018]	F12:018	nvoVARhNetM1_XXX	SNVT_count_inc_f
VAR-hours Net Meter 02	AI	142	AI	142	S32_XXX[019]	F12:019	nvoVARhNetM2_XXX	SNVT_count_inc_f
VAR-hours Net Meter 03	AI	143	AI	143	S32_XXX[020]	F12:020	nvoVARhNetM3_XXX	SNVT_count_inc_f
VAR-hours Total Meter 01	AI	144	AI	144	S32_XXX[021]	F12:021	nvoVARhTotM1_XXX	SNVT_count_inc_f
VAR-hours Total Meter 02	AI	145	AI	145	S32_XXX[022]	F12:022	nvoVARhTotM2_XXX	SNVT_count_inc_f
VAR-hours Total Meter 03	AI	146	AI	146	S32_XXX[023]	F12:023	nvoVARhTotM3_XXX	SNVT_count_inc_f
VA-hours Total Meter 01	AI	147	AI	147	S32_XXX[024]	F12:024	nvoVAhTotM1_XXX	SNVT_count_inc_f
VA-hours Total Meter 02	AI	148	AI	148	S32_XXX[025]	F12:025	nvoVAhTotM2_XXX	SNVT_count_inc_f
VA-hours Total Meter 03	AI	149	AI	149	S32_XXX[026]	F12:026	nvoVAhTotM3_XXX	SNVT_count_inc_f
W-hours Received Meter 04	AI	150	AI	150	S32_XXX[027]	F12:027	nvoWHRecM4_XXX	SNVT_count_inc_f
W-hours Received Meter 05	AI	151	AI	151	S32_XXX[028]	F12:028	nvoWHRecM5_XXX	SNVT_count_inc_f
W-hours Received Meter 06	AI	152	AI	152	S32_XXX[029]	F12:029	nvoWHRecM6_XXX	SNVT_count_inc_f
W-hours Delivered Meter 04	AI	153	AI	153	S32_XXX[030]	F12:030	nvoWHDelM4_XXX	SNVT_count_inc_f
W-hours Delivered Meter 05	AI	154	AI	154	S32_XXX[031]	F12:031	nvoWHDelM5_XXX	SNVT_count_inc_f
W-hours Delivered Meter 06	AI	155	AI	155	S32_XXX[032]	F12:032	nvoWHDelM6_XXX	SNVT_count_inc_f
W-hours Net Meter 04	AI	156	AI	156	S32_XXX[033]	F12:033	nvoWHNetM4_XXX	SNVT_count_inc_f
W-hours Net Meter 05	AI	157	AI	157	S32_XXX[034]	F12:034	nvoWHNetM5_XXX	SNVT_count_inc_f
W-hours Net Meter 06	AI	158	AI	158	S32_XXX[035]	F12:035	nvoWHNetM6_XXX	SNVT_count_inc_f
W-hours Total Meter 04	AI	159	AI	159	S32_XXX[036]	F12:036	nvoWHTotM4_XXX	SNVT_count_inc_f
W-hours Total Meter 05	AI	160	AI	160	S32_XXX[037]	F12:037	nvoWHTotM5_XXX	SNVT_count_inc_f
W-hours Total Meter 06	AI	161	AI	161	S32_XXX[038]	F12:038	nvoWHTotM6_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 04	AI	162	AI	162	S32_XXX[039]	F12:039	nvoVARhPosM4_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 05	AI	163	AI	163	S32_XXX[040]	F12:040	nvoVARhPosM5_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 06	AI	164	AI	164	S32_XXX[041]	F12:041	nvoVARhPosM6_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 04	AI	165	AI	165	S32_XXX[042]	F12:042	nvoVARhNegM4_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 05	AI	166	AI	166	S32_XXX[043]	F12:043	nvoVARhNegM5_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 06	AI	167	AI	167	S32_XXX[044]	F12:044	nvoVARhNegM6_XXX	SNVT_count_inc_f
VAR-hours Net Meter 04	AI	168	AI	168	S32_XXX[045]	F12:045	nvoVARhNetM4_XXX	SNVT_count_inc_f
VAR-hours Net Meter 05	AI	169	AI	169	S32_XXX[046]	F12:046	nvoVARhNetM5_XXX	SNVT_count_inc_f
VAR-hours Net Meter 06	AI	170	AI	170	S32_XXX[047]	F12:047	nvoVARhNetM6_XXX	SNVT_count_inc_f
VAR-hours Total Meter 04	AI	171	AI	171	S32_XXX[048]	F12:048	nvoVARhTotM4_XXX	SNVT_count_inc_f
VAR-hours Total Meter 05	AI	172	AI	172	S32_XXX[049]	F12:049	nvoVARhTotM5_XXX	SNVT_count_inc_f
VAR-hours Total Meter 06	AI	173	AI	173	S32_XXX[050]	F12:050	nvoVARhTotM6_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
VA-hours Total Meter 04	AI	174	AI	174	S32_XXX[051]	F12:051	nvoVAhTotM4_XXX	SNVT_count_inc_f
VA-hours Total Meter 05	AI	175	AI	175	S32_XXX[052]	F12:052	nvoVAhTotM5_XXX	SNVT_count_inc_f
VA-hours Total Meter 06	AI	176	AI	176	S32_XXX[053]	F12:053	nvoVAhTotM6_XXX	SNVT_count_inc_f
W-hours Received Meter 07	AI	177	AI	177	S32_XXX[054]	F12:054	nvoWHRecM7_XXX	SNVT_count_inc_f
W-hours Received Meter 08	AI	178	AI	178	S32_XXX[055]	F12:055	nvoWHRecM8_XXX	SNVT_count_inc_f
W-hours Received Meter 09	AI	179	AI	179	S32_XXX[056]	F12:056	nvoWHRecM9_XXX	SNVT_count_inc_f
W-hours Delivered Meter 07	AI	180	AI	180	S32_XXX[057]	F12:057	nvoWHDelM7_XXX	SNVT_count_inc_f
W-hours Delivered Meter 08	AI	181	AI	181	S32_XXX[058]	F12:058	nvoWHDelM8_XXX	SNVT_count_inc_f
W-hours Delivered Meter 09	AI	182	AI	182	S32_XXX[059]	F12:059	nvoWHDelM9_XXX	SNVT_count_inc_f
W-hours Net Meter 07	AI	183	AI	183	S32_XXX[060]	F12:060	nvoWHNetM7_XXX	SNVT_count_inc_f
W-hours Net Meter 08	AI	184	AI	184	S32_XXX[061]	F12:061	nvoWHNetM8_XXX	SNVT_count_inc_f
W-hours Net Meter 09	AI	185	AI	185	S32_XXX[062]	F12:062	nvoWHNetM9_XXX	SNVT_count_inc_f
W-hours Total Meter 07	AI	186	AI	186	S32_XXX[063]	F12:063	nvoWHTotM7_XXX	SNVT_count_inc_f
W-hours Total Meter 08	AI	187	AI	187	S32_XXX[064]	F12:064	nvoWHTotM8_XXX	SNVT_count_inc_f
W-hours Total Meter 09	AI	188	AI	188	S32_XXX[065]	F12:065	nvoWHTotM9_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 07	AI	189	AI	189	S32_XXX[066]	F12:066	nvoVARhPosM7_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 08	AI	190	AI	190	S32_XXX[067]	F12:067	nvoVARhPosM8_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 09	AI	191	AI	191	S32_XXX[068]	F12:068	nvoVARhPosM9_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 07	AI	192	AI	192	S32_XXX[069]	F12:069	nvoVARhNegM7_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 08	AI	193	AI	193	S32_XXX[070]	F12:070	nvoVARhNegM8_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 09	AI	194	AI	194	S32_XXX[071]	F12:071	nvoVARhNegM9_XXX	SNVT_count_inc_f
VAR-hours Net Meter 07	AI	195	AI	195	S32_XXX[072]	F12:072	nvoVARhNetM7_XXX	SNVT_count_inc_f
VAR-hours Net Meter 08	AI	196	AI	196	S32_XXX[073]	F12:073	nvoVARhNetM8_XXX	SNVT_count_inc_f
VAR-hours Net Meter 09	AI	197	AI	197	S32_XXX[074]	F12:074	nvoVARhNetM9_XXX	SNVT_count_inc_f
VAR-hours Total Meter 07	AI	198	AI	198	S32_XXX[075]	F12:075	nvoVARhTotM7_XXX	SNVT_count_inc_f
VAR-hours Total Meter 08	AI	199	AI	199	S32_XXX[076]	F12:076	nvoVARhTotM8_XXX	SNVT_count_inc_f
VAR-hours Total Meter 09	AI	200	AI	200	S32_XXX[077]	F12:077	nvoVARhTotM9_XXX	SNVT_count_inc_f
VA-hours Total Meter 07	AI	201	AI	201	S32_XXX[078]	F12:078	nvoVAhTotM7_XXX	SNVT_count_inc_f
VA-hours Total Meter 08	AI	202	AI	202	S32_XXX[079]	F12:079	nvoVAhTotM8_XXX	SNVT_count_inc_f
VA-hours Total Meter 09	AI	203	AI	203	S32_XXX[080]	F12:080	nvoVAhTotM9_XXX	SNVT_count_inc_f
W-hours Received Meter 10	AI	204	AI	204	S32_XXX[081]	F12:081	nvoWHRecM10_XXX	SNVT_count_inc_f
W-hours Received Meter 11	AI	205	AI	205	S32_XXX[082]	F12:082	nvoWHRecM11_XXX	SNVT_count_inc_f
W-hours Received Meter 12	AI	206	AI	206	S32_XXX[083]	F12:083	nvoWHRecM12_XXX	SNVT_count_inc_f
