CG-1001
November 23, 2020

MB485ETH-CG
Communication Gateway
Installation and Operation

1 DESCRIPTION

The MB485ETH-CG communication gateway is an accessory designed to allow any Modbus-capable Fireye control to communicate to a building management system or PLC using the BACnet/IP, BACnet MS/TP, EtherNet/IP or Modbus TCP/IP protocols. Multiple devices can be connected to a single communication gateway. Configuration is done using any web browser connected to the same network as the communication gateway, or wirelessly via the built-in access point.

Additionally, the communication gateway provides remote monitoring capabilities through the cloud using SMC Cloud services.

Technical Support

Thank you for purchasing the MB485ETH-CG.

Please call Fireye for technical support of this product. Please note that the manufacturer (MSA Safety dba Sierra Monitor) does not provide direct support for this Fireye-branded product.

Support Contact Information:

Fireye, Inc.
3 Manchester Road
Derry, NH 03038

Customer Service:

603-432-4100

For online support fill in and submit the form found at: https://www.fireye.com/Home/ContactUs.

Website: www.fireye.com

Quick Start Guide

1. Record the information about the unit. (**Section** 4.1)
2. Check that the MB485ETH-CG and customer device COM settings match. (**Section** 4.3)
3. Connect the MB485ETH-CG 3 pin RS-485 R1 port to the RS-485 network connected to each of the devices. (**Section** 5.1)
4. **If using a serial field protocol:**
   Connect the MB485ETH-CG 3 pin RS-485 R2 port to the field protocol cabling. (**Section** 5.2)
5. Connect power to the MB485ETH-CG 3 pin power port. (**Section** 5.5)
6. Connect a PC to the MB485ETH-CG via Ethernet cable or by the MB485ETH-CG's Wi-Fi Access Point. (**Section** 6)
7. Setup Web Server Security and login via web browser. (**Section** 7)
8. Configure the MB485ETH-CG to connect to the local network. (**Section** 8)
9. Integrate the MB485ETH-CG with SMC Cloud or opt out. (**Section** 9)
10. Use a web browser to access the MB485ETH-CG Web Configurator page to select the profile of the device attached to the MB485ETH-CG and enter any necessary device information. Once the device is selected, the MB485ETH-CG automatically builds and loads the appropriate configuration. (**Section** 10.3)

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2 CERTIFICATION

2.1 BTL Mark – BACnet®[1] Testing Laboratory

The BTL Mark on the MB485ETH-CG is a symbol that indicates that a product has passed a series of rigorous tests conducted by an independent laboratory which verifies that the product correctly implements the BACnet features claimed in the listing. The mark is a symbol of a high-quality BACnet product.

Go to www.BACnetInternational.net for more information about the BACnet Testing Laboratory. Click here for the BACnet PIC Statement.

[1] BACnet is a registered trademark of ASHRAE

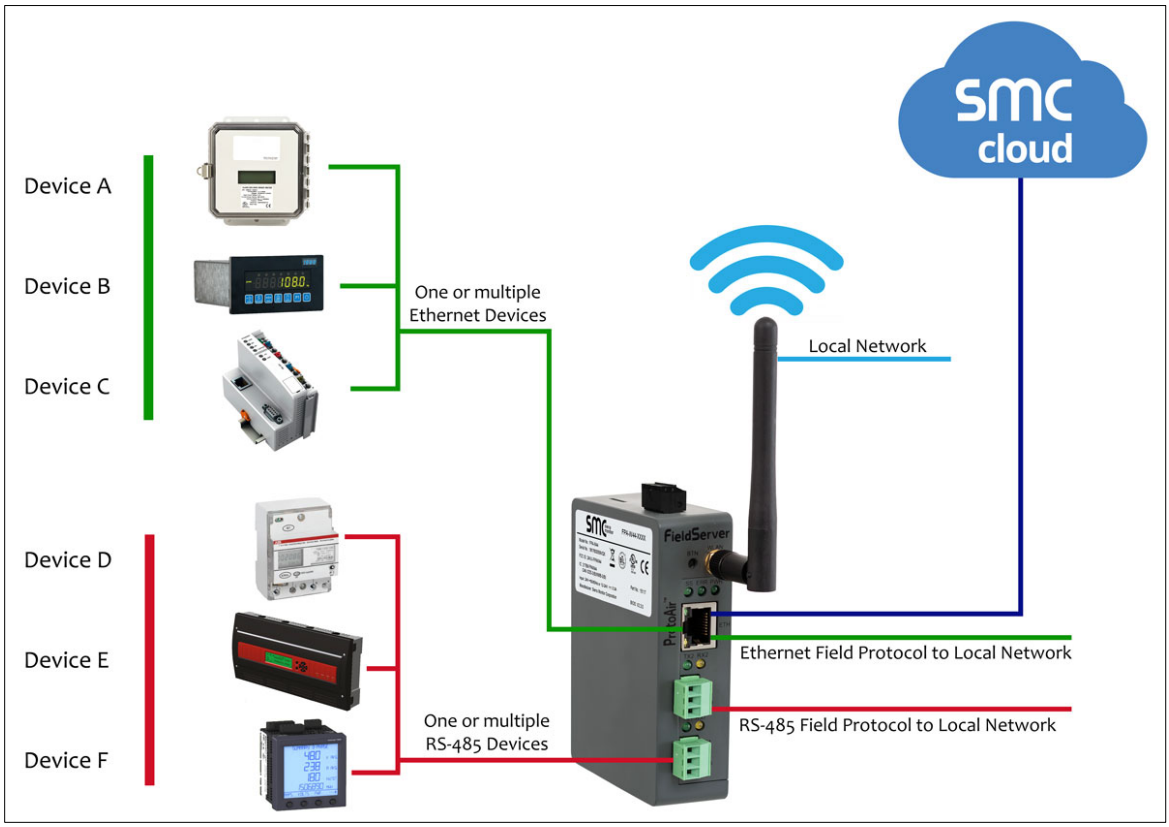
3 INTRODUCTION

3.1 MB485ETH-CG Gateway

The MB485ETH-CG wireless gateway is an external, high performance **building automation multi-protocol gateway** that is preconfigured to automatically communicate between Fireye's devices (hereafter simply called "device") connected to the MB485ETH-CG and automatically configures them for BACnet/IP, BACnet MS/TP, Modbus TCP/IP and EtherNet/IP.

It is not necessary to download any configuration files to support the required applications. The MB485ETH-CG is pre-loaded with tested profiles/configurations for the supported devices.

Connectivity Diagram:



The MB485ETH-CG can connect with the SMC Cloud. The SMC Cloud allows technicians, the OEM's support team and MSA Safety's support team to remotely connect to the MB485ETH-CG. The SMC Cloud provides the following capabilities for any registered devices in the field:

- Remotely monitor and control devices.
- Collect device data and view it on the SMC Cloud Dashboard and the SMC Smart Phone App.
- Create user defined device notifications (alarm, trouble and warning) via SMS and/or Email.
- Generate diagnostic captures (as needed for troubleshooting) without going to the site.

For more information about the SMC Cloud, refer to the SMC Cloud Start-up Guide.

3.2 Methods of Configuration

Devices	Communication Protocol
YB110_FSG	Modbus RTU
PPC4000_NXF4000	Modbus RTU
ZB110_FSG	Modbus RTU
PPC6000_NX6100	Modbus RTU
E110	Modbus RTU
MicroM	Modbus RTU
BurnerPRO_Gen_3	Modbus RTU
NXCESO2	Modbus RTU
FX_Series_Servos	Modbus RTU
ACS550	Modbus RTU
Insight_Insight_II_Scanner	Modbus RTU
NXTSD507HD_NXTSD512HD	Modbus TCP/IP

Figure 1: Method of Configuration for the Devices

4 MB485ETH-CG SETUP

4.1 Record Identification Data

Each MB485ETH-CG has a unique part number located on the side or the back of the unit. This number should be recorded, as it may be required for technical support. The numbers are as follows:

Model	Part Number
MB485ETH-CG	FPA-W44-0042

Figure 2: MB485ETH-CG Part Numbers

- FPA-W44 units have the following 4 ports: Ethernet + Wi-Fi + RS-485 + RS-485/RS-232

4.2 Point Count Capacity

The total number of points presented to the device(s) attached to the MB485ETH-CG cannot exceed:

Part number	Total Points
FPA-W44-0042	10,000

Figure 3: Supported Point Count Capacity

Devices	Points Per Device
YB110_FSG	96
PPC4000_NXF4000	168
ZB110_FSG	163
PPC6000_NX6100	439
E110	77
MicroM	32
BurnerPRO_Gen_3	82
NXCESO2	42
FX_Series_Servos	71
ACS550	51
Insight_Insight_II_Scanner	245
NXTSD507HD_NXTSD512HD	306

Figure 4: Points per Device

4.3 Configuring Device Communications

4.3.1 Confirm the Device and MB485ETH-CG COM Settings Match

- **Any connected serial device MUST have the same baud rate, data bits, stop bits, and parity settings as the MB485ETH-CG.**
- Figure 5 specifies the device serial port settings required to communicate with the MB485ETH-CG.

Port Setting	NXCESO2	E110, Micro M	Other Devices
Protocol	Modbus RTU	Modbus RTU	Modbus RTU
Baud Rate	57600	4800	9600
Parity	None	None	None
Data Bits	8	8	8
Stop Bits	1	1	1

Figure 5: COM Settings

4.3.2 Set Node-ID for Any Device Attached to the MB485ETH-CG

- Set Node-ID for the device attached to MB485ETH-CG. The Node-ID needs to be uniquely assigned between 1 and 255.
- Document the Node-ID that is assigned. The Node-ID assigned is used for deriving the Device Instance for BACnet/IP and BACnet MS/TP. (**Section** 10.5)

NOTE: The Modbus TCP/IP field protocol Node-IDs are automatically set to be the same value as the Node-ID of the device.

4.3.3 Set IP Address for Any Ethernet Device Connected to the MB485ETH-CG

- **Ensure the device is set to Modbus TCP/IP to communicate with the MB485ETH-CG.**
- The device needs to be on the same IP subnet as the MB485ETH-CG and the configuration PC.
- Record the following device information to start the setup:
  - IP Address
  - IP port
  - TCP_ID

NOTE: This information is required for Section 10.3.

4.4 Attaching the Antenna

Wi-Fi Antenna:

Screw in the Wi-Fi antenna to the front of the unit as shown in Figure 54.

NOTE: Using an external antenna is also an option. An external antenna can be plugged into the SMA connector. The best antenna for the job depends on the range, topography and obstacles between the two radios.

5 INTERFACING MB485ETH-CG TO DEVICES

5.1 Device Connections to MB485ETH-CG

The MB485ETH-CG has a 3-pin Phoenix connector for connecting RS-485 devices on the R1 port. See specific device bulletins for details on how to properly connect Modbus to each.

NOTE: Use standard grounding principles for RS-485 GND.

Device Pins	MB485ETH-CG Pin Label	Pin Assignment
RS-485 +	TX+	RS-485 +
RS-485 -	RX-	RS-485 -
RS-485 GND	GND	RS-485 GND

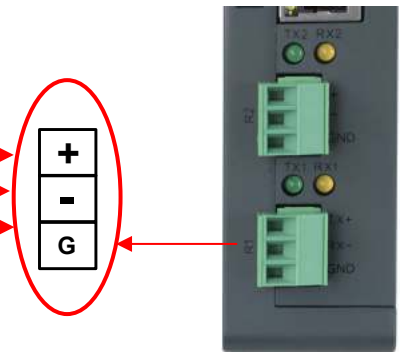


Figure 6: RS-485 Connections from Devices to the MB485ETH-CG

5.2 Wiring Field Port to RS-485 Serial Network

- Connect the RS-485 network wires to the 3-pin RS-485 connector on the R2 port. (Figure 7)
  - Use standard grounding principles for RS-485 GND
- See **Section** 6 for information on connecting to an Ethernet network.

BMS Wiring	MB485ETH-CG Pin Label	Pin Assignment
RS-485 +	+	RS-485 +
RS-485 -	-	RS-485 -
-	GND	RS-485 GND

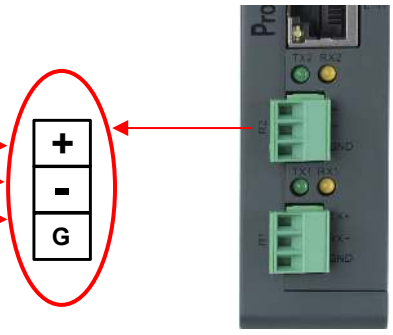


Figure 7: Connection from MB485ETH-CG to RS-485 Field Network

5.3 Bias Resistors

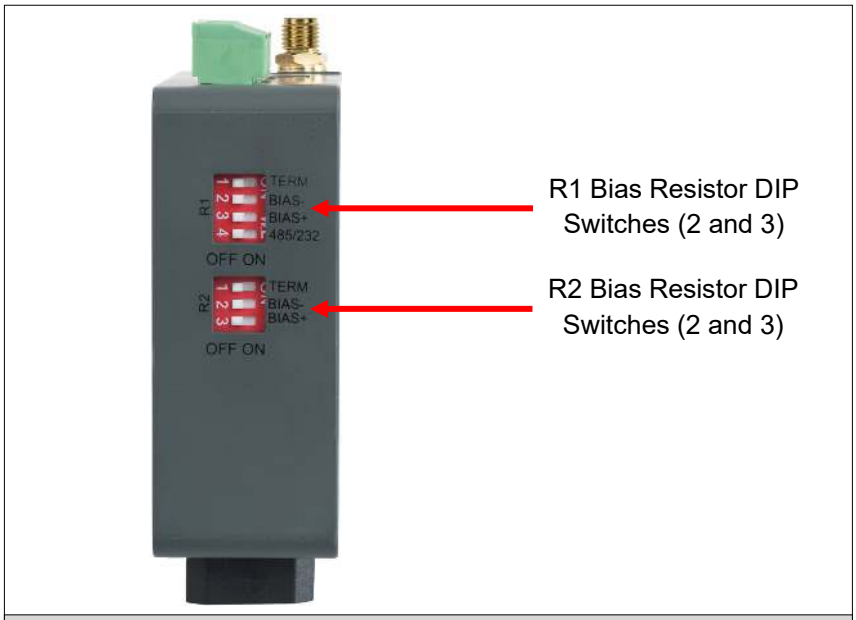


Figure 8: Bias Resistor DIP Switches

To enable Bias Resistors, move both the BIAS- and BIAS+ dip switches to the right as shown in Figure 8.

The MB485ETH-CG bias resistors are used to keep the RS-485 bus to a known state, when there is no transmission on the line (bus is idling), to help prevent false bits of data from being detected. The bias resistors typically pull one line high and the other low - far away from the decision point of the logic.

The bias resistor is 510 ohms which is in line with the BACnet spec. It should only be enabled at one point on the bus (for example, on the field port were there are very weak bias resistors of 100k). Since there are no jumpers, many gateways can be put on the network without running into the bias resistor limit which is < 500 ohms.

NOTE: See www.ni.com/support/serial/resinfo.htm for additional pictures and notes.

NOTE: The R1 and R2 DIP Switches apply settings to the respective serial port.

NOTE: If the gateway is already powered on, DIP switch settings will not take effect unless the unit is power cycled.

5.4 Termination Resistor

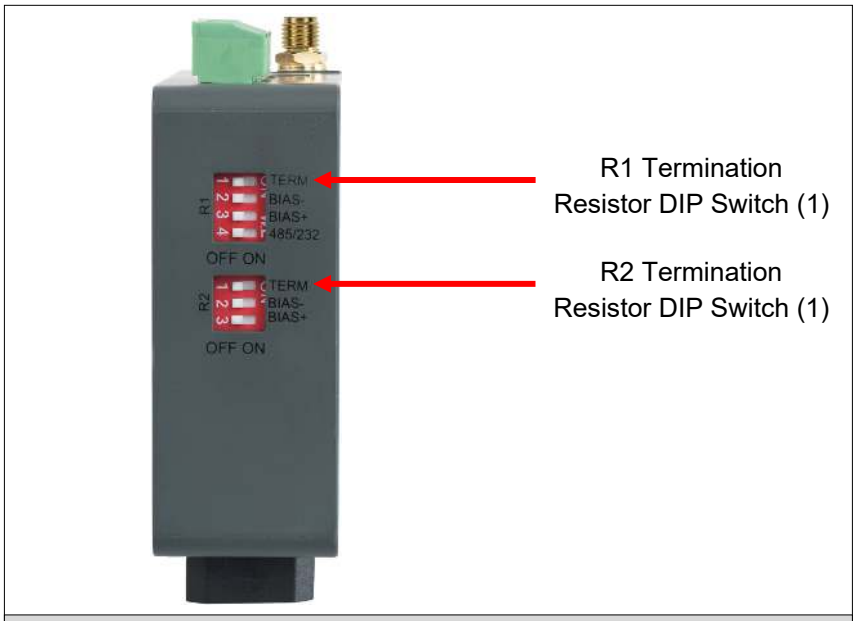


Figure 9: Termination Resistor DIP Switch

If the MB485ETH-CG is the last device on the serial trunk, then the End-Of-Line Termination Switch needs to be enabled. **To enable the Termination Resistor, move the TERM dip switch to the right as shown in Figure 9.**

Termination resistor is also used to reduce noise. It pulls the two lines of an idle bus together. However, the resistor would override the effect of any bias resistors if connected.

NOTE: The R1 and R2 DIP Switches apply settings to the respective serial port.

NOTE: If the gateway is already powered on, DIP switch settings will not take effect unless the unit is power cycled.

5.5 Power-Up MB485ETH-CG

Check power requirements in the table below:

Power Requirement for MB485ETH-CG External Gateway		
	Current Draw Type	
MB485ETH-CG Family	12VDC	24VDC/AC
FPA – W44 (Typical)	250mA	125mA
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.		

Figure 10: Required Current Draw for the MB485ETH-CG

Apply power to the MB485ETH-CG as shown below in **Figure 11.** Ensure that the power supply used complies with the specifications provided in **Appendix C.1**.

- The MB485ETH-CG accepts 9-30VDC or 24VAC on pins L+ and N-.The NXF4000 or PPC4000 can supply 24VDC voltage, all other devices will require an external 24VDC power supply.
- Frame GND should be connected.

Power to MB485ETH-CG	MB485ETH-CG Pin Label	Pin Assignment
Power In (+)	L +	V +
Power In (-)	N -	V -
Frame Ground	FG	FRAME GND

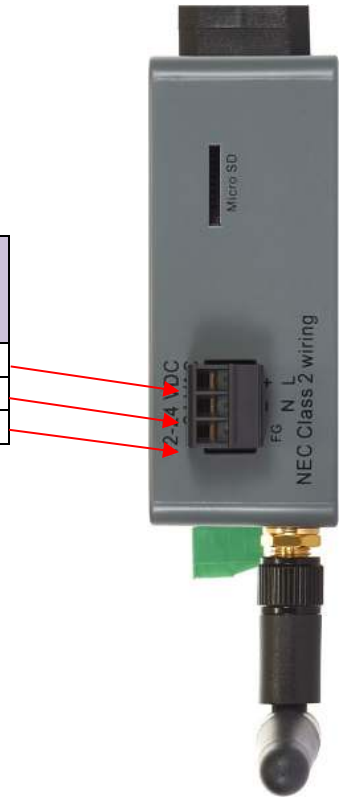


Figure 11: Power Connections

6 CONNECT TO THE MB485ETH-CG

6.1 Connect the PC to the MB485ETH-CG

There are two ways to connect the PC to the MB485ETH-CG, either by **Ethernet cable** (**Section** 6.1.1) or **Wi-Fi Access Point** (**Section** 6.1.2).

6.1.1 Connecting to the MB485ETH-CG via Ethernet

Connect a Cat-5 Ethernet cable (straight through or cross-over) between the local PC and MB485ETH-CG.

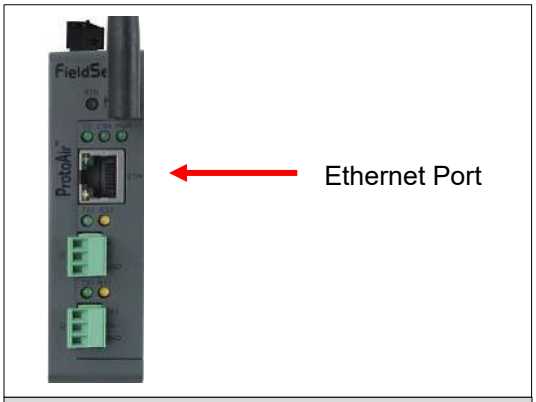


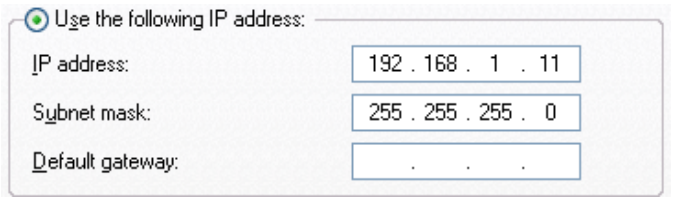
Figure 12: Ethernet Port Location

6.1.1.1 Changing the Subnet of the Connected PC

The default IP Address for the MB485ETH-CG is **192.168.1.24**, Subnet Mask is **255.255.255.0**. If the PC and MB485ETH-CG are on different IP networks, assign a static IP Address to the PC on the 192.168.1.xxx network.

For Windows 10:

- Find the search field in the local computer's taskbar (usually to the right of the windows icon) and type in "Control Panel".
- Click "Control Panel", click "Network and Internet" and then click "Network and Sharing Center".
- Click "Change adapter settings" on the left side of the window.
- Right-click on "Local Area Connection" and select "Properties" from the dropdown menu.
- Highlight Internet Protocol Version 4 (TCP/IPv4) and then click the Properties button.
- Select and enter a static IP Address on the same subnet. For example:



- Click the Okay button to close the Internet Protocol window and the Close button to close the Ethernet Properties window.

6.1.2 Connecting to the MB485ETH-CG Over Wi-Fi Access Point

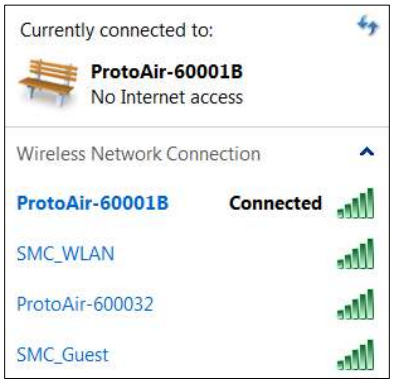
When the MB485ETH-CG is first powered up, the Wi-Fi Access Point will be enabled allowing direct connection to the MB485ETH-CG with Wi-Fi.

To connect to the MB485ETH-CG Wi-Fi Access Point:

- Click the icon (found in the bottom-right corner of the computer screen) to open the available Wireless Network Connections.
- Select the desired MB485ETH-CG and click Connect.

- Enter the Security key. The default is "**12345678**".

The available Wireless Network Connection menu should now show that the computer is connected to the MB485ETH-CG.



7 SETUP WEB SERVER SECURITY

Navigate to the IP Address of the MB485ETH-CG on the local PC by opening a web browser and entering the IP Address of the MB485ETH-CG; the default Ethernet address is 192.168.1.24, the default Wi-Fi Access Point address is 192.168.50.1.

NOTE: If the IP Address of the MB485ETH-CG has been changed, the IP Address can be discovered using the FS Toolbox utility. See Appendix A.1 for instructions.

7.1 Login to the MB485ETH-CG

The first time the MB485ETH-CG GUI is opened in a browser, the IP Address for the gateway will appear as untrusted. This will cause the following pop-up windows to appear.

- When the Web Server Security Unconfigured window appears, read the text and choose whether to move forward with HTTPS or HTTP.

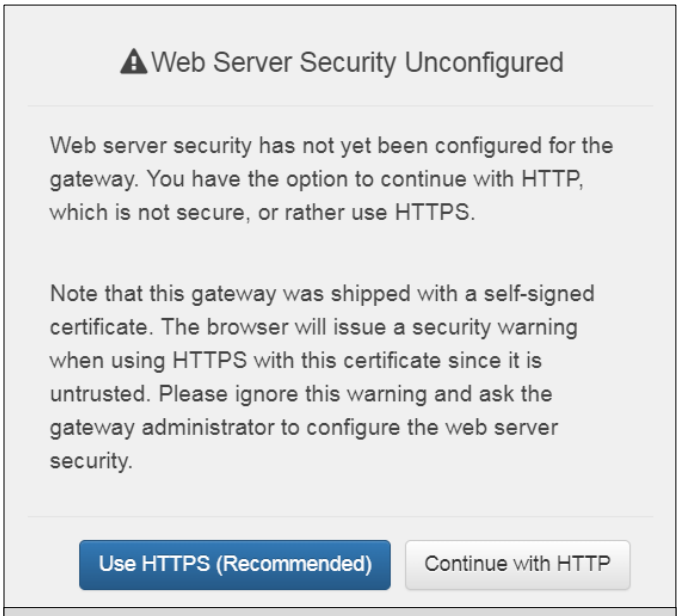


Figure 13: Web Server Security Unconfigured Window

- When the warning that “Your connection is not private” appears, click the advanced button on the bottom left corner of the screen.

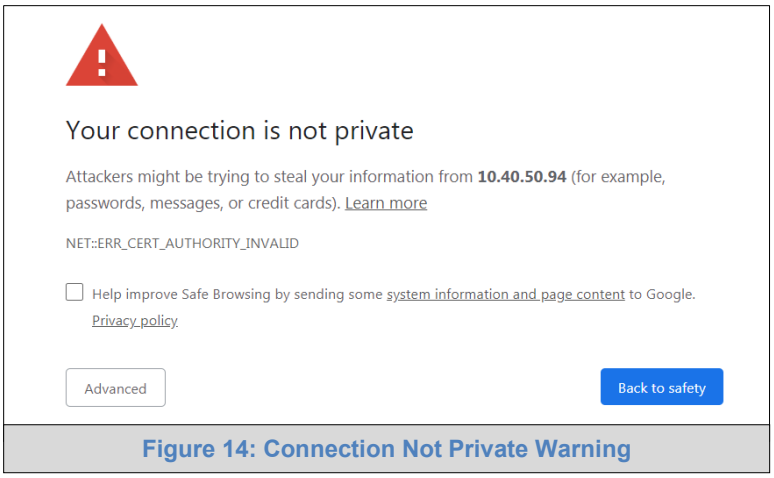


Figure 14: Connection Not Private Warning

- Additional text will expand below the warning, click the underlined text to go to the IP Address. In the **Figure 15** example this text is "Proceed to 10.40.50.94 (unsafe)".

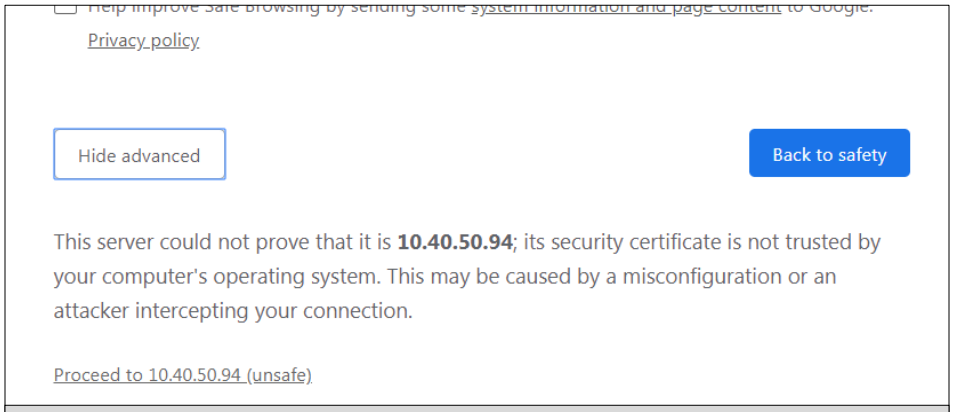


Figure 15: Warning Expanded Text

- When the login screen appears, put in the Username (default is "admin") and the Password (found on the label of the MB485ETH-CG).