W-hours Delivered Meter 10	AI	207	AI	207	S32_XXX[084]	F12:084	nvoWHDelM10_XXX	SNVT_count_inc_f
W-hours Delivered Meter 11	AI	208	AI	208	S32_XXX[085]	F12:085	nvoWHDelM11_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
W-hours Delivered Meter 12	AI	209	AI	209	S32_XXX[086]	F12:086	nvoWHDelM12_XXX	SNVT_count_inc_f
W-hours Net Meter 10	AI	210	AI	210	S32_XXX[087]	F12:087	nvoWHNetM10_XXX	SNVT_count_inc_f
W-hours Net Meter 11	AI	211	AI	211	S32_XXX[088]	F12:088	nvoWHNetM11_XXX	SNVT_count_inc_f
W-hours Net Meter 12	AI	212	AI	212	S32_XXX[089]	F12:089	nvoWHNetM12_XXX	SNVT_count_inc_f
W-hours Total Meter 10	AI	213	AI	213	S32_XXX[090]	F12:090	nvoWHTotM10_XXX	SNVT_count_inc_f
W-hours Total Meter 11	AI	214	AI	214	S32_XXX[091]	F12:091	nvoWHTotM11_XXX	SNVT_count_inc_f
W-hours Total Meter 12	AI	215	AI	215	S32_XXX[092]	F12:092	nvoWHTotM12_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 10	AI	216	AI	216	S32_XXX[093]	F12:093	nvoVARhPsM10_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 11	AI	217	AI	217	S32_XXX[094]	F12:094	nvoVARhPsM11_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 12	AI	218	AI	218	S32_XXX[095]	F12:095	nvoVARhPsM12_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 10	AI	219	AI	219	S32_XXX[096]	F12:096	nvoVARhNgM10_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 11	AI	220	AI	220	S32_XXX[097]	F12:097	nvoVARhNgM11_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 12	AI	221	AI	221	S32_XXX[098]	F12:098	nvoVARhNgM12_XXX	SNVT_count_inc_f
VAR-hours Net Meter 10	AI	222	AI	222	S32_XXX[099]	F12:099	nvoVARhNtM10_XXX	SNVT_count_inc_f
VAR-hours Net Meter 11	AI	223	AI	223	S32_XXX[100]	F12:100	nvoVARhNtM11_XXX	SNVT_count_inc_f
VAR-hours Net Meter 12	AI	224	AI	224	S32_XXX[101]	F12:101	nvoVARhNtM12_XXX	SNVT_count_inc_f
VAR-hours Total Meter 10	AI	225	AI	225	S32_XXX[102]	F12:102	nvoVARhToM10_XXX	SNVT_count_inc_f
VAR-hours Total Meter 11	AI	226	AI	226	S32_XXX[103]	F12:103	nvoVARhToM11_XXX	SNVT_count_inc_f
VAR-hours Total Meter 12	AI	227	AI	227	S32_XXX[104]	F12:104	nvoVARhToM12_XXX	SNVT_count_inc_f
VA-hours Total Meter 10	AI	228	AI	228	S32_XXX[105]	F12:105	nvoVAhTotM10_XXX	SNVT_count_inc_f
VA-hours Total Meter 11	AI	229	AI	229	S32_XXX[106]	F12:106	nvoVAhTotM11_XXX	SNVT_count_inc_f
VA-hours Total Meter 12	AI	230	AI	230	S32_XXX[107]	F12:107	nvoVAhTotM12_XXX	SNVT_count_inc_f
W-hours Received Meter 13	AI	231	AI	231	S32_XXX[108]	F12:108	nvoWHRecM13_XXX	SNVT_count_inc_f
W-hours Received Meter 14	AI	232	AI	232	S32_XXX[109]	F12:109	nvoWHRecM14_XXX	SNVT_count_inc_f
W-hours Received Meter 15	AI	233	AI	233	S32_XXX[110]	F12:110	nvoWHRecM15_XXX	SNVT_count_inc_f
W-hours Delivered Meter 13	AI	234	AI	234	S32_XXX[111]	F12:111	nvoWHDelM13_XXX	SNVT_count_inc_f
W-hours Delivered Meter 14	AI	235	AI	235	S32_XXX[112]	F12:112	nvoWHDelM14_XXX	SNVT_count_inc_f
W-hours Delivered Meter 15	AI	236	AI	236	S32_XXX[113]	F12:113	nvoWHDelM15_XXX	SNVT_count_inc_f
W-hours Net Meter 13	AI	237	AI	237	S32_XXX[114]	F12:114	nvoWHNetM13_XXX	SNVT_count_inc_f
W-hours Net Meter 14	AI	238	AI	238	S32_XXX[115]	F12:115	nvoWHNetM14_XXX	SNVT_count_inc_f
W-hours Net Meter 15	AI	239	AI	239	S32_XXX[116]	F12:116	nvoWHNetM15_XXX	SNVT_count_inc_f
W-hours Total Meter 13	AI	240	AI	240	S32_XXX[117]	F12:117	nvoWHTotM13_XXX	SNVT_count_inc_f
W-hours Total Meter 14	AI	241	AI	241	S32_XXX[118]	F12:118	nvoWHTotM14_XXX	SNVT_count_inc_f
W-hours Total Meter 15	AI	242	AI	242	S32_XXX[119]	F12:119	nvoWHTotM15_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 13	AI	243	AI	243	S32_XXX[120]	F12:120	nvoVARhPsM13_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
VAR-hours Positive Meter 14	AI	244	AI	244	S32_XXX[121]	F12:121	nvoVARhPsM14_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 15	AI	245	AI	245	S32_XXX[122]	F12:122	nvoVARhPsM15_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 13	AI	246	AI	246	S32_XXX[123]	F12:123	nvoVARhNgM13_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 14	AI	247	AI	247	S32_XXX[124]	F12:124	nvoVARhNgM14_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 15	AI	248	AI	248	S32_XXX[125]	F12:125	nvoVARhNgM15_XXX	SNVT_count_inc_f
VAR-hours Net Meter 13	AI	249	AI	249	S32_XXX[126]	F12:126	nvoVARhNtM13_XXX	SNVT_count_inc_f
VAR-hours Net Meter 14	AI	250	AI	250	S32_XXX[127]	F12:127	nvoVARhNtM14_XXX	SNVT_count_inc_f
VAR-hours Net Meter 15	AI	251	AI	251	S32_XXX[128]	F12:128	nvoVARhNtM15_XXX	SNVT_count_inc_f
VAR-hours Total Meter 13	AI	252	AI	252	S32_XXX[129]	F12:129	nvoVARhToM13_XXX	SNVT_count_inc_f
VAR-hours Total Meter 14	AI	253	AI	253	S32_XXX[130]	F12:130	nvoVARhToM14_XXX	SNVT_count_inc_f
VAR-hours Total Meter 15	AI	254	AI	254	S32_XXX[131]	F12:131	nvoVARhToM15_XXX	SNVT_count_inc_f
VA-hours Total Meter 13	AI	255	AI	255	S32_XXX[132]	F12:132	nvoVAhTotM13_XXX	SNVT_count_inc_f
VA-hours Total Meter 14	AI	256	AI	256	S32_XXX[133]	F12:133	nvoVAhTotM14_XXX	SNVT_count_inc_f
VA-hours Total Meter 15	AI	257	ADF	1	S32_XXX[134]	F12:134	nvoVAhTotM15_XXX	SNVT_count_inc_f
W-hours Received Meter 16	AI	258	ADF	2	S32_XXX[135]	F12:135	nvoWHRecM16_XXX	SNVT_count_inc_f
W-hours Received Meter 17	AI	259	ADF	3	S32_XXX[136]	F12:136	nvoWHRecM17_XXX	SNVT_count_inc_f
W-hours Received Meter 18	AI	260	ADF	4	S32_XXX[137]	F12:137	nvoWHRecM18_XXX	SNVT_count_inc_f
W-hours Delivered Meter 16	AI	261	ADF	5	S32_XXX[138]	F12:138	nvoWHDelM16_XXX	SNVT_count_inc_f
W-hours Delivered Meter 17	AI	262	ADF	6	S32_XXX[139]	F12:139	nvoWHDelM17_XXX	SNVT_count_inc_f
W-hours Delivered Meter 18	AI	263	ADF	7	S32_XXX[140]	F12:140	nvoWHDelM18_XXX	SNVT_count_inc_f
W-hours Net Meter 16	AI	264	ADF	8	S32_XXX[141]	F12:141	nvoWHNetM16_XXX	SNVT_count_inc_f
W-hours Net Meter 17	AI	265	ADF	9	S32_XXX[142]	F12:142	nvoWHNetM17_XXX	SNVT_count_inc_f
W-hours Net Meter 18	AI	266	ADF	10	S32_XXX[143]	F12:143	nvoWHNetM18_XXX	SNVT_count_inc_f
W-hours Total Meter 16	AI	267	ADF	11	S32_XXX[144]	F12:144	nvoWHTotM16_XXX	SNVT_count_inc_f
W-hours Total Meter 17	AI	268	ADF	12	S32_XXX[145]	F12:145	nvoWHTotM17_XXX	SNVT_count_inc_f
W-hours Total Meter 18	AI	269	ADF	13	S32_XXX[146]	F12:146	nvoWHTotM18_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 16	AI	270	ADF	14	S32_XXX[147]	F12:147	nvoVARhPsM16_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 17	AI	271	ADF	15	S32_XXX[148]	F12:148	nvoVARhPsM17_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 18	AI	272	ADF	16	S32_XXX[149]	F12:149	nvoVARhPsM18_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 16	AI	273	ADF	17	S32_XXX[150]	F12:150	nvoVARhNgM16_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 17	AI	274	ADF	18	S32_XXX[151]	F12:151	nvoVARhNgM17_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 18	AI	275	ADF	19	S32_XXX[152]	F12:152	nvoVARhNgM18_XXX	SNVT_count_inc_f