NOTE: There is also a QR code in the top right corner of the MB485ETH-CG label that shows the default unique password when scanned.

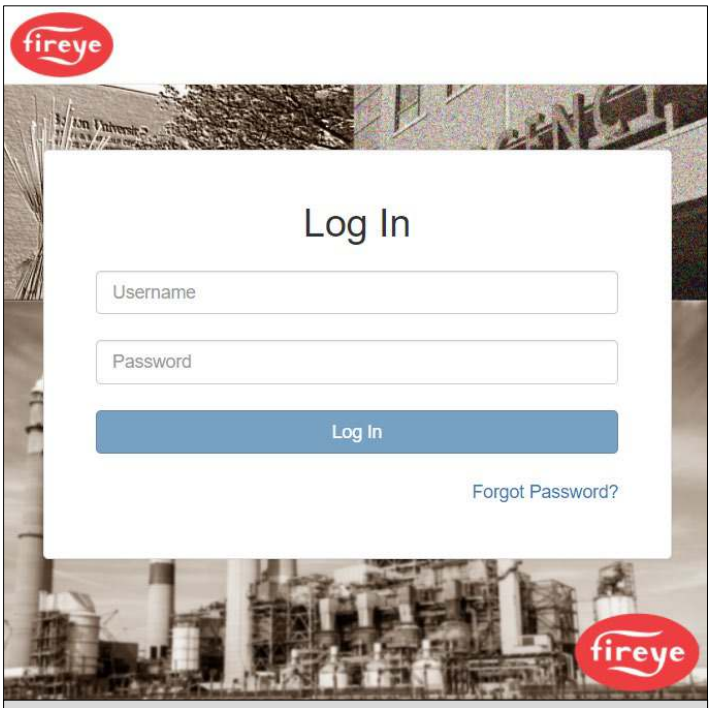


Figure 16: MB485ETH-CG Login

NOTE: A user has 5 attempts to login then there will be a 10-minute lockout. There is no timeout on the MB485ETH-CG to enter a password.

NOTE: To create individual user logins, go to Appendix B.6.

7.2 Select the Security Mode

On the first login to the MB485ETH-CG, the following screen will appear that allows the user to select which mode the MB485ETH-CG should use.

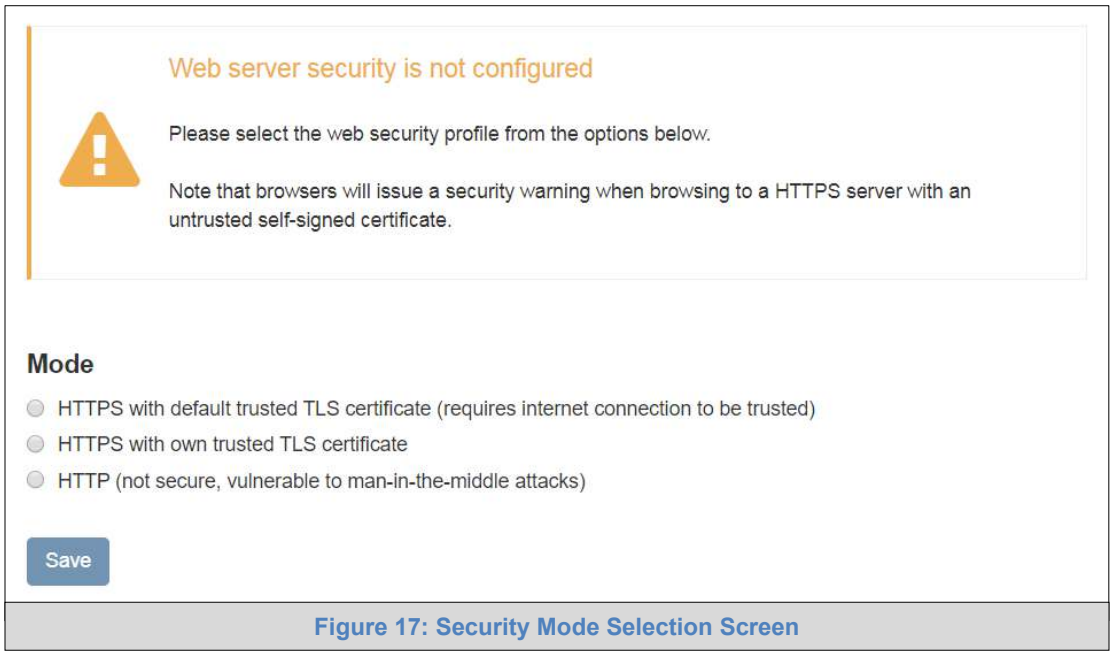


Figure 17: Security Mode Selection Screen

NOTE: Cookies are used for authentication.

NOTE: To change the web server security mode after initial setup, go to Appendix B.5.

The sections that follow include instructions for assigning the different security modes.

7.2.1 HTTPS with Own Trusted TLS Certificate

This is the recommended selection and the most secure.

- Once this option is selected, the Certificate, Private Key and Private Key Passphrase fields will appear under the mode selection.

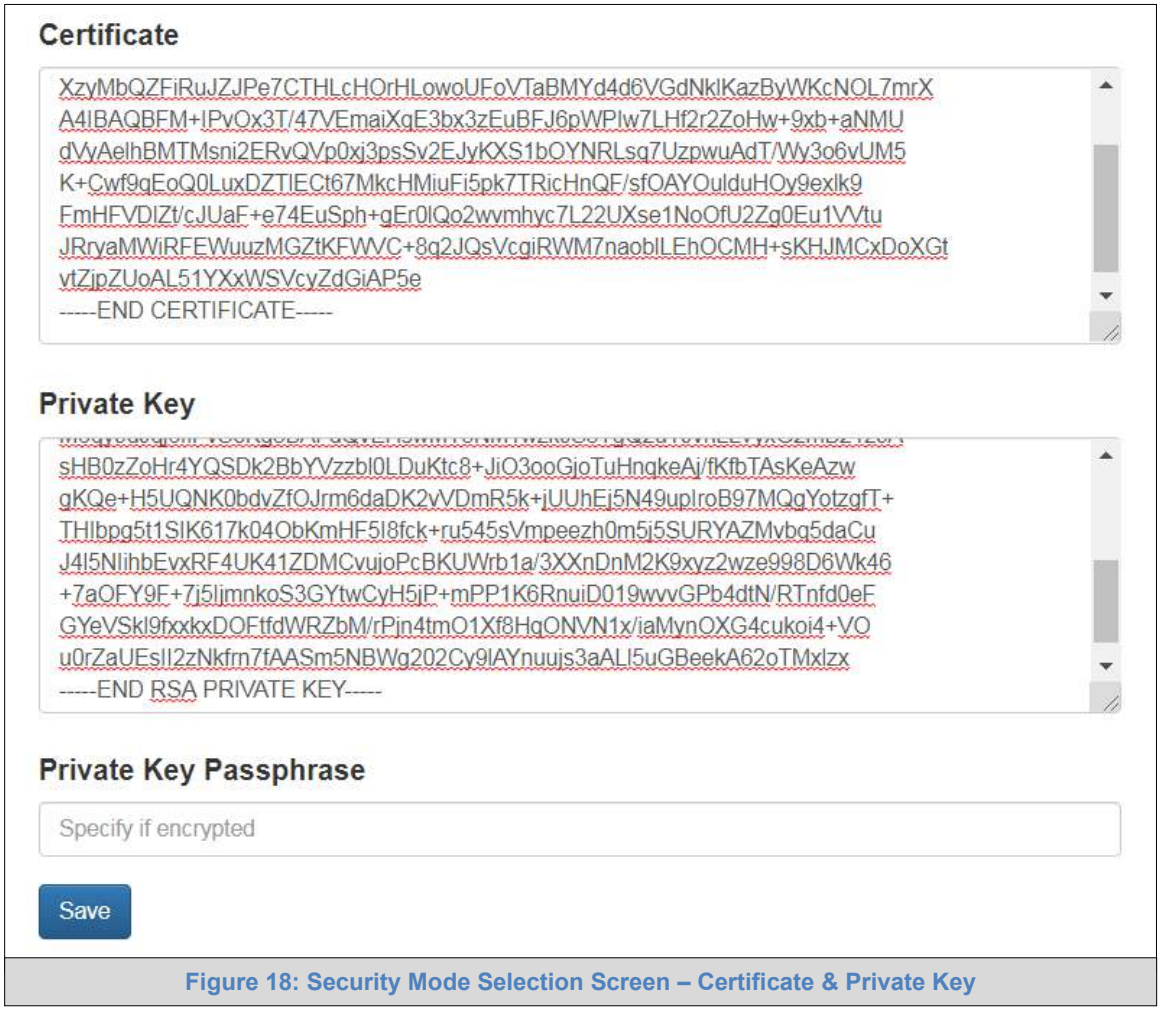


Figure 18: Security Mode Selection Screen – Certificate & Private Key

- Copy and paste the Certificate and Private Key text into their respective fields. If the Private Key is encrypted type in the associated Passphrase.
- Click Save.
- A “Redirecting” message will appear. After a short time the Web Configurator page will open.

7.2.2 HTTPS with Default Untrusted Self-Signed TLS Certificate or HTTP with Built-in Payload Encryption

- Select the desired option and click the Save button.
- A “Redirecting” message will appear. After a short time the Web Configurator page will open.

8 CONFIGURE NETWORK SETTINGS

8.1 Navigate to the Network Settings

- From the Web App landing page, click the Settings tab on the left side of the screen.

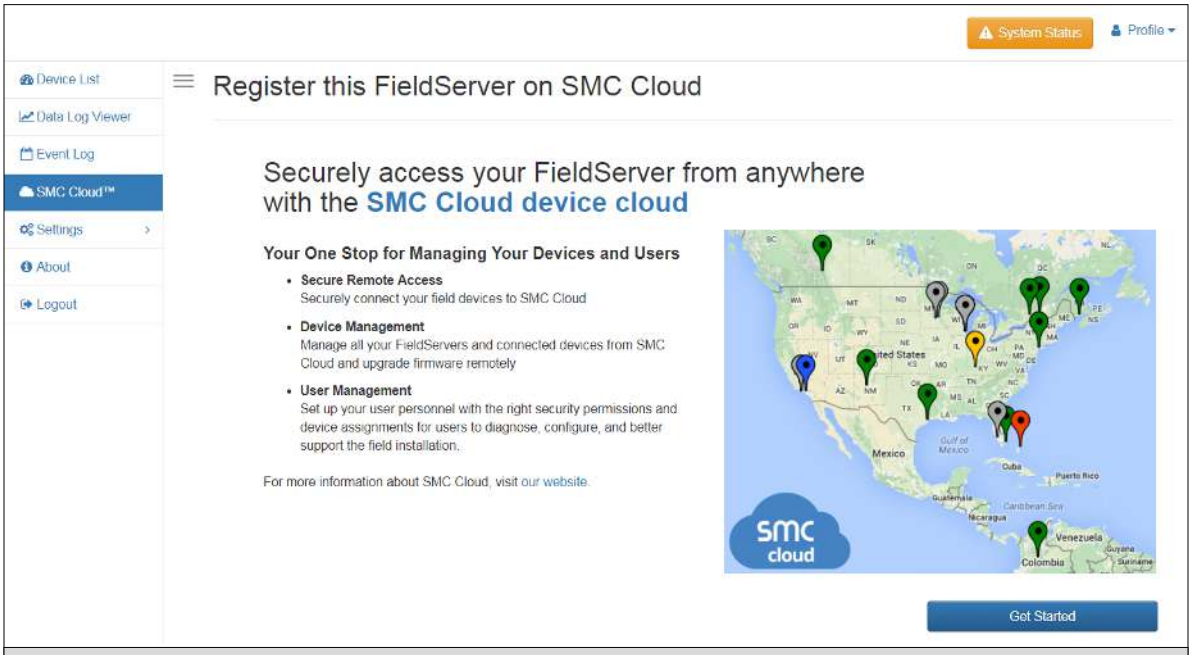


Figure 19: Web App Landing Page

- Click the Network tab that appears to open the Network Settings page.

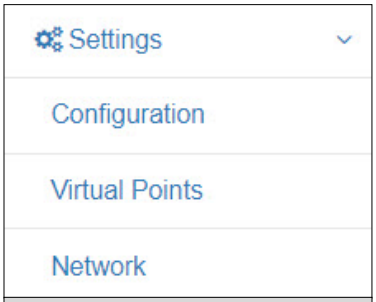


Figure 20: Settings Tabs

- A warning message will appear when performing the first-time setup, click the Exit Registration button to continue to the Network Settings page.

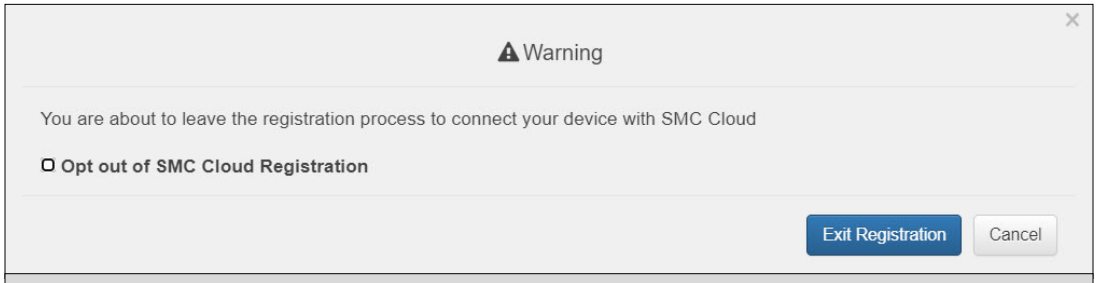


Figure 21: FS-GUI Landing Page

8.2 Change the MB485ETH-CG IP Address

Configure the IP settings of the MB485ETH-CG using the following methods:

- When using the Ethernet port to connect to the local network (**Section** 8.2.2).
- When connecting the MB485ETH-CG to a local wireless network, configure the Wi-Fi Client Settings in the MB485ETH-CG (**Section** 8.2.3).
- When updating Wi-Fi Access Point settings, configre the (**Section** 8.2.4).