VAR-hours Net Meter 16	AI	276	ADF	20	S32_XXX[153]	F12:153	nvoVARhNtM16_XXX	SNVT_count_inc_f
VAR-hours Net Meter 17	AI	277	ADF	21	S32_XXX[154]	F12:154	nvoVARhNtM17_XXX	SNVT_count_inc_f
VAR-hours Net Meter 18	AI	278	ADF	22	S32_XXX[155]	F12:155	nvoVARhNtM18_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
VAR-hours Total Meter 16	AI	279	ADF	23	S32_XXX[156]	F12:156	nvoVARhToM16_XXX	SNVT_count_inc_f
VAR-hours Total Meter 17	AI	280	ADF	24	S32_XXX[157]	F12:157	nvoVARhToM17_XXX	SNVT_count_inc_f
VAR-hours Total Meter 18	AI	281	ADF	25	S32_XXX[158]	F12:158	nvoVARhToM18_XXX	SNVT_count_inc_f
VA-hours Total Meter 16	AI	282	ADF	26	S32_XXX[159]	F12:159	nvoVAhTotM16_XXX	SNVT_count_inc_f
VA-hours Total Meter 17	AI	283	ADF	27	S32_XXX[160]	F12:160	nvoVAhTotM17_XXX	SNVT_count_inc_f
VA-hours Total Meter 18	AI	284	ADF	28	S32_XXX[161]	F12:161	nvoVAhTotM18_XXX	SNVT_count_inc_f
W-hours Received Meter 19	AI	285	ADF	29	S32_XXX[162]	F12:162	nvoWHRecM19_XXX	SNVT_count_inc_f
W-hours Received Meter 20	AI	286	ADF	30	S32_XXX[163]	F12:163	nvoWHRecM20_XXX	SNVT_count_inc_f
W-hours Received Meter 21	AI	287	ADF	31	S32_XXX[164]	F12:164	nvoWHRecM21_XXX	SNVT_count_inc_f
W-hours Delivered Meter 19	AI	288	ADF	32	S32_XXX[165]	F12:165	nvoWHDelM19_XXX	SNVT_count_inc_f
W-hours Delivered Meter 20	AI	289	ADF	33	S32_XXX[166]	F12:166	nvoWHDelM20_XXX	SNVT_count_inc_f
W-hours Delivered Meter 21	AI	290	ADF	34	S32_XXX[167]	F12:167	nvoWHDelM21_XXX	SNVT_count_inc_f
W-hours Net Meter 19	AI	291	ADF	35	S32_XXX[168]	F12:168	nvoWHNetM19_XXX	SNVT_count_inc_f
W-hours Net Meter 20	AI	292	ADF	36	S32_XXX[169]	F12:169	nvoWHNetM20_XXX	SNVT_count_inc_f
W-hours Net Meter 21	AI	293	ADF	37	S32_XXX[170]	F12:170	nvoWHNetM21_XXX	SNVT_count_inc_f
W-hours Total Meter 19	AI	294	ADF	38	S32_XXX[171]	F12:171	nvoWHTotM19_XXX	SNVT_count_inc_f
W-hours Total Meter 20	AI	295	ADF	39	S32_XXX[172]	F12:172	nvoWHTotM20_XXX	SNVT_count_inc_f
W-hours Total Meter 21	AI	296	ADF	40	S32_XXX[173]	F12:173	nvoWHTotM21_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 19	AI	297	ADF	41	S32_XXX[174]	F12:174	nvoVARhPsM19_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 20	AI	298	ADF	42	S32_XXX[175]	F12:175	nvoVARhPsM20_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 21	AI	299	ADF	43	S32_XXX[176]	F12:176	nvoVARhPsM21_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 19	AI	300	ADF	44	S32_XXX[177]	F12:177	nvoVARhNgM19_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 20	AI	301	ADF	45	S32_XXX[178]	F12:178	nvoVARhNgM20_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 21	AI	302	ADF	46	S32_XXX[179]	F12:179	nvoVARhNgM21_XXX	SNVT_count_inc_f
VAR-hours Net Meter 19	AI	303	ADF	47	S32_XXX[180]	F12:180	nvoVARhNtM19_XXX	SNVT_count_inc_f
VAR-hours Net Meter 20	AI	304	ADF	48	S32_XXX[181]	F12:181	nvoVARhNtM20_XXX	SNVT_count_inc_f
VAR-hours Net Meter 21	AI	305	ADF	49	S32_XXX[182]	F12:182	nvoVARhNtM21_XXX	SNVT_count_inc_f
VAR-hours Total Meter 19	AI	306	ADF	50	S32_XXX[183]	F12:183	nvoVARhToM19_XXX	SNVT_count_inc_f
VAR-hours Total Meter 20	AI	307	ADF	51	S32_XXX[184]	F12:184	nvoVARhToM20_XXX	SNVT_count_inc_f
VAR-hours Total Meter 21	AI	308	ADF	52	S32_XXX[185]	F12:185	nvoVARhToM21_XXX	SNVT_count_inc_f
VA-hours Total Meter 19	AI	309	ADF	53	S32_XXX[186]	F12:186	nvoVAhTotM19_XXX	SNVT_count_inc_f
VA-hours Total Meter 20	AI	310	ADF	54	S32_XXX[187]	F12:187	nvoVAhTotM20_XXX	SNVT_count_inc_f
VA-hours Total Meter 21	AI	311	ADF	55	S32_XXX[188]	F12:188	nvoVAhTotM21_XXX	SNVT_count_inc_f
W-hours Received Meter 22	AI	312	ADF	56	S32_XXX[189]	F12:189	nvoWHRecM22_XXX	SNVT_count_inc_f
W-hours Received Meter 23	AI	313	ADF	57	S32_XXX[190]	F12:190	nvoWHRecM23_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
W-hours Received Meter 24	AI	314	ADF	58	S32_XXX[191]	F12:191	nvoWHRecM24_XXX	SNVT_count_inc_f
W-hours Delivered Meter 22	AI	315	ADF	59	S32_XXX[192]	F12:192	nvoWHDelM22_XXX	SNVT_count_inc_f
W-hours Delivered Meter 23	AI	316	ADF	60	S32_XXX[193]	F12:193	nvoWHDelM23_XXX	SNVT_count_inc_f
W-hours Delivered Meter 24	AI	317	ADF	61	S32_XXX[194]	F12:194	nvoWHDelM24_XXX	SNVT_count_inc_f
W-hours Net Meter 22	AI	318	ADF	62	S32_XXX[195]	F12:195	nvoWHNetM22_XXX	SNVT_count_inc_f
W-hours Net Meter 23	AI	319	ADF	63	S32_XXX[196]	F12:196	nvoWHNetM23_XXX	SNVT_count_inc_f
W-hours Net Meter 24	AI	320	ADF	64	S32_XXX[197]	F12:197	nvoWHNetM24_XXX	SNVT_count_inc_f
W-hours Total Meter 22	AI	321	ADF	65	S32_XXX[198]	F12:198	nvoWHTotM22_XXX	SNVT_count_inc_f
W-hours Total Meter 23	AI	322	ADF	66	S32_XXX[199]	F12:199	nvoWHTotM23_XXX	SNVT_count_inc_f
W-hours Total Meter 24	AI	323	ADF	67	S32_XXX[200]	F12:200	nvoWHTotM24_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 22	AI	324	ADF	68	S32_XXX[201]	F12:201	nvoVARhPsM22_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 23	AI	325	ADF	69	S32_XXX[202]	F12:202	nvoVARhPsM23_XXX	SNVT_count_inc_f
VAR-hours Positive Meter 24	AI	326	ADF	70	S32_XXX[203]	F12:203	nvoVARhPsM24_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 22	AI	327	ADF	71	S32_XXX[204]	F12:204	nvoVARhNgM22_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 23	AI	328	ADF	72	S32_XXX[205]	F12:205	nvoVARhNgM23_XXX	SNVT_count_inc_f
VAR-hours Negative Meter 24	AI	329	ADF	73	S32_XXX[206]	F12:206	nvoVARhNgM24_XXX	SNVT_count_inc_f
VAR-hours Net Meter 22	AI	330	ADF	74	S32_XXX[207]	F12:207	nvoVARhNtM22_XXX	SNVT_count_inc_f
VAR-hours Net Meter 23	AI	331	ADF	75	S32_XXX[208]	F12:208	nvoVARhNtM23_XXX	SNVT_count_inc_f
VAR-hours Net Meter 24	AI	332	ADF	76	S32_XXX[209]	F12:209	nvoVARhNtM24_XXX	SNVT_count_inc_f
VAR-hours Total Meter 22	AI	333	ADF	77	S32_XXX[210]	F12:210	nvoVARhToM22_XXX	SNVT_count_inc_f
VAR-hours Total Meter 23	AI	334	ADF	78	S32_XXX[211]	F12:211	nvoVARhToM23_XXX	SNVT_count_inc_f
VAR-hours Total Meter 24	AI	335	ADF	79	S32_XXX[212]	F12:212	nvoVARhToM24_XXX	SNVT_count_inc_f
VA-hours Total Meter 22	AI	336	ADF	80	S32_XXX[213]	F12:213	nvoVAhTotM22_XXX	SNVT_count_inc_f
VA-hours Total Meter 23	AI	337	ADF	81	S32_XXX[214]	F12:214	nvoVAhTotM23_XXX	SNVT_count_inc_f
VA-hours Total Meter 24	AI	338	ADF	82	S32_XXX[215]	F12:215	nvoVAhTotM24_XXX	SNVT_count_inc_f
Positive Watts Meter 01 Avg	AI	339	ADF	83	Flt_XXX[122]	F10:122	nvoPsWtM1Avg_XXX	SNVT_count_inc_f
Positive Watts Meter 02 Avg	AI	340	ADF	84	Flt_XXX[123]	F10:123	nvoPsWtM2Avg_XXX	SNVT_count_inc_f
Positive Watts Meter 03 Avg	AI	341	ADF	85	Flt_XXX[124]	F10:124	nvoPsWtM3Avg_XXX	SNVT_count_inc_f
Positive VARs Meter 01 Avg	AI	342	ADF	86	Flt_XXX[125]	F10:125	nvoPsVARM1Av_XXX	SNVT_count_inc_f
Positive VARs Meter 02 Avg	AI	343	ADF	87	Flt_XXX[126]	F10:126	nvoPsVARM2Av_XXX	SNVT_count_inc_f
Positive VARs Meter 03 Avg	AI	344	ADF	88	Flt_XXX[127]	F10:127	nvoPsVARM3Av_XXX	SNVT_count_inc_f
Negative Watts Meter 01 Avg	AI	345	ADF	89	Flt_XXX[128]	F10:128	nvoNgWtM1Avg_XXX	SNVT_count_inc_f
Negative Watts Meter 02 Avg	AI	346	ADF	90	Flt_XXX[129]	F10:129	nvoNgWtM2Avg_XXX	SNVT_count_inc_f
Negative Watts Meter 03 Avg	AI	347	ADF	91	Flt_XXX[130]	F10:130	nvoNgWtM3Avg_XXX	SNVT_count_inc_f
Negative VARs Meter 01 Avg	AI	348	ADF	92	Flt_XXX[131]	F10:131	nvoNgVARM1Av_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
Negative VARs Meter 02 Avg	AI	349	ADF	93	Flt_XXX[132]	F10:132	nvoNgVARM2Av_XXX	SNVT_count_inc_f
Negative VARs Meter 03 Avg	AI	350	ADF	94	Flt_XXX[133]	F10:133	nvoNgVARM3Av_XXX	SNVT_count_inc_f
Positive Watts Meter 04 Avg	AI	351	ADF	95	Flt_XXX[134]	F10:134	nvoPsWtM4Avg_XXX	SNVT_count_inc_f
Positive Watts Meter 05 Avg	AI	352	ADF	96	Flt_XXX[135]	F10:135	nvoPsWtM5Avg_XXX	SNVT_count_inc_f
Positive Watts Meter 06 Avg	AI	353	ADF	97	Flt_XXX[136]	F10:136	nvoPsWtM6Avg_XXX	SNVT_count_inc_f
Positive VARs Meter 04 Avg	AI	354	ADF	98	Flt_XXX[137]	F10:137	nvoPsVARM4Av_XXX	SNVT_count_inc_f
Positive VARs Meter 05 Avg	AI	355	ADF	99	Flt_XXX[138]	F10:138	nvoPsVARM5Av_XXX	SNVT_count_inc_f
Positive VARs Meter 06 Avg	AI	356	ADF	100	Flt_XXX[139]	F10:139	nvoPsVARM6Av_XXX	SNVT_count_inc_f
Negative Watts Meter 04 Avg	AI	357	ADF	101	Flt_XXX[140]	F10:140	nvoNgWtM4Avg_XXX	SNVT_count_inc_f
Negative Watts Meter 05 Avg	AI	358	ADF	102	Flt_XXX[141]	F10:141	nvoNgWtM5Avg_XXX	SNVT_count_inc_f
Negative Watts Meter 06 Avg	AI	359	ADF	103	Flt_XXX[142]	F10:142	nvoNgWtM6Avg_XXX	SNVT_count_inc_f
Negative VARs Meter 04 Avg	AI	360	ADF	104	Flt_XXX[143]	F10:143	nvoNgVARM4Av_XXX	SNVT_count_inc_f
Negative VARs Meter 05 Avg	AI	361	ADF	105	Flt_XXX[144]	F10:144	nvoNgVARM5Av_XXX	SNVT_count_inc_f
Negative VARs Meter 06 Avg	AI	362	ADF	106	Flt_XXX[145]	F10:145	nvoNgVARM6Av_XXX	SNVT_count_inc_f
Positive Watts Meter 07 Avg	AI	363	ADF	107	Flt_XXX[146]	F10:146	nvoPsWtM7Avg_XXX	SNVT_count_inc_f
Positive Watts Meter 08 Avg	AI	364	ADF	108	Flt_XXX[147]	F10:147	nvoPsWtM8Avg_XXX	SNVT_count_inc_f
Positive Watts Meter 09 Avg	AI	365	ADF	109	Flt_XXX[148]	F10:148	nvoPsWtM9Avg_XXX	SNVT_count_inc_f
Positive VARs Meter 07 Avg	AI	366	ADF	110	Flt_XXX[149]	F10:149	nvoPsVARM7Av_XXX	SNVT_count_inc_f
Positive VARs Meter 08 Avg	AI	367	ADF	111	Flt_XXX[150]	F10:150	nvoPsVARM8Av_XXX	SNVT_count_inc_f
Positive VARs Meter 09 Avg	AI	368	ADF	112	Flt_XXX[151]	F10:151	nvoPsVARM9Av_XXX	SNVT_count_inc_f
Negative Watts Meter 07 Avg	AI	369	ADF	113	Flt_XXX[152]	F10:152	nvoNgWtM7Avg_XXX	SNVT_count_inc_f
Negative Watts Meter 08 Avg	AI	370	ADF	114	Flt_XXX[153]	F10:153	nvoNgWtM8Avg_XXX	SNVT_count_inc_f
Negative Watts Meter 09 Avg	AI	371	ADF	115	Flt_XXX[154]	F10:154	nvoNgWtM9Avg_XXX	SNVT_count_inc_f
Negative VARs Meter 07 Avg	AI	372	ADF	116	Flt_XXX[155]	F10:155	nvoNgVARM7Av_XXX	SNVT_count_inc_f
Negative VARs Meter 08 Avg	AI	373	ADF	117	Flt_XXX[156]	F10:156	nvoNgVARM8Av_XXX	SNVT_count_inc_f
Negative VARs Meter 09 Avg	AI	374	ADF	118	Flt_XXX[157]	F10:157	nvoNgVARM9Av_XXX	SNVT_count_inc_f
Positive Watts Meter 10 Avg	AI	375	ADF	119	Flt_XXX[158]	F10:158	nvoPsWtM10Av_XXX	SNVT_count_inc_f
Positive Watts Meter 11 Avg	AI	376	ADF	120	Flt_XXX[159]	F10:159	nvoPsWtM11Av_XXX	SNVT_count_inc_f
Positive Watts Meter 12 Avg	AI	377	ADF	121	Flt_XXX[160]	F10:160	nvoPsWtM12Av_XXX	SNVT_count_inc_f
Positive VARs Meter 10 Avg	AI	378	ADF	122	Flt_XXX[161]	F10:161	nvoPsVAR10Av_XXX	SNVT_count_inc_f
Positive VARs Meter 11 Avg	AI	379	ADF	123	Flt_XXX[162]	F10:162	nvoPsVAR11Av_XXX	SNVT_count_inc_f
Positive VARs Meter 12 Avg	AI	380	ADF	124	Flt_XXX[163]	F10:163	nvoPsVAR12Av_XXX	SNVT_count_inc_f
Negative Watts Meter 10 Avg	AI	381	ADF	125	Flt_XXX[164]	F10:164	nvoNgWtM10Av_XXX	SNVT_count_inc_f
Negative Watts Meter 11 Avg	AI	382	ADF	126	Flt_XXX[165]	F10:165	nvoNgWtM11Av_XXX	SNVT_count_inc_f
Negative Watts Meter 12 Avg	AI	383	ADF	127	Flt_XXX[166]	F10:166	nvoNgWtM12Av_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
Negative VARs Meter 10 Avg	AI	384	ADF	128	Flt_XXX[167]	F10:167	nvoNgVAR10Av_XXX	SNVT_count_inc_f
Negative VARs Meter 11 Avg	AI	385	ADF	129	Flt_XXX[168]	F10:168	nvoNgVAR11Av_XXX	SNVT_count_inc_f
Negative VARs Meter 12 Avg	AI	386	ADF	130	Flt_XXX[169]	F10:169	nvoNgVAR12Av_XXX	SNVT_count_inc_f
Positive Watts Meter 13 Avg	AI	387	ADF	131	Flt_XXX[170]	F10:170	nvoPsWtM13Av_XXX	SNVT_count_inc_f
Positive Watts Meter 14 Avg	AI	388	ADF	132	Flt_XXX[171]	F10:171	nvoPsWtM14Av_XXX	SNVT_count_inc_f
Positive Watts Meter 15 Avg	AI	389	ADF	133	Flt_XXX[172]	F10:172	nvoPsWtM15Av_XXX	SNVT_count_inc_f
Positive VARs Meter 13 Avg	AI	390	ADF	134	Flt_XXX[173]	F10:173	nvoPsVAR13Av_XXX	SNVT_count_inc_f
Positive VARs Meter 14 Avg	AI	391	ADF	135	Flt_XXX[174]	F10:174	nvoPsVAR14Av_XXX	SNVT_count_inc_f
Positive VARs Meter 15 Avg	AI	392	ADF	136	Flt_XXX[175]	F10:175	nvoPsVAR15Av_XXX	SNVT_count_inc_f
Negative Watts Meter 13 Avg	AI	393	ADF	137	Flt_XXX[176]	F10:176	nvoNgWtM13Av_XXX	SNVT_count_inc_f
Negative Watts Meter 14 Avg	AI	394	ADF	138	Flt_XXX[177]	F10:177	nvoNgWtM14Av_XXX	SNVT_count_inc_f
Negative Watts Meter 15 Avg	AI	395	ADF	139	Flt_XXX[178]	F10:178	nvoNgWtM15Av_XXX	SNVT_count_inc_f
Negative VARs Meter 13 Avg	AI	396	ADF	140	Flt_XXX[179]	F10:179	nvoNgVAR13Av_XXX	SNVT_count_inc_f
Negative VARs Meter 14 Avg	AI	397	ADF	141	Flt_XXX[180]	F10:180	nvoNgVAR14Av_XXX	SNVT_count_inc_f
Negative VARs Meter 15 Avg	AI	398	ADF	142	Flt_XXX[181]	F10:181	nvoNgVAR15Av_XXX	SNVT_count_inc_f
Positive Watts Meter 16 Avg	AI	399	ADF	143	Flt_XXX[182]	F10:182	nvoPsWtM16Av_XXX	SNVT_count_inc_f
Positive Watts Meter 17 Avg	AI	400	ADF	144	Flt_XXX[183]	F10:183	nvoPsWtM17Av_XXX	SNVT_count_inc_f