8.2.1 Common Settings

The Common Settings make it possible to choose the primary connection when both Ethernet and Wi-Fi Client connections are available.

NOTE: The default Primary Connection is Ethernet.

- Select the desired option from the drop-down menu.
- Click the Save button, then click on the Confirm button in the pop-up window to activate the new settings.

NOTE: If using Wi-Fi Client and not Ethernet, change Primary Connection to Wi-Fi.

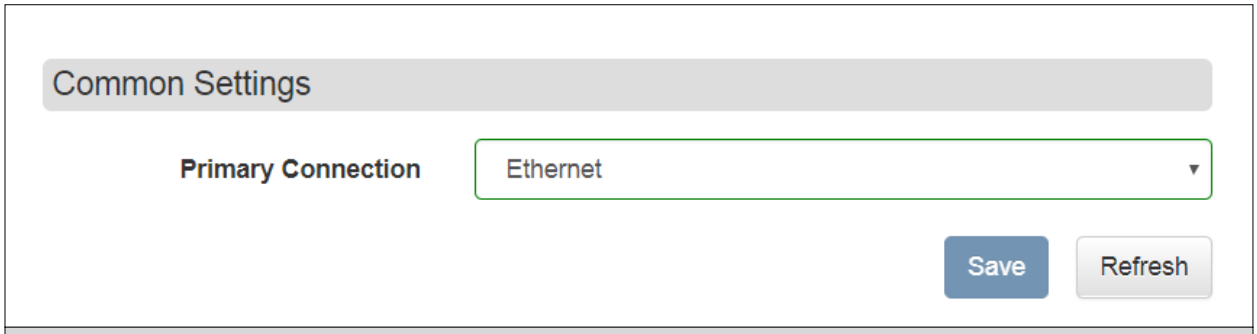


Figure 22: Common Network Settings

NOTE: The fields below the update button show the settings as they were set in the IP Settings or Wi-Fi Client pages. They are not editable on the Common page.

8.2.2 Wired Network Settings

The IP Settings section updates the wired network configuration. To update, follow these instructions:

- Enable DHCP Client State to automatically assign IP Settings or modify the settings manually as needed, via these fields: IP Address, Netmask, Default Gateway and Domain Name Server1/2.

NOTE: If connected to a router, set the Default Gateway to the same IP Address as the router.

- Click Update IP Settings, then click on System Restart to restart the Gateway and activate the new IP Address.
- Connect the MB485ETH-CG to the local network or router.

NOTE: If the webpage was open in a browser, the browser will need to be pointed to the new IP Address of the MB485ETH-CG before the webpage will be accessible again.

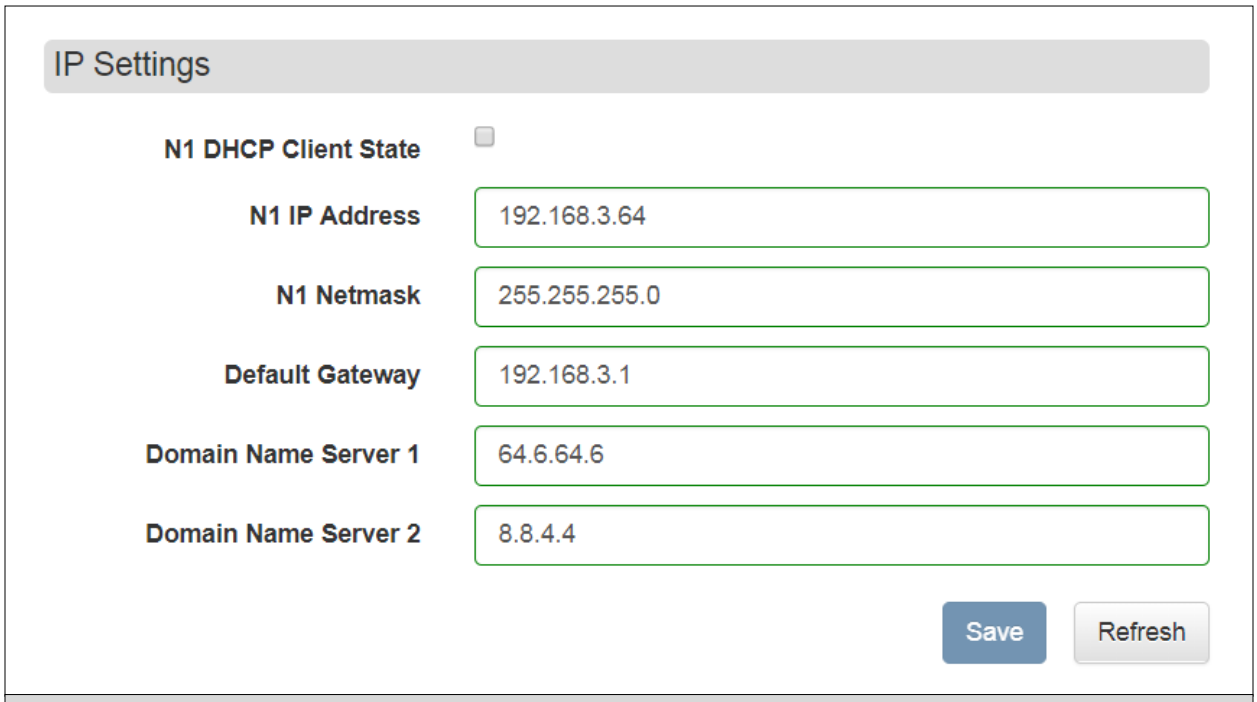


Figure 23: Ethernet Port Network Settings

8.2.3 Wi-Fi Client Settings

To change the Wi-Fi client settings, follow these instructions:

- Set the Wi-Fi Status to ENABLED for the MB485ETH-CG to communicate with other devices via Wi-Fi.
- Enter the Wi-Fi SSID and Wi-Fi Password for the local wireless network.
- Enable DHCP to automatically assign all Wi-Fi Client network settings or manually modify the setting using the fields immediately below (IP Address, Network, etc.).

NOTE: If connected to a router, set the IP gateway to the same IP Address as the router.

- Click Update Wi-Fi Settings, then click on System Restart to restart the gateway and activate Wi-Fi Client settings.
- Go to Common settings (**Section** 8.2.1) to set the Primary Connection to Wi-Fi Client.

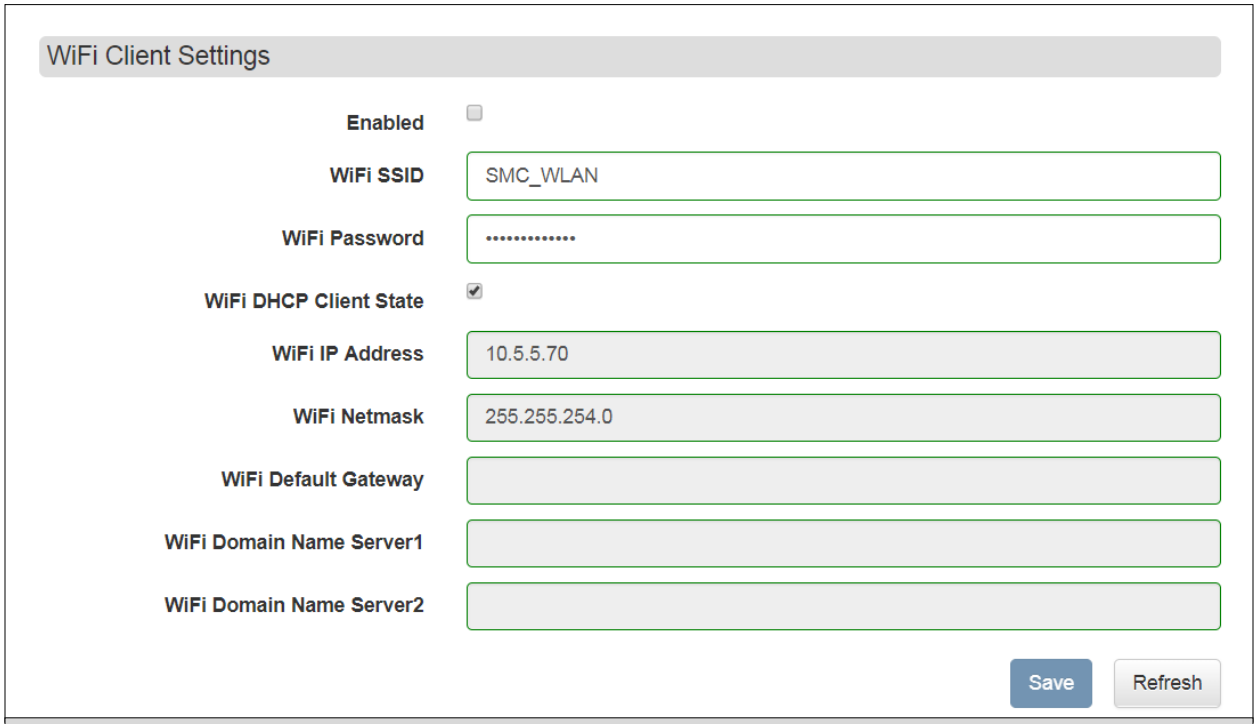


Figure 24: Wi-Fi Client Network Settings

8.2.4 Wi-Fi Access Point Settings

To change the Wi-Fi AP settings, follow these instructions:

- The Access Point Status Field must be ENABLED to allow connecting to the MB485ETH-CG via Wi-Fi.
- Modify the Settings manually as needed, via these fields: Access Point SSID, Access Point Password, SSID Broadcast, and Channel.

NOTE: The default channel is 11. The default IP Address is 192.168.50.1.

- Click Update Wi-Fi Settings, then click on the System Restart to restart the Gateway and activate the Wi-Fi settings.

NOTE: If the FS-GUI was open in a browser via Wi-Fi, the browser will need to be updated with the new Wi-Fi details before the MB485ETH-CG FS-GUI will be accessible again.

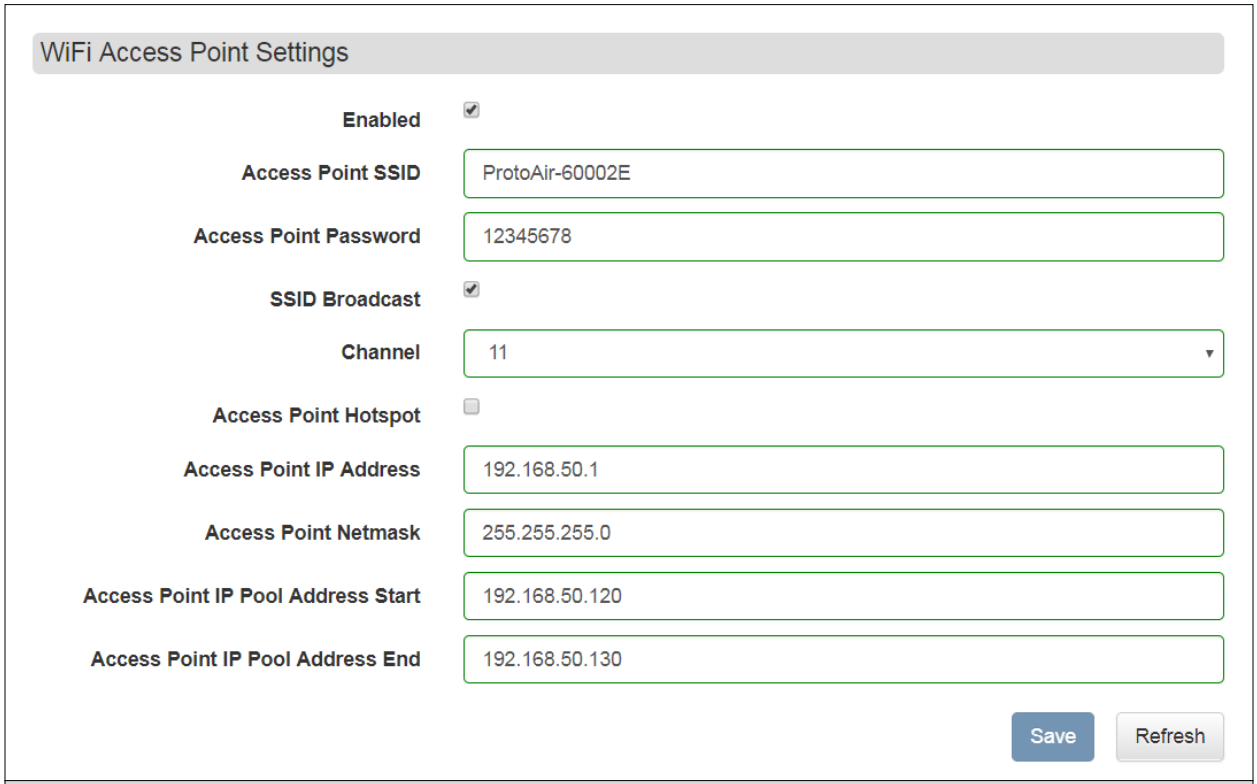


Figure 25: FS-GUI Wi-Fi AP Network Settings

9 SMC CLOUD USER SETUP, REGISTRATION AND LOGIN

The SMC Cloud is MSA Safety's device cloud solution for IIoT. Integration with the SMC Cloud enables a secure remote connection to field devices through a MB485ETH-CG and hosts local applications for device configuration, management, as well as maintenance. For more information about the SMC Cloud, refer to the SMC Cloud Start-up Guide.

9.1 Choose Whether to Integrate SMC Cloud

When first logging onto the MB485ETH-CG, the Web App will open on the SMC Cloud™ page.

NOTE: If a warning message appears instead, go to Appendix B.7 to resolve the connecton issue.