Positive Watts Meter 18 Avg	AI	401	ADF	145	Flt_XXX[184]	F10:184	nvoPsWtM18Av_XXX	SNVT_count_inc_f
Positive VARs Meter 16 Avg	AI	402	ADF	146	Flt_XXX[185]	F10:185	nvoPsVAR16Av_XXX	SNVT_count_inc_f
Positive VARs Meter 17 Avg	AI	403	ADF	147	Flt_XXX[186]	F10:186	nvoPsVAR17Av_XXX	SNVT_count_inc_f
Positive VARs Meter 18 Avg	AI	404	ADF	148	Flt_XXX[187]	F10:187	nvoPsVAR18Av_XXX	SNVT_count_inc_f
Negative Watts Meter 16 Avg	AI	405	ADF	149	Flt_XXX[188]	F10:188	nvoNgWtM16Av_XXX	SNVT_count_inc_f
Negative Watts Meter 17 Avg	AI	406	ADF	150	Flt_XXX[189]	F10:189	nvoNgWtM17Av_XXX	SNVT_count_inc_f
Negative Watts Meter 18 Avg	AI	407	ADF	151	Flt_XXX[190]	F10:190	nvoNgWtM18Av_XXX	SNVT_count_inc_f
Negative VARs Meter 16 Avg	AI	408	ADF	152	Flt_XXX[191]	F10:191	nvoNgVAR16Av_XXX	SNVT_count_inc_f
Negative VARs Meter 17 Avg	AI	409	ADF	153	Flt_XXX[192]	F10:192	nvoNgVAR17Av_XXX	SNVT_count_inc_f
Negative VARs Meter 18 Avg	AI	410	ADF	154	Flt_XXX[193]	F10:193	nvoNgVAR18Av_XXX	SNVT_count_inc_f
Positive Watts Meter 19 Avg	AI	411	ADF	155	Flt_XXX[194]	F10:194	nvoPsWtM19Av_XXX	SNVT_count_inc_f
Positive Watts Meter 20 Avg	AI	412	ADF	156	Flt_XXX[195]	F10:195	nvoPsWtM20Av_XXX	SNVT_count_inc_f
Positive Watts Meter 21 Avg	AI	413	ADF	157	Flt_XXX[196]	F10:196	nvoPsWtM21Av_XXX	SNVT_count_inc_f
Positive VARs Meter 19 Avg	AI	414	ADF	158	Flt_XXX[197]	F10:197	nvoPsVAR19Av_XXX	SNVT_count_inc_f
Positive VARs Meter 20 Avg	AI	415	ADF	159	Flt_XXX[198]	F10:198	nvoPsVAR20Av_XXX	SNVT_count_inc_f
Positive VARs Meter 21 Avg	AI	416	ADF	160	Flt_XXX[199]	F10:199	nvoPsVAR21Av_XXX	SNVT_count_inc_f
Negative Watts Meter 19 Avg	AI	417	ADF	161	Flt_XXX[200]	F10:200	nvoNgWtM19Av_XXX	SNVT_count_inc_f
Negative Watts Meter 20 Avg	AI	418	ADF	162	Flt_XXX[201]	F10:201	nvoNgWtM20Av_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
Negative Watts Meter 21 Avg	AI	419	ADF	163	Flt_XXX[202]	F10:202	nvoNgWtM21Av_XXX	SNVT_count_inc_f
Negative VARs Meter 19 Avg	AI	420	ADF	164	Flt_XXX[203]	F10:203	nvoNgVAR19Av_XXX	SNVT_count_inc_f
Negative VARs Meter 20 Avg	AI	421	ADF	165	Flt_XXX[204]	F10:204	nvoNgVAR20Av_XXX	SNVT_count_inc_f
Negative VARs Meter 21 Avg	AI	422	ADF	166	Flt_XXX[205]	F10:205	nvoNgVAR21Av_XXX	SNVT_count_inc_f
Positive Watts Meter 22 Avg	AI	423	ADF	167	Flt_XXX[206]	F10:206	nvoPsWtM22Av_XXX	SNVT_count_inc_f
Positive Watts Meter 23 Avg	AI	424	ADF	168	Flt_XXX[207]	F10:207	nvoPsWtM23Av_XXX	SNVT_count_inc_f
Positive Watts Meter 24 Avg	AI	425	ADF	169	Flt_XXX[208]	F10:208	nvoPsWtM24Av_XXX	SNVT_count_inc_f
Positive VARs Meter 22 Avg	AI	426	ADF	170	Flt_XXX[209]	F10:209	nvoPsVAR22Av_XXX	SNVT_count_inc_f
Positive VARs Meter 23 Avg	AI	427	ADF	171	Flt_XXX[210]	F10:210	nvoPsVAR23Av_XXX	SNVT_count_inc_f
Positive VARs Meter 24 Avg	AI	428	ADF	172	Flt_XXX[211]	F10:211	nvoPsVAR24Av_XXX	SNVT_count_inc_f
Negative Watts Meter 22 Avg	AI	429	ADF	173	Flt_XXX[212]	F10:212	nvoNgWtM22Av_XXX	SNVT_count_inc_f
Negative Watts Meter 23 Avg	AI	430	ADF	174	Flt_XXX[213]	F10:213	nvoNgWtM23Av_XXX	SNVT_count_inc_f
Negative Watts Meter 24 Avg	AI	431	ADF	175	Flt_XXX[214]	F10:214	nvoNgWtM24Av_XXX	SNVT_count_inc_f
Negative VARs Meter 22 Avg	AI	432	ADF	176	Flt_XXX[215]	F10:215	nvoNgVAR22Av_XXX	SNVT_count_inc_f
Negative VARs Meter 23 Avg	AI	433	ADF	177	Flt_XXX[216]	F10:216	nvoNgVAR23Av_XXX	SNVT_count_inc_f
Negative VARs Meter 24 Avg	AI	434	ADF	178	Flt_XXX[217]	F10:217	nvoNgVAR24Av_XXX	SNVT_count_inc_f
Current Date and Time 1	AI	435	ADF	179	Dev1_XXX[000]	N13:000	nvoCurDatTm1_XXX	SNVT_count_inc_f
Current Date and Time 2	AI	436	ADF	180	Dev1_XXX[001]	N13:001	nvoCurDatTm2_XXX	SNVT_count_inc_f
Current Date and Time 3	AI	437	ADF	181	Dev1_XXX[002]	N13:002	nvoCurDatTm3_XXX	SNVT_count_inc_f
Pos Watts Meter 01 Max Avg Dem	AI	438	ADF	182	Flt_XXX[218]	F10:218	nvoPWt1MxAvD_XXX	SNVT_count_inc_f
Pos Watts Meter 02 Max Avg Dem	AI	439	ADF	183	Flt_XXX[219]	F10:219	nvoPWt2MxAvD_XXX	SNVT_count_inc_f
Pos Watts Meter 03 Max Avg Dem	AI	440	ADF	184	Flt_XXX[220]	F10:220	nvoPWt3MxAvD_XXX	SNVT_count_inc_f
Pos VARs Meter 01 Max Avg Dem	AI	441	ADF	185	Flt_XXX[221]	F10:221	nvoPVAR1MxAv_XXX	SNVT_count_inc_f
Pos VARs Meter 02 Max Avg Dem	AI	442	ADF	186	Flt_XXX[222]	F10:222	nvoPVAR2MxAv_XXX	SNVT_count_inc_f
Pos VARs Meter 03 Max Avg Dem	AI	443	ADF	187	Flt_XXX[223]	F10:223	nvoPVAR3MxAv_XXX	SNVT_count_inc_f
Neg Watts Meter 01 Max Avg Dem	AI	444	ADF	188	Flt_XXX[224]	F10:224	nvoNWt1MxAvD_XXX	SNVT_count_inc_f
Neg Watts Meter 02 Max Avg Dem	AI	445	ADF	189	Flt_XXX[225]	F10:225	nvoNWt2MxAvD_XXX	SNVT_count_inc_f
Neg Watts Meter 03 Max Avg Dem	AI	446	ADF	190	Flt_XXX[226]	F10:226	nvoNWt3MxAvD_XXX	SNVT_count_inc_f
Neg VARs Meter 01 Max Avg Dem	AI	447	ADF	191	Flt_XXX[227]	F10:227	nvoNVAR1MxAv_XXX	SNVT_count_inc_f
Neg VARs Meter 02 Max Avg Dem	AI	448	ADF	192	Flt_XXX[228]	F10:228	nvoNVAR2MxAv_XXX	SNVT_count_inc_f
Neg VARs Meter 03 Max Avg Dem	AI	449	ADF	193	Flt_XXX[229]	F10:229	nvoNVAR3MxAv_XXX	SNVT_count_inc_f
Pos Watts Meter 04 Max Avg Dem	AI	450	ADF	194	Flt_XXX[230]	F10:230	nvoPWt4MxAvD_XXX	SNVT_count_inc_f
Pos Watts Meter 05 Max Avg Dem	AI	451	ADF	195	Flt_XXX[231]	F10:231	nvoPWt5MxAvD_XXX	SNVT_count_inc_f
Pos Watts Meter 06 Max Avg Dem	AI	452	ADF	196	Flt_XXX[232]	F10:232	nvoPWt6MxAvD_XXX	SNVT_count_inc_f
Pos VARs Meter 04 Max Avg Dem	AI	453	ADF	197	Flt_XXX[233]	F10:233	nvoPVAR4MxAv_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
Pos VARs Meter 05 Max Avg Dem	AI	454	ADF	198	Flt_XXX[234]	F10:234	nvoPVAR5MxAv_XXX	SNVT_count_inc_f
Pos VARs Meter 06 Max Avg Dem	AI	455	ADF	199	Flt_XXX[235]	F10:235	nvoPVAR6MxAv_XXX	SNVT_count_inc_f
Neg Watts Meter 04 Max Avg Dem	AI	456	ADF	200	Flt_XXX[236]	F10:236	nvoNWt4MxAvD_XXX	SNVT_count_inc_f
Neg Watts Meter 05 Max Avg Dem	AI	457	ADF	201	Flt_XXX[237]	F10:237	nvoNWt5MxAvD_XXX	SNVT_count_inc_f
Neg Watts Meter 06 Max Avg Dem	AI	458	ADF	202	Flt_XXX[238]	F10:238	nvoNWt6MxAvD_XXX	SNVT_count_inc_f
Neg VARs Meter 04 Max Avg Dem	AI	459	ADF	203	Flt_XXX[239]	F10:239	nvoNVAR4MxAv_XXX	SNVT_count_inc_f
Neg VARs Meter 05 Max Avg Dem	AI	460	ADF	204	Flt_XXX[240]	F10:240	nvoNVAR5MxAv_XXX	SNVT_count_inc_f
Neg VARs Meter 06 Max Avg Dem	AI	461	ADF	205	Flt_XXX[241]	F10:241	nvoNVAR6MxAv_XXX	SNVT_count_inc_f
Pos Watts Meter 07 Max Avg Dem	AI	462	ADF	206	Flt_XXX[242]	F10:242	nvoPWt7MxAvD_XXX	SNVT_count_inc_f
Pos Watts Meter 08 Max Avg Dem	AI	463	ADF	207	Flt_XXX[243]	F10:243	nvoPWt8MxAvD_XXX	SNVT_count_inc_f