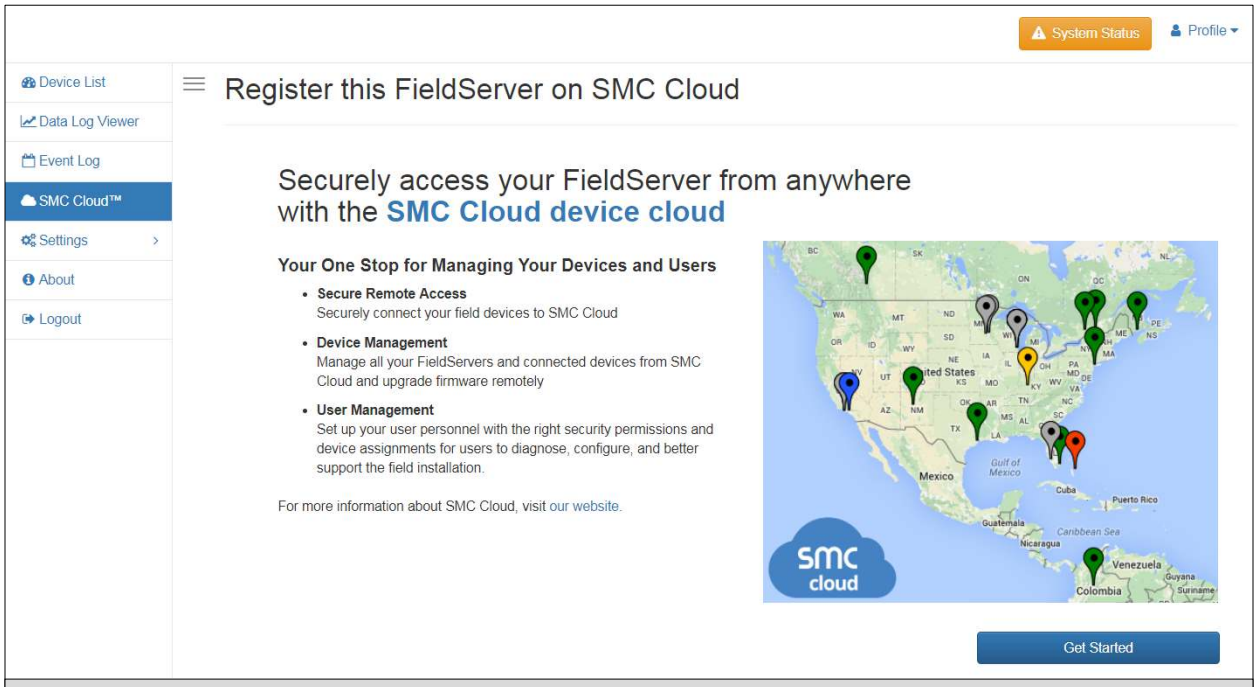


Figure 26: Generic Web App Page – First Login

- Either go through the SMC Cloud setup to integrate SMC Cloud functionality to the MB485ETH-CG or optout of SMC Cloud setup.
  - For SMC Cloud setup, continue with instructions in the following sections
  - **To opt out of SMC Cloud**, click on a tab other than the SMC Cloud™ tab 

, click the checkbox next to “Opt out of SMC Cloud Registration” in the Warning window that appears and click the Exit Registration button (skip to **Section** 10 to continue MB485ETH-CG configuration)
  - To ignore SMC Cloud setup until the next time the MB485ETH-CG Web App is opened, click a tab other than SMC Cloud™ and then click the Exit Registration button with the “Opt out” checkbox unchecked (skip to **Section** 10 to continue MB485ETH-CG configuration)

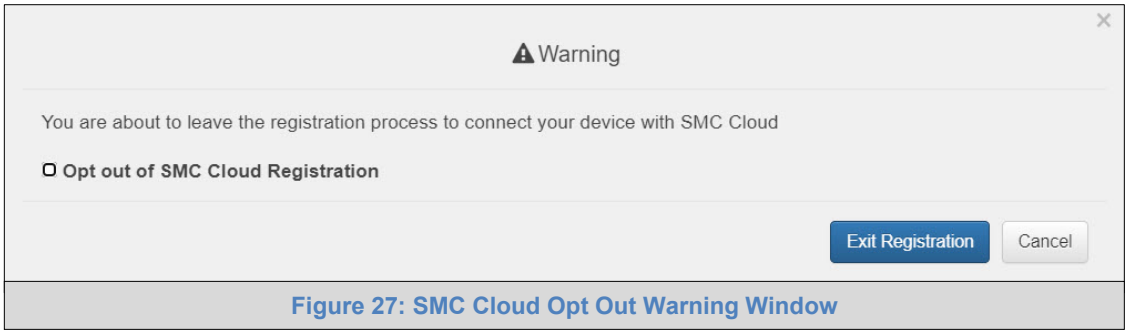


Figure 27: SMC Cloud Opt Out Warning Window

NOTE: If SMC Cloud integration with the MB485ETH-CG is not desired, skip to Section 10 to continue gateway setup. If user setup is already complete go to Section 9.3.

9.2 User Setup

Before the gateway can be connected to SMC Cloud a user account must be created. Request an invitation to SMC Cloud from the manufacturer's support team and follow the instructions below to set up login details:

- The "Welcome to SMC Cloud" email will appear as shown below.

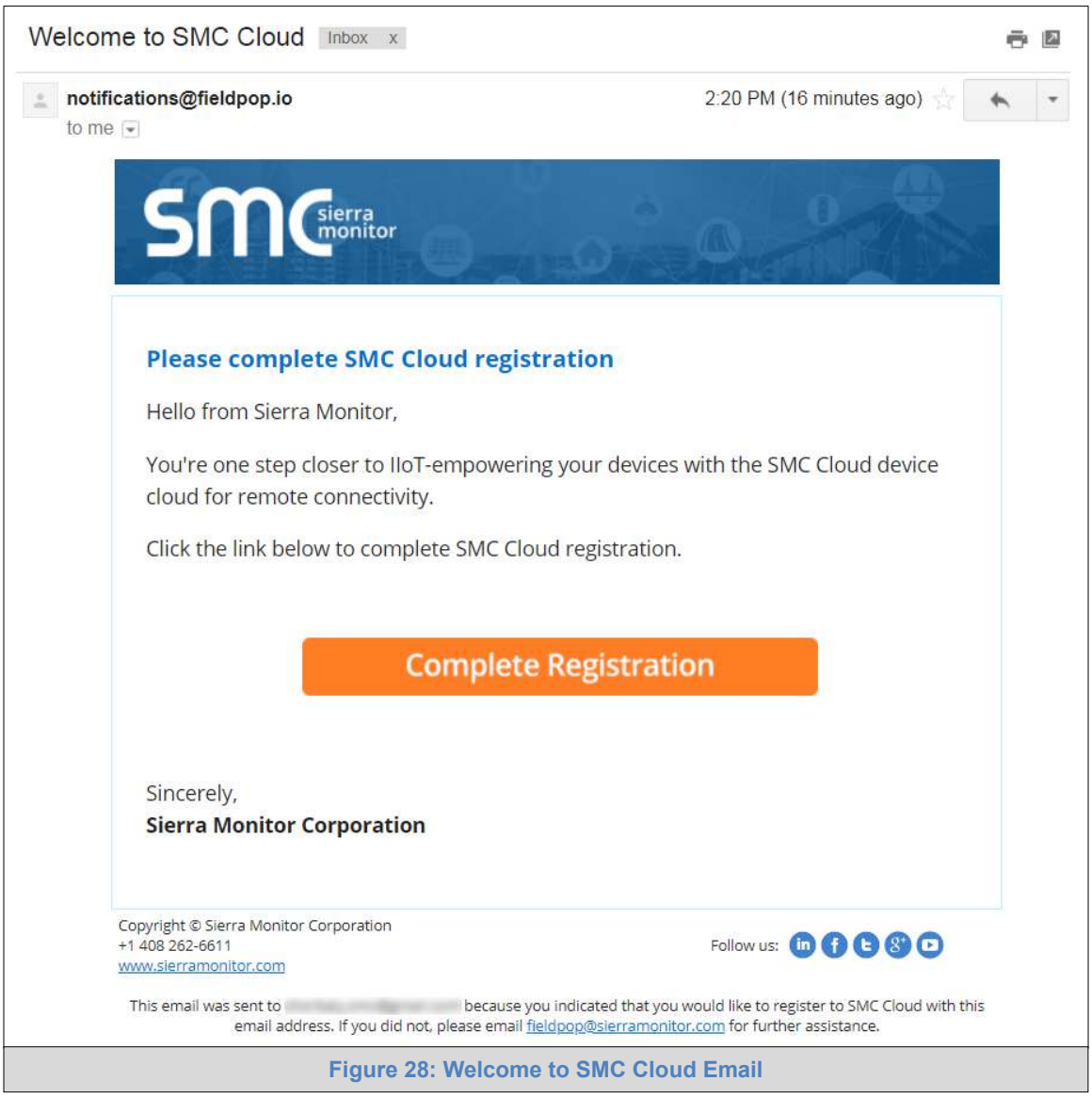


Figure 28: Welcome to SMC Cloud Email

NOTE: If no SMC Cloud email was received, check the spam/junk folder for an email from notification@fieldpop.io. Contact the manufacturer's support team if no email is found.

- Click the “Complete Registration” button and fill in user details accordingly.

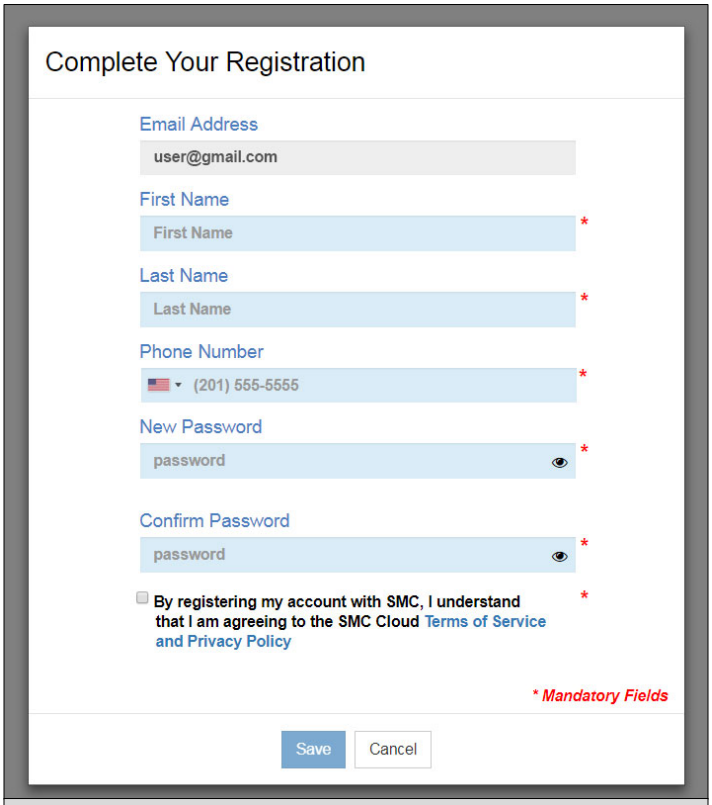


Figure 29: Setting User Details

- Fill in the name, phone number, password fields and click the checkbox to agree to the privacy policy and terms of service.

NOTE: If access to data logs using RESTful API is needed, do not include “#” in the password.

- Click “Save” to save the user details.
- Click “OK” when the Success message appears.
- Record the email account used and password for future use.

9.3 Registration Process

Once SMC Cloud user credentials have been generated, the MB485ETH-CG can be registered onto the SMC Cloud server.

- When first logging onto the MB485ETH-CG, the Web App will open on the SMC Cloud™ page.

NOTE: If a warning message appears instead, go to Appendix B.7 to resolve the connecton issue.

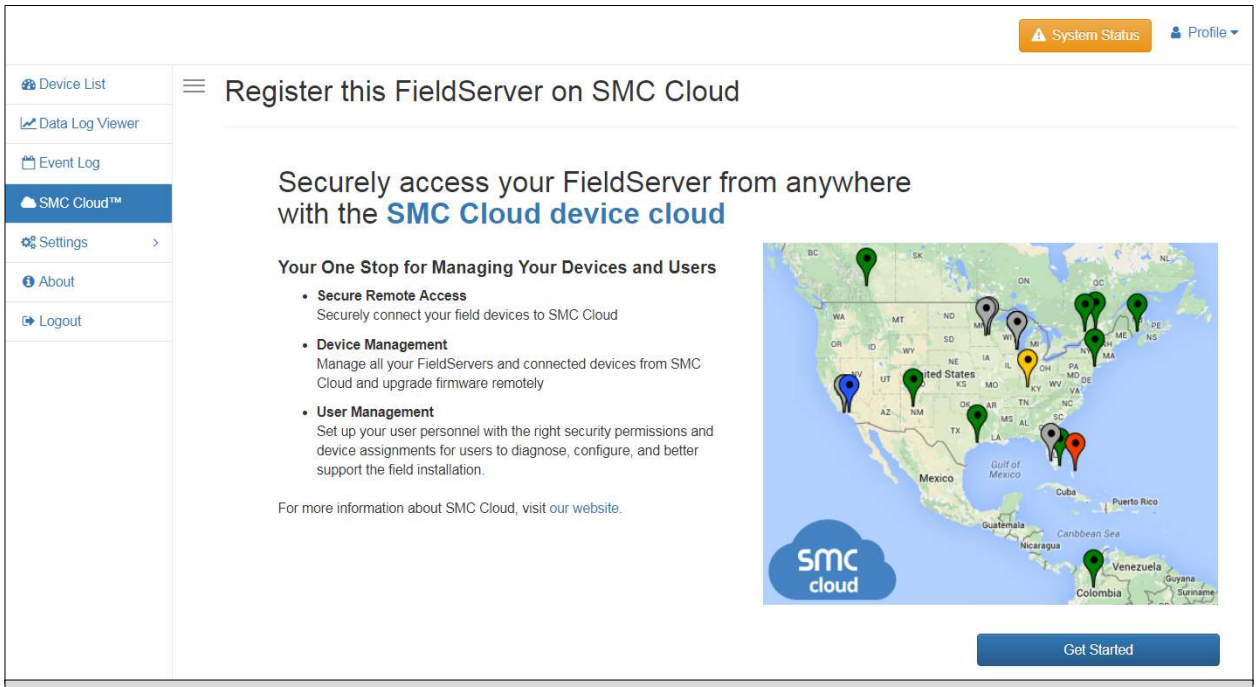


Figure 30: SMC Cloud Registration Message

- Click Get Started to view the SMC Cloud registration page.