Pos Watts Meter 09 Max Avg Dem	AI	464	ADF	208	Flt_XXX[244]	F10:244	nvoPWt9MxAvD_XXX	SNVT_count_inc_f
Pos VARs Meter 07 Max Avg Dem	AI	465	ADF	209	Flt_XXX[245]	F10:245	nvoPVAR7MxAv_XXX	SNVT_count_inc_f
Pos VARs Meter 08 Max Avg Dem	AI	466	ADF	210	Flt_XXX[246]	F10:246	nvoPVAR8MxAv_XXX	SNVT_count_inc_f
Pos VARs Meter 09 Max Avg Dem	AI	467	ADF	211	Flt_XXX[247]	F10:247	nvoPVAR9MxAv_XXX	SNVT_count_inc_f
Neg Watts Meter 07 Max Avg Dem	AI	468	ADF	212	Flt_XXX[248]	F10:248	nvoNWt7MxAvD_XXX	SNVT_count_inc_f
Neg Watts Meter 08 Max Avg Dem	AI	469	ADF	213	Flt_XXX[249]	F10:249	nvoNWt8MxAvD_XXX	SNVT_count_inc_f
Neg Watts Meter 09 Max Avg Dem	AI	470	ADF	214	Flt_XXX[250]	F10:250	nvoNWt9MxAvD_XXX	SNVT_count_inc_f
Neg VARs Meter 07 Max Avg Dem	AI	471	ADF	215	Flt_XXX[251]	F10:251	nvoNVAR7MxAv_XXX	SNVT_count_inc_f
Neg VARs Meter 08 Max Avg Dem	AI	472	ADF	216	Flt_XXX[252]	F10:252	nvoNVAR8MxAv_XXX	SNVT_count_inc_f
Neg VARs Meter 09 Max Avg Dem	AI	473	ADF	217	Flt_XXX[253]	F10:253	nvoNVAR9MxAv_XXX	SNVT_count_inc_f
Pos Watts Meter 10 Max Avg Dem	AI	474	ADF	218	Flt_XXX[254]	F10:254	nvoPWt10MxAv_XXX	SNVT_count_inc_f
Pos Watts Meter 11 Max Avg Dem	AI	475	ADF	219	Flt_XXX[255]	F11:000	nvoPWt11MxAv_XXX	SNVT_count_inc_f
Pos Watts Meter 12 Max Avg Dem	AI	476	ADF	220	Flt_XXX[256]	F11:001	nvoPWt12MxAv_XXX	SNVT_count_inc_f
Pos VARs Meter 10 Max Avg Dem	AI	477	ADF	221	Flt_XXX[257]	F11:002	nvoPVAR10MxA_XXX	SNVT_count_inc_f
Pos VARs Meter 11 Max Avg Dem	AI	478	ADF	222	Flt_XXX[258]	F11:003	nvoPVAR11MxA_XXX	SNVT_count_inc_f
Pos VARs Meter 12 Max Avg Dem	AI	479	ADF	223	Flt_XXX[259]	F11:004	nvoPVAR12MxA_XXX	SNVT_count_inc_f
Neg Watts Meter 10 Max Avg Dem	AI	480	ADF	224	Flt_XXX[260]	F11:005	nvoNWt10MxAv_XXX	SNVT_count_inc_f
Neg Watts Meter 11 Max Avg Dem	AI	481	ADF	225	Flt_XXX[261]	F11:006	nvoNWt11MxAv_XXX	SNVT_count_inc_f
Neg Watts Meter 12 Max Avg Dem	AI	482	ADF	226	Flt_XXX[262]	F11:007	nvoNWt12MxAv_XXX	SNVT_count_inc_f
Neg VARs Meter 10 Max Avg Dem	AI	483	ADF	227	Flt_XXX[263]	F11:008	nvoNVAR10MxA_XXX	SNVT_count_inc_f
Neg VARs Meter 11 Max Avg Dem	AI	484	ADF	228	Flt_XXX[264]	F11:009	nvoNVAR11MxA_XXX	SNVT_count_inc_f
Neg VARs Meter 12 Max Avg Dem	AI	485	ADF	229	Flt_XXX[265]	F11:010	nvoNVAR12MxA_XXX	SNVT_count_inc_f
Pos Watts Meter 13 Max Avg Dem	AI	486	ADF	230	Flt_XXX[266]	F11:011	nvoPWt13MxAv_XXX	SNVT_count_inc_f
Pos Watts Meter 14 Max Avg Dem	AI	487	ADF	231	Flt_XXX[267]	F11:012	nvoPWt14MxAv_XXX	SNVT_count_inc_f
Pos Watts Meter 15 Max Avg Dem	AI	488	ADF	232	Flt_XXX[268]	F11:013	nvoPWt15MxAv_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
Pos VARs Meter 13 Max Avg Dem	AI	489	ADF	233	Flt_XXX[269]	F11:014	nvoPVAR13MxA_XXX	SNVT_count_inc_f
Pos VARs Meter 14 Max Avg Dem	AI	490	ADF	234	Flt_XXX[270]	F11:015	nvoPVAR14MxA_XXX	SNVT_count_inc_f
Pos VARs Meter 15 Max Avg Dem	AI	491	ADF	235	Flt_XXX[271]	F11:016	nvoPVAR15MxA_XXX	SNVT_count_inc_f
Neg Watts Meter 13 Max Avg Dem	AI	492	ADF	236	Flt_XXX[272]	F11:017	nvoNWt13MxAv_XXX	SNVT_count_inc_f
Neg Watts Meter 14 Max Avg Dem	AI	493	ADF	237	Flt_XXX[273]	F11:018	nvoNWt14MxAv_XXX	SNVT_count_inc_f
Neg Watts Meter 15 Max Avg Dem	AI	494	ADF	238	Flt_XXX[274]	F11:019	nvoNWt15MxAv_XXX	SNVT_count_inc_f
Neg VARs Meter 13 Max Avg Dem	AI	495	ADF	239	Flt_XXX[275]	F11:020	nvoNVAR13MxA_XXX	SNVT_count_inc_f
Neg VARs Meter 14 Max Avg Dem	AI	496	ADF	240	Flt_XXX[276]	F11:021	nvoNVAR14MxA_XXX	SNVT_count_inc_f
Neg VARs Meter 15 Max Avg Dem	AI	497	ADF	241	Flt_XXX[277]	F11:022	nvoNVAR15MxA_XXX	SNVT_count_inc_f
Pos Watts Meter 16 Max Avg Dem	AI	498	ADF	242	Flt_XXX[278]	F11:023	nvoPWt16MxAv_XXX	SNVT_count_inc_f
Pos Watts Meter 17 Max Avg Dem	AI	499	ADF	243	Flt_XXX[279]	F11:024	nvoPWt17MxAv_XXX	SNVT_count_inc_f
Pos Watts Meter 18 Max Avg Dem	AI	500	ADF	244	Flt_XXX[280]	F11:025	nvoPWt18MxAv_XXX	SNVT_count_inc_f
Pos VARs Meter 16 Max Avg Dem	AI	501	ADF	245	Flt_XXX[281]	F11:026	nvoPVAR16MxA_XXX	SNVT_count_inc_f
Pos VARs Meter 17 Max Avg Dem	AI	502	ADF	246	Flt_XXX[282]	F11:027	nvoPVAR17MxA_XXX	SNVT_count_inc_f
Pos VARs Meter 18 Max Avg Dem	AI	503	ADF	247	Flt_XXX[283]	F11:028	nvoPVAR18MxA_XXX	SNVT_count_inc_f
Neg Watts Meter 16 Max Avg Dem	AI	504	ADF	248	Flt_XXX[284]	F11:029	nvoNWt16MxAv_XXX	SNVT_count_inc_f
Neg Watts Meter 17 Max Avg Dem	AI	505	ADF	249	Flt_XXX[285]	F11:030	nvoNWt17MxAv_XXX	SNVT_count_inc_f
Neg Watts Meter 18 Max Avg Dem	AI	506	ADF	250	Flt_XXX[286]	F11:031	nvoNWt18MxAv_XXX	SNVT_count_inc_f
Neg VARs Meter 16 Max Avg Dem	AI	507	ADF	251	Flt_XXX[287]	F11:032	nvoNVAR16MxA_XXX	SNVT_count_inc_f
Neg VARs Meter 17 Max Avg Dem	AI	508	ADF	252	Flt_XXX[288]	F11:033	nvoNVAR17MxA_XXX	SNVT_count_inc_f
Neg VARs Meter 18 Max Avg Dem	AI	509	ADF	253	Flt_XXX[289]	F11:034	nvoNVAR18MxA_XXX	SNVT_count_inc_f
Pos Watts Meter 19 Max Avg Dem	AI	510	ADF	254	Flt_XXX[290]	F11:035	nvoPWt19MxAv_XXX	SNVT_count_inc_f
Pos Watts Meter 20 Max Avg Dem	AI	511	ADF	255	Flt_XXX[291]	F11:036	nvoPWt20MxAv_XXX	SNVT_count_inc_f
Pos Watts Meter 21 Max Avg Dem	AI	512	ADF	256	Flt_XXX[292]	F11:037	nvoPWt21MxAv_XXX	SNVT_count_inc_f
Pos VARs Meter 19 Max Avg Dem	AI	513	ADI	1	Flt_XXX[293]	F11:038	nvoPVAR19MxA_XXX	SNVT_count_inc_f
Pos VARs Meter 20 Max Avg Dem	AI	514	ADI	2	Flt_XXX[294]	F11:039	nvoPVAR20MxA_XXX	SNVT_count_inc_f
Pos VARs Meter 21 Max Avg Dem	AI	515	ADI	3	Flt_XXX[295]	F11:040	nvoPVAR21MxA_XXX	SNVT_count_inc_f
Neg Watts Meter 19 Max Avg Dem	AI	516	ADI	4	Flt_XXX[296]	F11:041	nvoNWt19MxAv_XXX	SNVT_count_inc_f
Neg Watts Meter 20 Max Avg Dem	AI	517	ADI	5	Flt_XXX[297]	F11:042	nvoNWt20MxAv_XXX	SNVT_count_inc_f
Neg Watts Meter 21 Max Avg Dem	AI	518	ADI	6	Flt_XXX[298]	F11:043	nvoNWt21MxAv_XXX	SNVT_count_inc_f
Neg VARs Meter 19 Max Avg Dem	AI	519	ADI	7	Flt_XXX[299]	F11:044	nvoNVAR19MxA_XXX	SNVT_count_inc_f
Neg VARs Meter 20 Max Avg Dem	AI	520	ADI	8	Flt_XXX[300]	F11:045	nvoNVAR20MxA_XXX	SNVT_count_inc_f
Neg VARs Meter 21 Max Avg Dem	AI	521	ADI	9	Flt_XXX[301]	F11:046	nvoNVAR21MxA_XXX	SNVT_count_inc_f
Pos Watts Meter 22 Max Avg Dem	AI	522	ADI	10	Flt_XXX[302]	F11:047	nvoPWt22MxAv_XXX	SNVT_count_inc_f
Pos Watts Meter 23 Max Avg Dem	AI	523	ADI	11	Flt_XXX[303]	F11:048	nvoPWt23MxAv_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
Pos Watts Meter 24 Max Avg Dem	AI	524	ADI	12	Flt_XXX[304]	F11:049	nvoPWt24MxAv_XXX	SNVT_count_inc_f
Pos VARs Meter 22 Max Avg Dem	AI	525	ADI	13	Flt_XXX[305]	F11:050	nvoPVAR22MxA_XXX	SNVT_count_inc_f
Pos VARs Meter 23 Max Avg Dem	AI	526	ADI	14	Flt_XXX[306]	F11:051	nvoPVAR23MxA_XXX	SNVT_count_inc_f
Pos VARs Meter 24 Max Avg Dem	AI	527	ADI	15	Flt_XXX[307]	F11:052	nvoPVAR24MxA_XXX	SNVT_count_inc_f
Neg Watts Meter 22 Max Avg Dem	AI	528	ADI	16	Flt_XXX[308]	F11:053	nvoNWt22MxAv_XXX	SNVT_count_inc_f
Neg Watts Meter 23 Max Avg Dem	AI	529	ADI	17	Flt_XXX[309]	F11:054	nvoNWt23MxAv_XXX	SNVT_count_inc_f
Neg Watts Meter 24 Max Avg Dem	AI	530	ADI	18	Flt_XXX[310]	F11:055	nvoNWt24MxAv_XXX	SNVT_count_inc_f
Neg VARs Meter 22 Max Avg Dem	AI	531	ADI	19	Flt_XXX[311]	F11:056	nvoNVAR22MxA_XXX	SNVT_count_inc_f
Neg VARs Meter 23 Max Avg Dem	AI	532	ADI	20	Flt_XXX[312]	F11:057	nvoNVAR23MxA_XXX	SNVT_count_inc_f
Neg VARs Meter 24 Max Avg Dem	AI	533	ADI	21	Flt_XXX[313]	F11:058	nvoNVAR24MxA_XXX	SNVT_count_inc_f
CT Denominator	AI	534	ADI	22	Dev2_XXX[000]	N14:000	nvoCTDen_XXX	SNVT_count_inc
CT Numerator Meter 1	AI	535	ADI	23	Dev2_XXX[001]	N14:001	nvoCTNum1_XXX	SNVT_count_inc
CT Numerator Meter 2	AI	536	ADI	24	Dev2_XXX[002]	N14:002	nvoCTNum2_XXX	SNVT_count_inc
CT Numerator Meter 3	AI	537	ADI	25	Dev2_XXX[003]	N14:003	nvoCTNum3_XXX	SNVT_count_inc
CT Numerator Meter 4	AI	538	ADI	26	Dev2_XXX[004]	N14:004	nvoCTNum4_XXX	SNVT_count_inc
CT Numerator Meter 5	AI	539	ADI	27	Dev2_XXX[005]	N14:005	nvoCTNum5_XXX	SNVT_count_inc
CT Numerator Meter 6	AI	540	ADI	28	Dev2_XXX[006]	N14:006	nvoCTNum6_XXX	SNVT_count_inc
CT Numerator Meter 7	AI	541	ADI	29	Dev2_XXX[007]	N14:007	nvoCTNum7_XXX	SNVT_count_inc
CT Numerator Meter 8	AI	542	ADI	30	Dev2_XXX[008]	N14:008	nvoCTNum8_XXX	SNVT_count_inc
CT Numerator Meter 9	AI	543	ADI	31	Dev2_XXX[009]	N14:009	nvoCTNum9_XXX	SNVT_count_inc
CT Numerator Meter 10	AI	544	ADI	32	Dev2_XXX[010]	N14:010	nvoCTNum10_XXX	SNVT_count_inc
CT Numerator Meter 11	AI	545	ADI	33	Dev2_XXX[011]	N14:011	nvoCTNum11_XXX	SNVT_count_inc
CT Numerator Meter 12	AI	546	ADI	34	Dev2_XXX[012]	N14:012	nvoCTNum12_XXX	SNVT_count_inc
CT Numerator Meter 13	AI	547	ADI	35	Dev2_XXX[013]	N14:013	nvoCTNum13_XXX	SNVT_count_inc
CT Numerator Meter 14	AI	548	ADI	36	Dev2_XXX[014]	N14:014	nvoCTNum14_XXX	SNVT_count_inc
CT Numerator Meter 15	AI	549	ADI	37	Dev2_XXX[015]	N14:015	nvoCTNum15_XXX	SNVT_count_inc
CT Numerator Meter 16	AI	550	ADI	38	Dev2_XXX[016]	N14:016	nvoCTNum16_XXX	SNVT_count_inc
CT Numerator Meter 17	AI	551	ADI	39	Dev2_XXX[017]	N14:017	nvoCTNum17_XXX	SNVT_count_inc
CT Numerator Meter 18	AI	552	ADI	40	Dev2_XXX[018]	N14:018	nvoCTNum18_XXX	SNVT_count_inc
CT Numerator Meter 19	AI	553	ADI	41	Dev2_XXX[019]	N14:019	nvoCTNum19_XXX	SNVT_count_inc
CT Numerator Meter 20	AI	554	ADI	42	Dev2_XXX[020]	N14:020	nvoCTNum20_XXX	SNVT_count_inc
CT Numerator Meter 21	AI	555	ADI	43	Dev2_XXX[021]	N14:021	nvoCTNum21_XXX	SNVT_count_inc
CT Numerator Meter 22	AI	556	ADI	44	Dev2_XXX[022]	N14:022	nvoCTNum22_XXX	SNVT_count_inc
CT Numerator Meter 23	AI	557	ADI	45	Dev2_XXX[023]	N14:023	nvoCTNum23_XXX	SNVT_count_inc
CT Numerator Meter 24	AI	558	ADI	46	Dev2_XXX[024]	N14:024	nvoCTNum24_XXX	SNVT_count_inc

Point Name	BACnet Object Type	BACnet Object ID	N2 Data Type	N2 Point Address	EIP Tag Name	DF1 Address	Lon Name	Lon SNVT
PT numerator	AI	559	ADI	47	Dev2_XXX[025]	N14:025	nvoPTnum_XXX	SNVT_count_inc_f
PT denominator	AI	560	ADI	48	Dev3_XXX[000]	N15:000	nvoPTden_XXX	SNVT_count_inc
Hookup	AI	561	ADI	49	Dev3_XXX[001]	N15:001	nvoHookup_XXX	SNVT_count_inc
Serial Number Reg 1	AI	562	ADI	50	Dev3_XXX[002]	N15:002	nvoSerNum1_XXX	SNVT_count_inc
Serial Number Reg 2	AI	563	ADI	51	Dev3_XXX[003]	N15:003	nvoSerNum2_XXX	SNVT_count_inc
Serial Number Reg 3	AI	564	ADI	52	Dev3_XXX[004]	N15:004	nvoSerNum3_XXX	SNVT_count_inc
Serial Number Reg 4	AI	565	ADI	53	Dev3_XXX[005]	N15:005	nvoSerNum4_XXX	SNVT_count_inc
Serial Number Reg 5	AI	566	ADI	54	Dev3_XXX[006]	N15:006	nvoSerNum5_XXX	SNVT_count_inc
Serial Number Reg 6	AI	567	ADI	55	Dev3_XXX[007]	N15:007	nvoSerNum6_XXX	SNVT_count_inc
Serial Number Reg 7	AI	568	ADI	56	Dev3_XXX[008]	N15:008	nvoSerNum7_XXX	SNVT_count_inc
Serial Number Reg 8	AI	569	ADI	57	Dev3_XXX[009]	N15:009	nvoSerNum8_XXX	SNVT_count_inc
Password for Reset in use	BI	570	ADI	58	Byt_XXX[0]	N16:0	nvoPswdReset_XXX	SNVT_count_inc
Password for Configuration in use	BI	571	ADI	59	Byt_XXX[1]	N16:1	nvoPswdCnfg_XXX	SNVT_count_inc

B: MAC Address DIP Switch Settings

This following table lists the settings for the A Bank of DIP switches, used to set a MAC address.

Address	A0	A1	A2	A3	A4	A5	A6	A7
0	Off	Off	Off	Off	Off	Off	Off	Off
1	On	Off	Off	Off	Off	Off	Off	Off
2	Off	On	Off	Off	Off	Off	Off	Off
3	On	On	Off	Off	Off	Off	Off	Off
4	Off	Off	On	Off	Off	Off	Off	Off
5	On	Off	On	Off	Off	Off	Off	Off
6	Off	On	On	Off	Off	Off	Off	Off
7	On	On	On	Off	Off	Off	Off	Off
8	Off	Off	Off	On	Off	Off	Off	Off
9	On	Off	Off	On	Off	Off	Off	Off
10	Off	On	Off	On	Off	Off	Off	Off
11	On	On	Off	On	Off	Off	Off	Off
12	Off	Off	On	On	Off	Off	Off	Off
13	On	Off	On	On	Off	Off	Off	Off
14	Off	On	On	On	Off	Off	Off	Off
15	On	On	On	On	Off	Off	Off	Off
16	Off	Off	Off	Off	On	Off	Off	Off
17	On	Off	Off	Off	On	Off	Off	Off
18	Off	On	Off	Off	On	Off	Off	Off
19	On	On	Off	Off	On	Off	Off	Off
20	Off	Off	On	Off	On	Off	Off	Off
21	On	Off	On	Off	On	Off	Off	Off
22	Off	On	On	Off	On	Off	Off	Off
23	On	On	On	Off	On	Off	Off	Off
24	Off	Off	Off	On	On	Off	Off	Off
25	On	Off	Off	On	On	Off	Off	Off
26	Off	On	Off	On	On	Off	Off	Off
27	On	On	Off	On	On	Off	Off	Off
28	Off	Off	On	On	On	Off	Off	Off
29	On	Off	On	On	On	Off	Off	Off
30	Off	On	On	On	On	Off	Off	Off
31	On	On	On	On	On	Off	Off	Off
32	Off	Off	Off	Off	Off	On	Off	Off
33	On	Off	Off	Off	Off	On	Off	Off
34	Off	On	Off	Off	Off	On	Off	Off
35	On	On	Off	Off	Off	On	Off	Off
36	Off	Off	On	Off	Off	On	Off	Off
37	On	Off	On	Off	Off	On	Off	Off
38	Off	On	On	Off	Off	On	Off	Off
39	On	On	On	Off	Off	On	Off	Off
40	Off	Off	Off	On	Off	On	Off	Off

Address	A0	A1	A2	A3	A4	A5	A6	A7
41	On	Off	Off	On	Off	On	Off	Off
42	Off	On	Off	On	Off	On	Off	Off
43	On	On	Off	On	Off	On	Off	Off
44	Off	Off	On	On	Off	On	Off	Off
45	On	Off	On	On	Off	On	Off	Off
46	Off	On	On	On	Off	On	Off	Off
47	On	On	On	On	Off	On	Off	Off
48	Off	Off	Off	Off	On	On	Off	Off
49	On	Off	Off	Off	On	On	Off	Off
50	Off	On	Off	Off	On	On	Off	Off
51	On	On	Off	Off	On	On	Off	Off
52	Off	Off	On	Off	On	On	Off	Off
53	On	Off	On	Off	On	On	Off	Off
54	Off	On	On	Off	On	On	Off	Off
55	On	On	On	Off	On	On	Off	Off
56	Off	Off	Off	On	On	On	Off	Off
57	On	Off	Off	On	On	On	Off	Off