NOTE: For information on the System Status button, go to Appendix B.8.

- To register, fill in the user details, site details, gateway details and SMC Cloud account credentials.
  - Enter user details and click Next

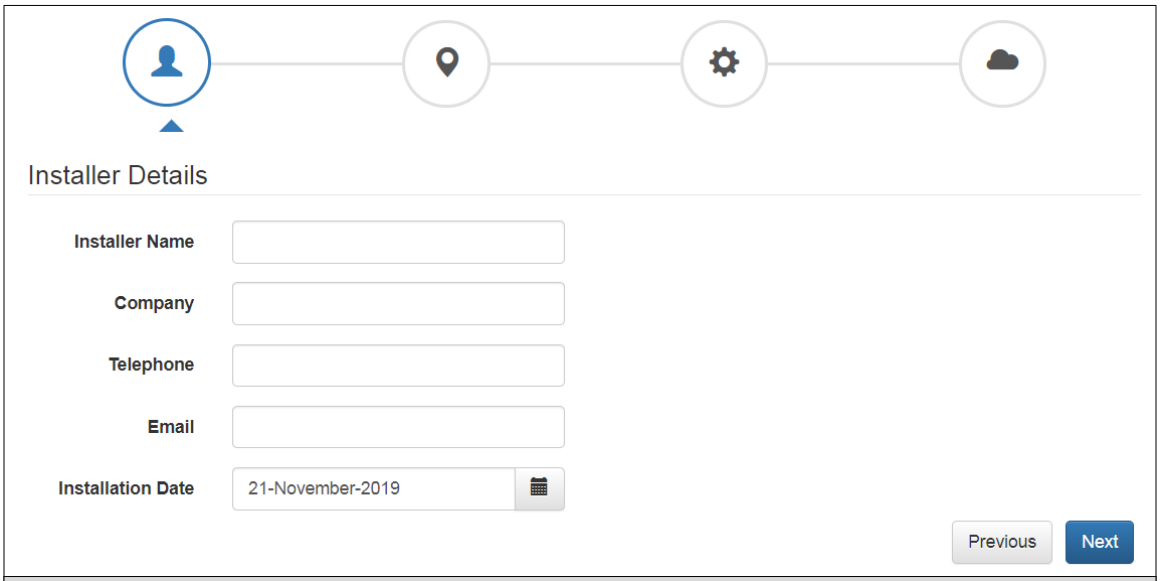


Figure 31: SMC Cloud Registration – Installer Details

  - Enter the site details by entering the physical address fields or the latitude and longitude then click Next

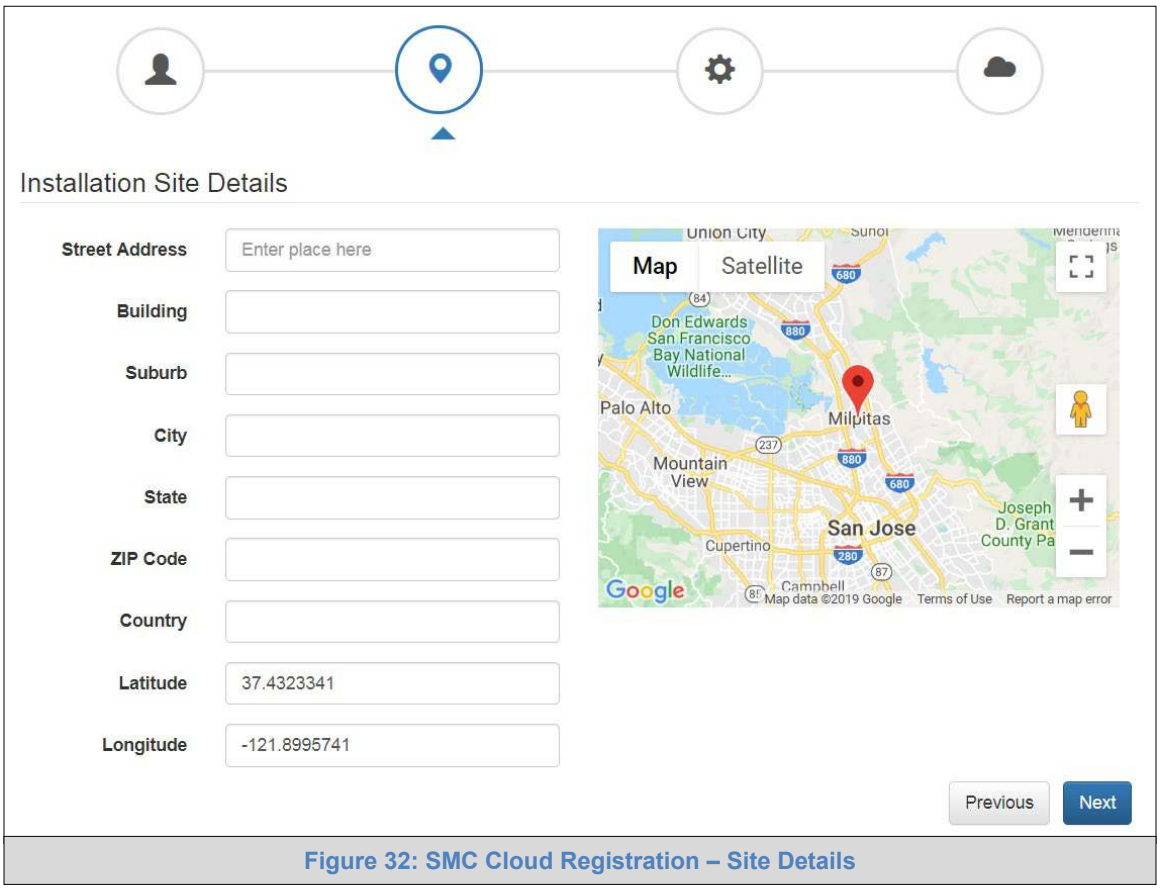


Figure 32: SMC Cloud Registration – Site Details

- Enter Name and Description (required) then click Next

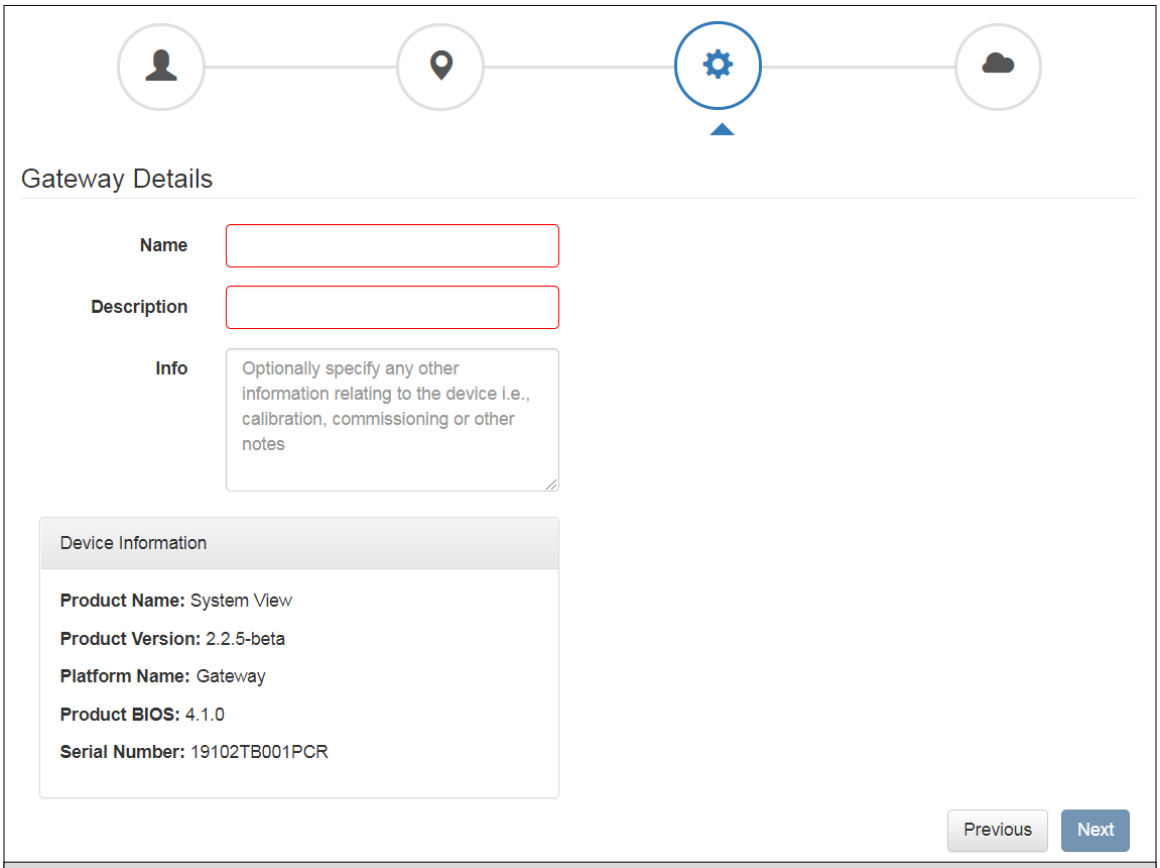


Figure 33: SMC Cloud Registration – Gateway Details

- Enter user credentials and click Register Device

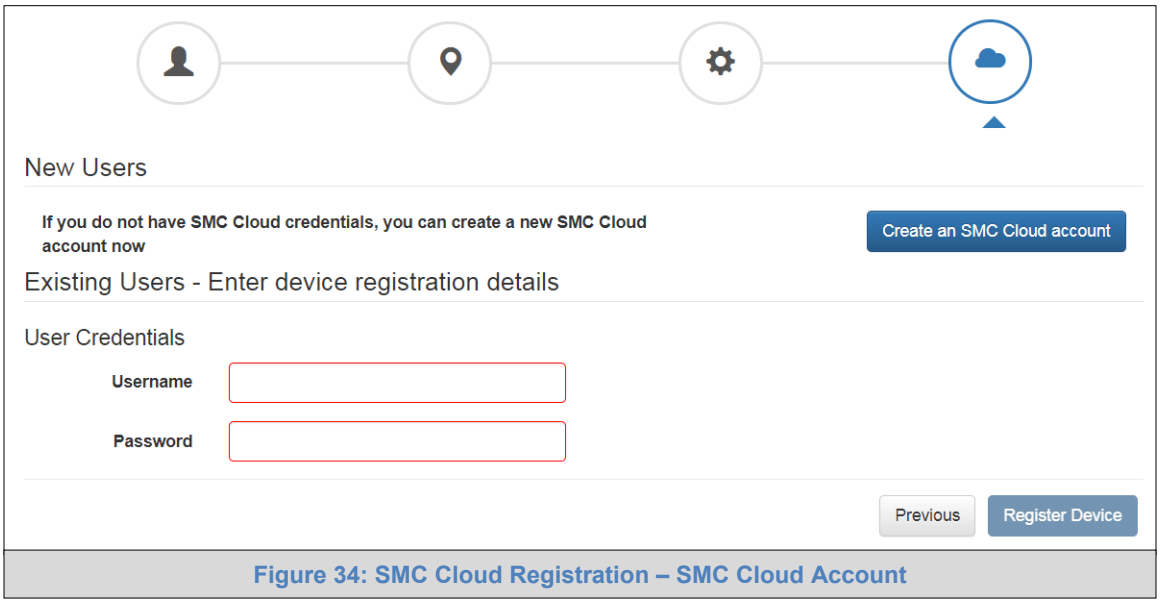


Figure 34: SMC Cloud Registration – SMC Cloud Account

- Once the device has successfully been registered, a confirmation window will appear. Click the Close button and the following screen will appear listing the device details and additional information auto-populated by the MB485ETH-CG.

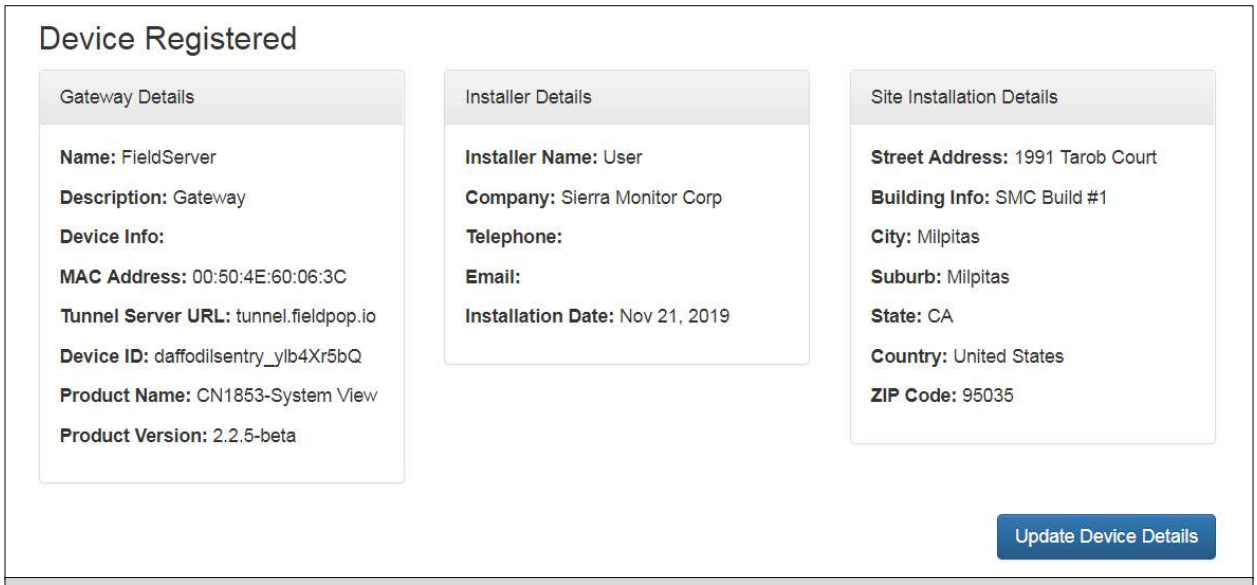


Figure 35: Device Registered for SMC Cloud

NOTE: Update these details at any time by going to the SMC Cloud™ tab and clicking the Update Device Details button.

9.4 Login to SMC Cloud

After the MB485ETH-CG is registered, go to www.smccloud.net and type in the appropriate login information as per registration credentials.

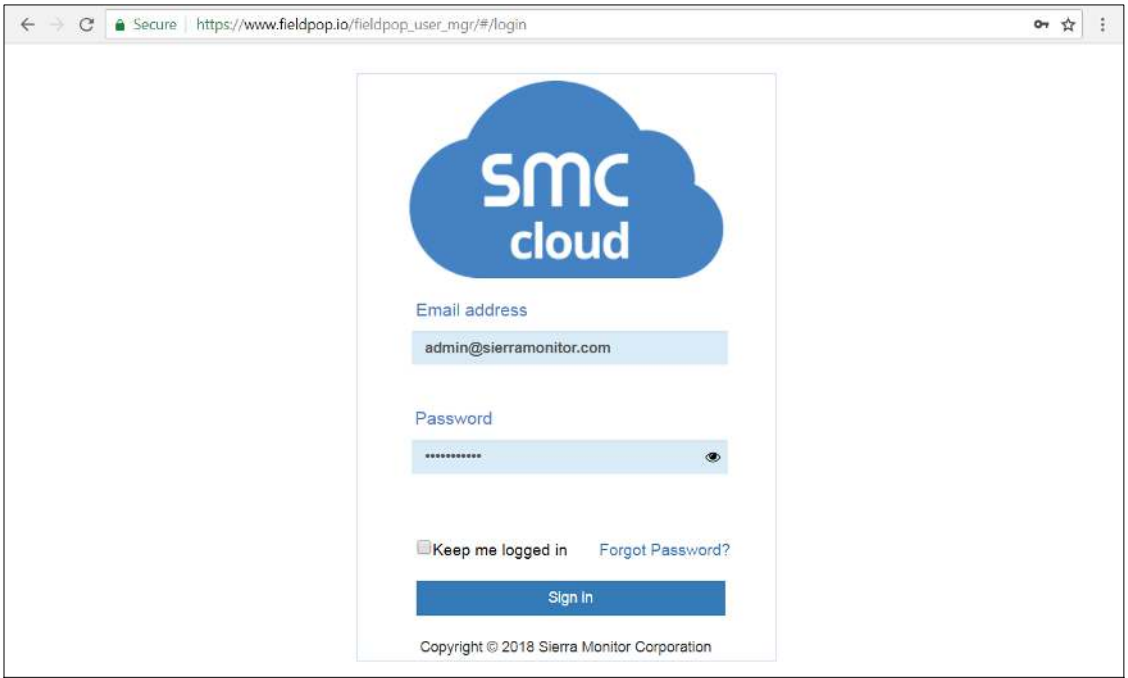


Figure 36: SMC Cloud Login Page

NOTE: If the login password is lost, see the SMC Cloud Start-up Guide for recovery instructions.

On first login, the Privacy Policy window will appear. Read the Terms of Service, click the checkbox to accept the terms and then click the Continue button to access SMC Cloud.

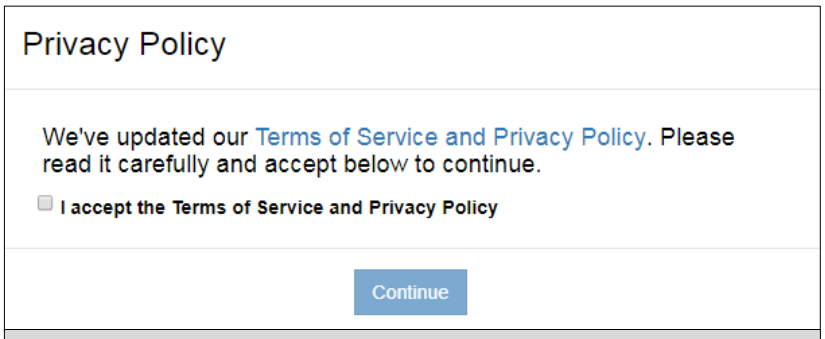


Figure 37: SMC Cloud Privacy Policy

NOTE: For additional SMC Cloud instructions see the SMC Cloud Start-up Guide.

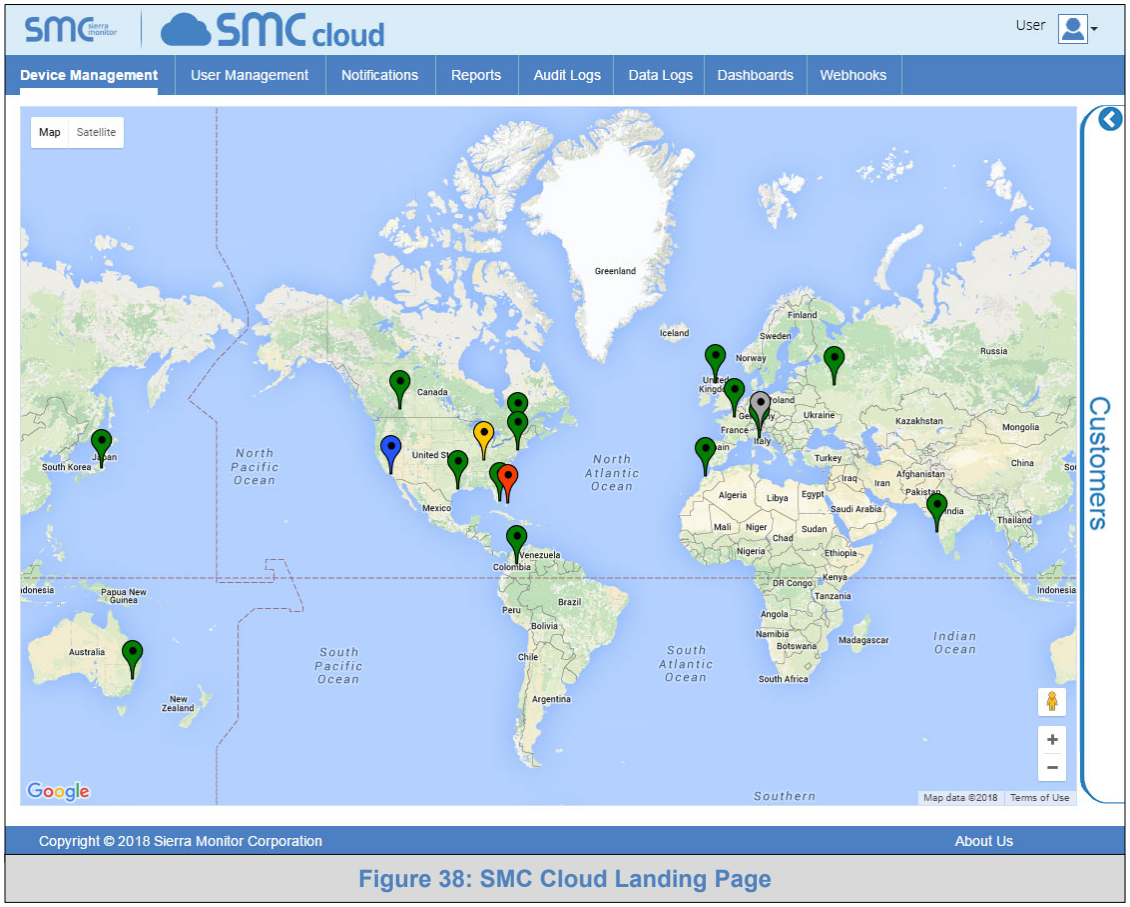


Figure 38: SMC Cloud Landing Page

10 CONFIGURE THE MB485ETH-CG

10.1 Navigate to the MB485ETH-CG Web Configurator

- From the Web App Device List page (**Figure 39**), click the Settings tab and then click Configuration.

Figure 39: Web App Landing Page

NOTE: For information on the System Status button, go to Appendix B.8.

- Then click the Profiles Configuration button to go to the Web Configurator page.

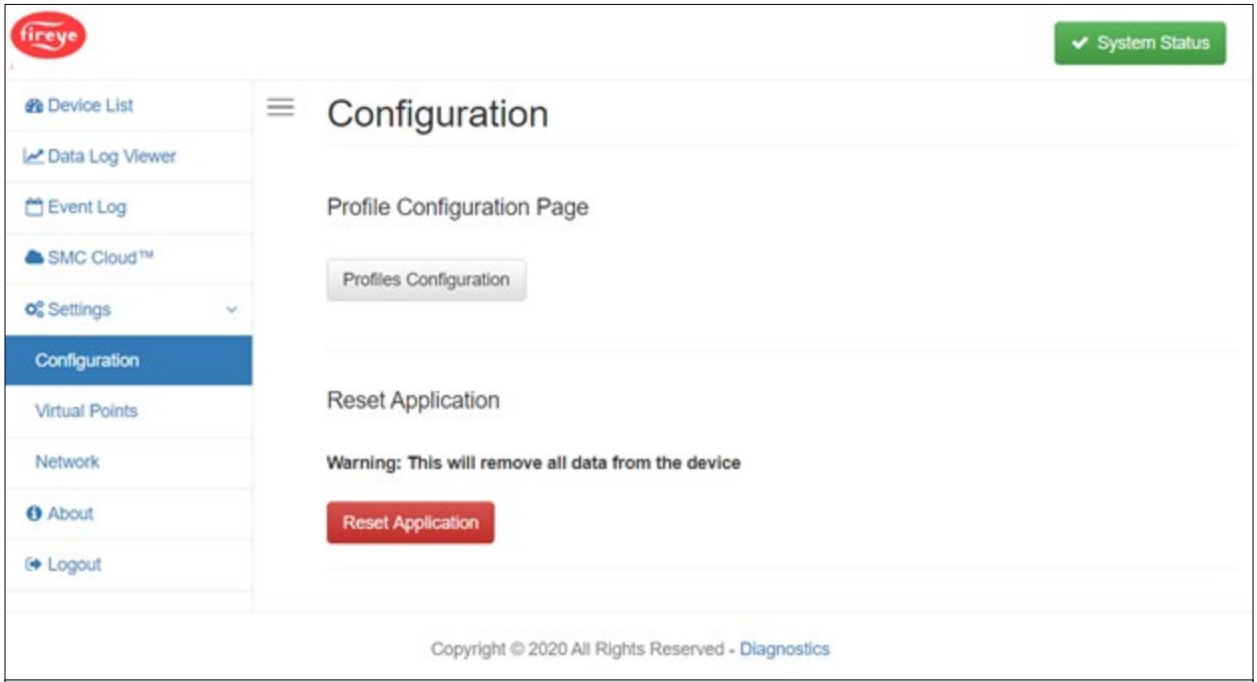


Figure 40: Configuration Tab

NOTE: For Web App instructions to the System View, Historian, Event Logger and Virtual Points functions, see the SMC Cloud Start-up Guide.

10.2 Select Field Protocol and Set Configuration Parameters

- On the Web Configurator page, the first configuration parameter is the Protocol Selector.

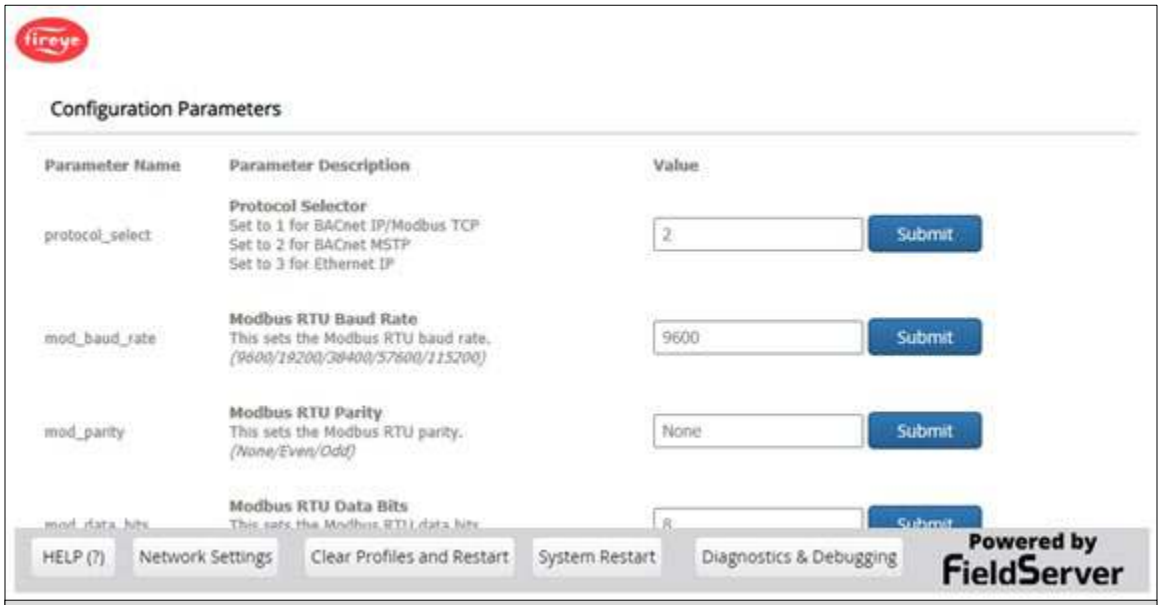


Figure 41: Web Configurator Showing Protocol Selector Parameter

- Select the field protocol by entering the appropriate number into the Protocol Selector Value. Click the Submit button. Click the System Restart button to save the updated configuration.

NOTE: Protocol specific parameters are only visible when the associated protocol is selected.

NOTE: If Modbus TCP/IP was selected and is used for the field protocol, skip Section 10.3. Device profiles are NOT used for Modbus TCP/IP.

- Ensure that all parameters are entered for successful operation of the gateway. Find the legal value options for each parameter under the Parameter Description in parentheses.

NOTE: If multiple devices are connected to the MB485ETH-CG, set the BACnet Virtual Server Nodes field to "Yes"; otherwise leave the field on the default "No" setting.