58	Off	On	Off	On	On	On	Off	Off
59	On	On	Off	On	On	On	Off	Off
60	Off	Off	On	On	On	On	Off	Off
61	On	Off	On	On	On	On	Off	Off
62	Off	On	On	On	On	On	Off	Off
63	On	On	On	On	On	On	Off	Off
64	Off	Off	Off	Off	Off	Off	On	Off
65	On	Off	Off	Off	Off	Off	On	Off
66	Off	On	Off	Off	Off	Off	On	Off
67	On	On	Off	Off	Off	Off	On	Off
68	Off	Off	On	Off	Off	Off	On	Off
69	On	Off	On	Off	Off	Off	On	Off
70	Off	On	On	Off	Off	Off	On	Off
71	On	On	On	Off	Off	Off	On	Off
72	Off	Off	Off	On	Off	Off	On	Off
73	On	Off	Off	On	Off	Off	On	Off
74	Off	On	Off	On	Off	Off	On	Off
75	On	On	Off	On	Off	Off	On	Off
76	Off	Off	On	On	Off	Off	On	Off
77	On	Off	On	On	Off	Off	On	Off
78	Off	On	On	On	Off	Off	On	Off
79	On	On	On	On	Off	Off	On	Off
80	Off	Off	Off	Off	On	Off	On	Off
81	On	Off	Off	Off	On	Off	On	Off
82	Off	On	Off	Off	On	Off	On	Off
83	On	On	Off	Off	On	Off	On	Off
84	Off	Off	On	Off	On	Off	On	Off
85	On	Off	On	Off	On	Off	On	Off
86	Off	On	On	Off	On	Off	On	Off
87	On	On	On	Off	On	Off	On	Off
88	Off	Off	Off	On	On	Off	On	Off
89	On	Off	Off	On	On	Off	On	Off

Address	A0	A1	A2	A3	A4	A5	A6	A7
90	Off	On	Off	On	On	Off	On	Off
91	On	On	Off	On	On	Off	On	Off
92	Off	Off	On	On	On	Off	On	Off
93	On	Off	On	On	On	Off	On	Off
94	Off	On	On	On	On	Off	On	Off
95	On	On	On	On	On	Off	On	Off
96	Off	Off	Off	Off	Off	On	On	Off
97	On	Off	Off	Off	Off	On	On	Off
98	Off	On	Off	Off	Off	On	On	Off
99	On	On	Off	Off	Off	On	On	Off
100	Off	Off	On	Off	Off	On	On	Off
101	On	Off	On	Off	Off	On	On	Off
102	Off	On	On	Off	Off	On	On	Off
103	On	On	On	Off	Off	On	On	Off
104	Off	Off	Off	On	Off	On	On	Off
105	On	Off	Off	On	Off	On	On	Off
106	Off	On	Off	On	Off	On	On	Off
107	On	On	Off	On	Off	On	On	Off
108	Off	Off	On	On	Off	On	On	Off
109	On	Off	On	On	Off	On	On	Off
110	Off	On	On	On	Off	On	On	Off
111	On	On	On	On	Off	On	On	Off
112	Off	Off	Off	Off	On	On	On	Off
113	On	Off	Off	Off	On	On	On	Off
114	Off	On	Off	Off	On	On	On	Off
115	On	On	Off	Off	On	On	On	Off
116	Off	Off	On	Off	On	On	On	Off
117	On	Off	On	Off	On	On	On	Off
118	Off	On	On	Off	On	On	On	Off
119	On	On	On	Off	On	On	On	Off
120	Off	Off	Off	On	On	On	On	Off
121	On	Off	Off	On	On	On	On	Off
122	Off	On	Off	On	On	On	On	Off
123	On	On	Off	On	On	On	On	Off
124	Off	Off	On	On	On	On	On	Off
125	On	Off	On	On	On	On	On	Off
126	Off	On	On	On	On	On	On	Off
127	On	On	On	On	On	On	On	Off
128	Off	Off	Off	Off	Off	Off	Off	On
129	On	Off	Off	Off	Off	Off	Off	On
130	Off	On	Off	Off	Off	Off	Off	On
131	On	On	Off	Off	Off	Off	Off	On
132	Off	Off	On	Off	Off	Off	Off	On
133	On	Off	On	Off	Off	Off	Off	On
134	Off	On	On	Off	Off	Off	Off	On
135	On	On	On	Off	Off	Off	Off	On
136	Off	Off	Off	On	Off	Off	Off	On
137	On	Off	Off	On	Off	Off	Off	On
138	Off	On	Off	On	Off	Off	Off	On

Address	A0	A1	A2	A3	A4	A5	A6	A7
139	On	On	Off	On	Off	Off	Off	On
140	Off	Off	On	On	Off	Off	Off	On
141	On	Off	On	On	Off	Off	Off	On
142	Off	On	On	On	Off	Off	Off	On
143	On	On	On	On	Off	Off	Off	On
144	Off	Off	Off	Off	On	Off	Off	On
145	On	Off	Off	Off	On	Off	Off	On
146	Off	On	Off	Off	On	Off	Off	On
147	On	On	Off	Off	On	Off	Off	On
148	Off	Off	On	Off	On	Off	Off	On
149	On	Off	On	Off	On	Off	Off	On
150	Off	On	On	Off	On	Off	Off	On
151	On	On	On	Off	On	Off	Off	On
152	Off	Off	Off	On	On	Off	Off	On
153	On	Off	Off	On	On	Off	Off	On
154	Off	On	Off	On	On	Off	Off	On
155	On	On	Off	On	On	Off	Off	On
156	Off	Off	On	On	On	Off	Off	On
157	On	Off	On	On	On	Off	Off	On
158	Off	On	On	On	On	Off	Off	On
159	On	On	On	On	On	Off	Off	On
160	Off	Off	Off	Off	Off	On	Off	On
161	On	Off	Off	Off	Off	On	Off	On
162	Off	On	Off	Off	Off	On	Off	On
163	On	On	Off	Off	Off	On	Off	On
164	Off	Off	On	Off	Off	On	Off	On
165	On	Off	On	Off	Off	On	Off	On
166	Off	On	On	Off	Off	On	Off	On
167	On	On	On	Off	Off	On	Off	On
168	Off	Off	Off	On	Off	On	Off	On
169	On	Off	Off	On	Off	On	Off	On
170	Off	On	Off	On	Off	On	Off	On
171	On	On	Off	On	Off	On	Off	On
172	Off	Off	On	On	Off	On	Off	On
173	On	Off	On	On	Off	On	Off	On
174	Off	On	On	On	Off	On	Off	On
175	On	On	On	On	Off	On	Off	On
176	Off	Off	Off	Off	On	On	Off	On
177	On	Off	Off	Off	On	On	Off	On
178	Off	On	Off	Off	On	On	Off	On
179	On	On	Off	Off	On	On	Off	On
180	Off	Off	On	Off	On	On	Off	On
181	On	Off	On	Off	On	On	Off	On
182	Off	On	On	Off	On	On	Off	On
183	On	On	On	Off	On	On	Off	On
184	Off	Off	Off	On	On	On	Off	On
185	On	Off	Off	On	On	On	Off	On
186	Off	On	Off	On	On	On	Off	On
187	On	On	Off	On	On	On	Off	On

Address	A0	A1	A2	A3	A4	A5	A6	A7
188	Off	Off	On	On	On	On	Off	On
189	On	Off	On	On	On	On	Off	On
190	Off	On	On	On	On	On	Off	On
191	On	On	On	On	On	On	Off	On
192	Off	Off	Off	Off	Off	Off	On	On
193	On	Off	Off	Off	Off	Off	On	On
194	Off	On	Off	Off	Off	Off	On	On
195	On	On	Off	Off	Off	Off	On	On
196	Off	Off	On	Off	Off	Off	On	On
197	On	Off	On	Off	Off	Off	On	On
198	Off	On	On	Off	Off	Off	On	On
199	On	On	On	Off	Off	Off	On	On
200	Off	Off	Off	On	Off	Off	On	On
201	On	Off	Off	On	Off	Off	On	On
202	Off	On	Off	On	Off	Off	On	On
203	On	On	Off	On	Off	Off	On	On
204	Off	Off	On	On	Off	Off	On	On
205	On	Off	On	On	Off	Off	On	On
206	Off	On	On	On	Off	Off	On	On
207	On	On	On	On	Off	Off	On	On
208	Off	Off	Off	Off	On	Off	On	On
209	On	Off	Off	Off	On	Off	On	On
210	Off	On	Off	Off	On	Off	On	On
211	On	On	Off	Off	On	Off	On	On
212	Off	Off	On	Off	On	Off	On	On
213	On	Off	On	Off	On	Off	On	On
214	Off	On	On	Off	On	Off	On	On
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220	Off	Off	On	On	On	Off	On	On
221	On	Off	On	On	On	Off	On	On
222	Off	On	On	On	On	Off	On	On
223	On	On	On	On	On	Off	On	On
224	Off	Off	Off	Off	Off	On	On	On
225	On	Off	Off	Off	Off	On	On	On
226	Off	On	Off	Off	Off	On	On	On
227	On	On	Off	Off	Off	On	On	On
228	Off	Off	On	Off	Off	On	On	On
229	On	Off	On	Off	Off	On	On	On
230	Off	On	On	Off	Off	On	On	On
231	On	On	On	Off	Off	On	On	On
232	Off	Off	Off	On	Off	On	On	On
233	On	Off	Off	On	Off	On	On	On
234	Off	On	Off	On	Off	On	On	On
235	On	On	Off	On	Off	On	On	On
236	Off	Off	On	On	Off	On	On	On

Address	A0	A1	A2	A3	A4	A5	A6	A7
237	On	Off	On	On	Off	On	On	On
238	Off	On	On	On	Off	On	On	On
239	On	On	On	On	Off	On	On	On
240	Off	Off	Off	Off	On	On	On	On
241	On	Off	Off	Off	On	On	On	On
242	Off	On	Off	Off	On	On	On	On
243	On	On	Off	Off	On	On	On	On
244	Off	Off	On	Off	On	On	On	On
245	On	Off	On	Off	On	On	On	On
246	Off	On	On	Off	On	On	On	On
247	On	On	On	Off	On	On	On	On
248	Off	Off	Off	On	On	On	On	On
249	On	Off	Off	On	On	On	On	On
250	Off	On	Off	On	On	On	On	On
251	On	On	Off	On	On	On	On	On
252	Off	Off	On	On	On	On	On	On
253	On	Off	On	On	On	On	On	On
254	Off	On	On	On	On	On	On	On
255	On	On	On	On	On	On	On	On