10.3 Setting MB485ETH-CG Active Profiles

- In the Web Configurator, the Active Profiles are shown below the configuration parameters. The Active Profiles section lists the currently active device profiles, including previous Web Configurator additions. This list is empty for new installations, or after clearing all configurations. (Figure 42)

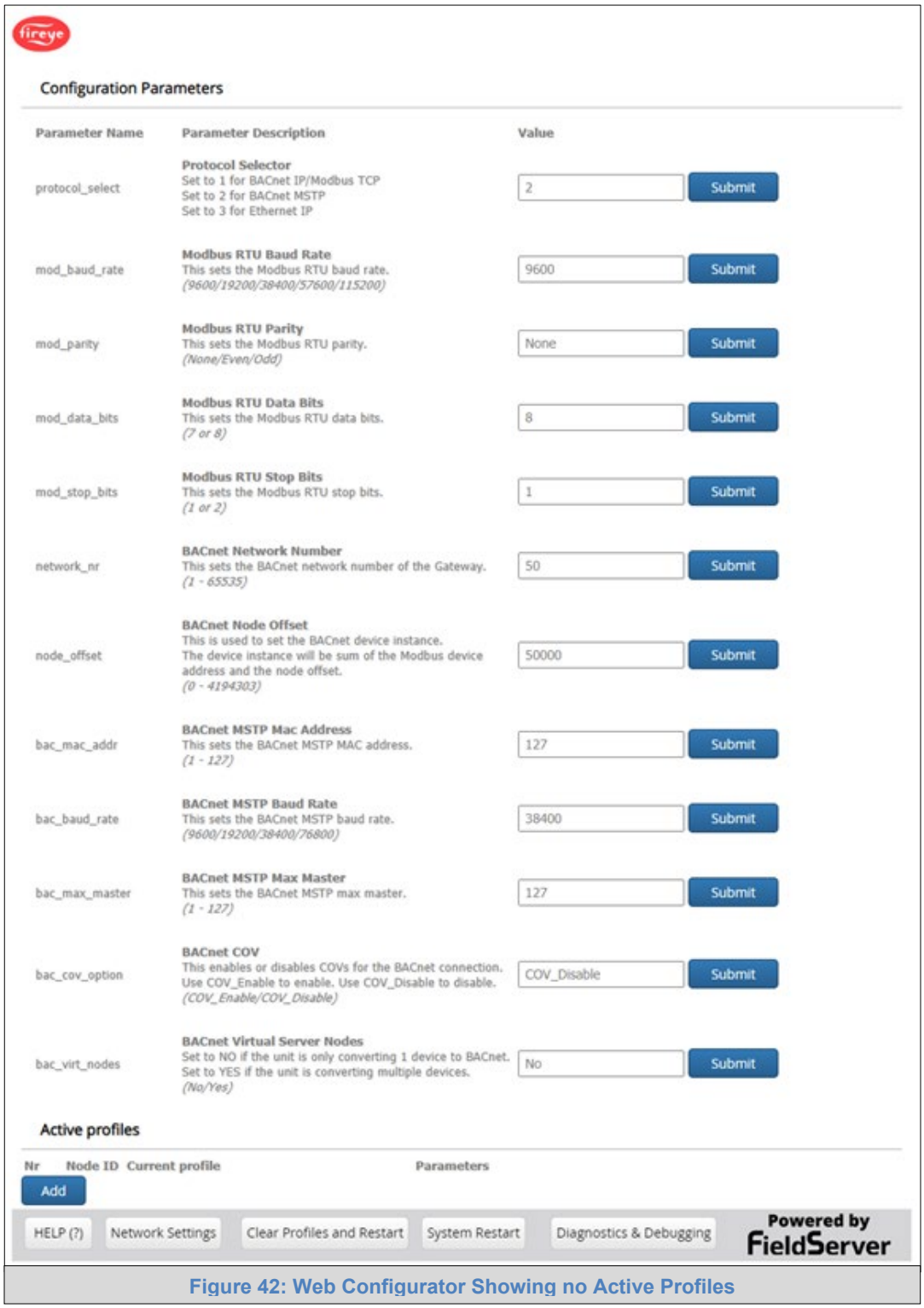


Figure 42: Web Configurator Showing no Active Profiles

- To add an active profile to support a device, click the Add button under the Active Profiles heading. This will present a drop-down menu underneath the Current profile column.
- Once the Profile for the device has been selected from the drop-down list, enter the value of the device's Node-ID which was assigned in **Section** 4.3.2.
- If the device is connected via Modbus TCP/IP, enter the "ip_address" and "tcp_id" under the Parameters heading. These are gathered from settings on the device and correspond to the device IP Address and TCP_ID. (**Section** 4.3.3)

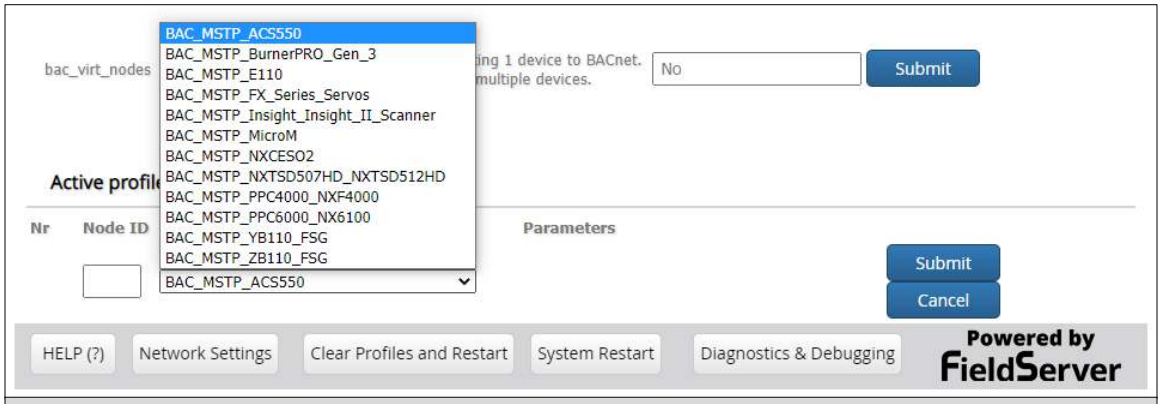


Figure 43: Profile Selection Menu

- Then press the "Submit" button to add the Profile to the list of devices to be configured.
- Repeat this process until all the devices have been added.
- Completed additions are listed under "Active profiles" as shown in Figure 44.

Figure 44: Web Configurator Showing Active Profile Additions

10.4 Verify Device Communications

- **If devices use a serial connection, check that the port R1 TX1 and RX1 LEDs are rapidly flashing**. See Appendix A.4 for additional information and images.
- Confirm the software shows communication without errors. Go to Appendix A.2 for instructions.

10.5 BACnet: Setting Node_Offset to Assign Specific Device Instances

- Follow the steps outlined in **Section 10.1** to access the MB485ETH-CG Web Configurator.
- The Node_Offset field shows the current value (default = 50,000).
  - The values allowed for a BACnet Device Instance can range from 1 to 4,194,303
- To assign a specific Device Instance (or range); change the Node_Offset value as needed using the calculation below:

  Device Instance (desired) = Node_Offset + Node_ID

  For example, if the desired Device Instance for the device 1 is 50,001 and the following is true:
  - Device 1 has a Node-ID of 1
  - Device 2 has a Node-ID of 22
  - Device 3 has a Node-ID of 33

  Then plug the device 1's information into the formula to find the desired Node_Offset:

  50,001 = Node_Offset + 1

  ➢ **50,000 = Node_Offset**

  Once the Node_Offset value is input, it will be applied as shown below:
  - Device 1 Instance = 50,000 + Node_ID = 50,000 + 1 = 50,001
  - Device 2 Instance = 50,000 + Node_ID = 50,000 + 22 = 50,022
  - Device 3 Instance = 50,000 + Node_ID = 50,000 + 33 = 50,033
- Click "Submit" once the desired value is entered.

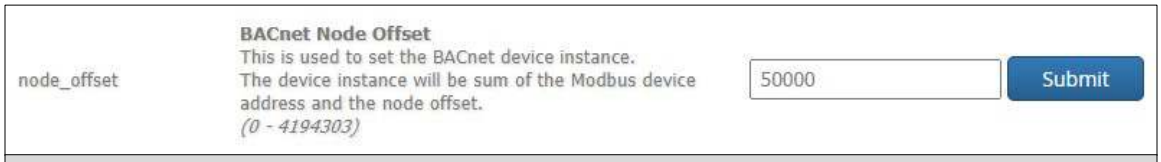


Figure 45: Web Configurator Node Offset Field

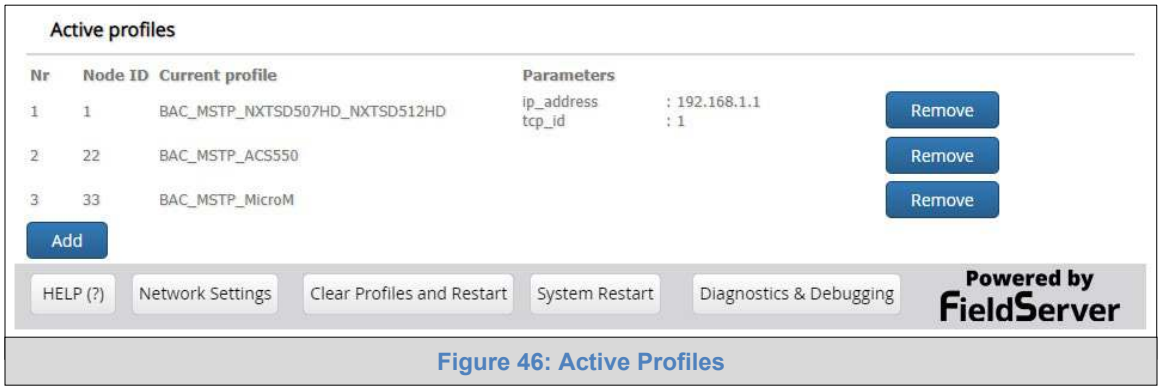


Figure 46: Active Profiles

10.6 How to Start the Installation Over: Clearing Profiles

- Follow the steps outlined in **Section 10.1** to access the MB485ETH-CG Web Configurator.
- At the bottom-left of the page, click the “Clear Profiles and Restart” button.
- Once restart is complete, all past profiles discovered and/or added via Web configurator are deleted. The unit can now be reinstalled.

Appendix A Troubleshooting

Appendix A.1 Lost or Incorrect IP Address

- Ensure that MB485ETH-CG Toolbox is loaded onto the local PC. Otherwise, download the MB485ETH-CG-Toolbox.zip via the Sierra Monitor website's Software Downloads.
- Extract the executable file and complete the installation.

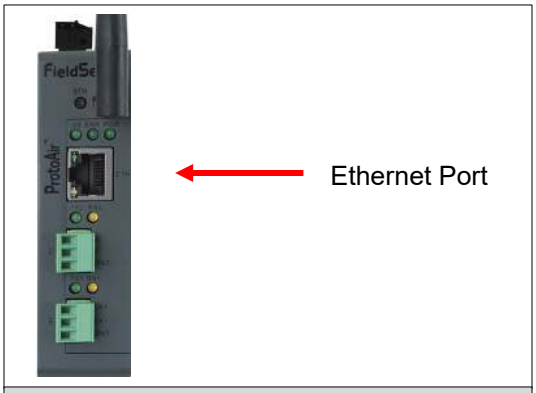
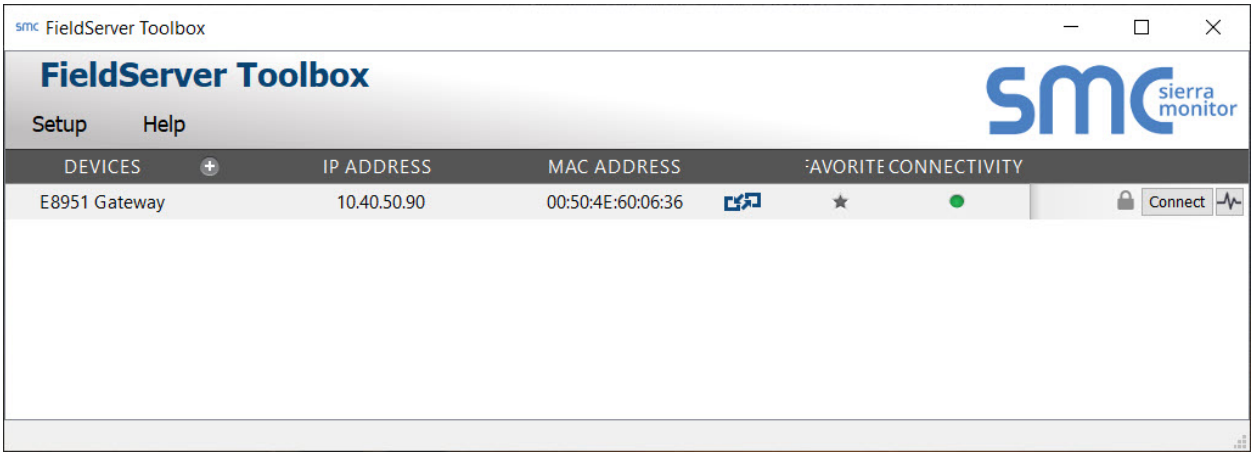


Figure 47: Ethernet Port Location

- Connect a standard Cat-5 Ethernet cable between the user's PC and MB485ETH-CG.
- Double click on the FS Toolbox Utility and click Discover Now on the splash page.
- Check for the IP Address of the desired gateway.



- If correcting the IP Address of the gateway: click the settings icon on the same row as the gateway, then click Network Settings, change the IP Address and click Update IP Settings to save.

Appendix A.2 Viewing Diagnostic Information

- Type the IP Address of the MB485ETH-CG into the web browser or use the MB485ETH-CG Toolbox to connect to the MB485ETH-CG.
- Click on Diagnostics Button, then click on view, and then on connections.
- If there are any errors showing on the Connections page, refer to **Appendix A.3** to check the wiring and settings.

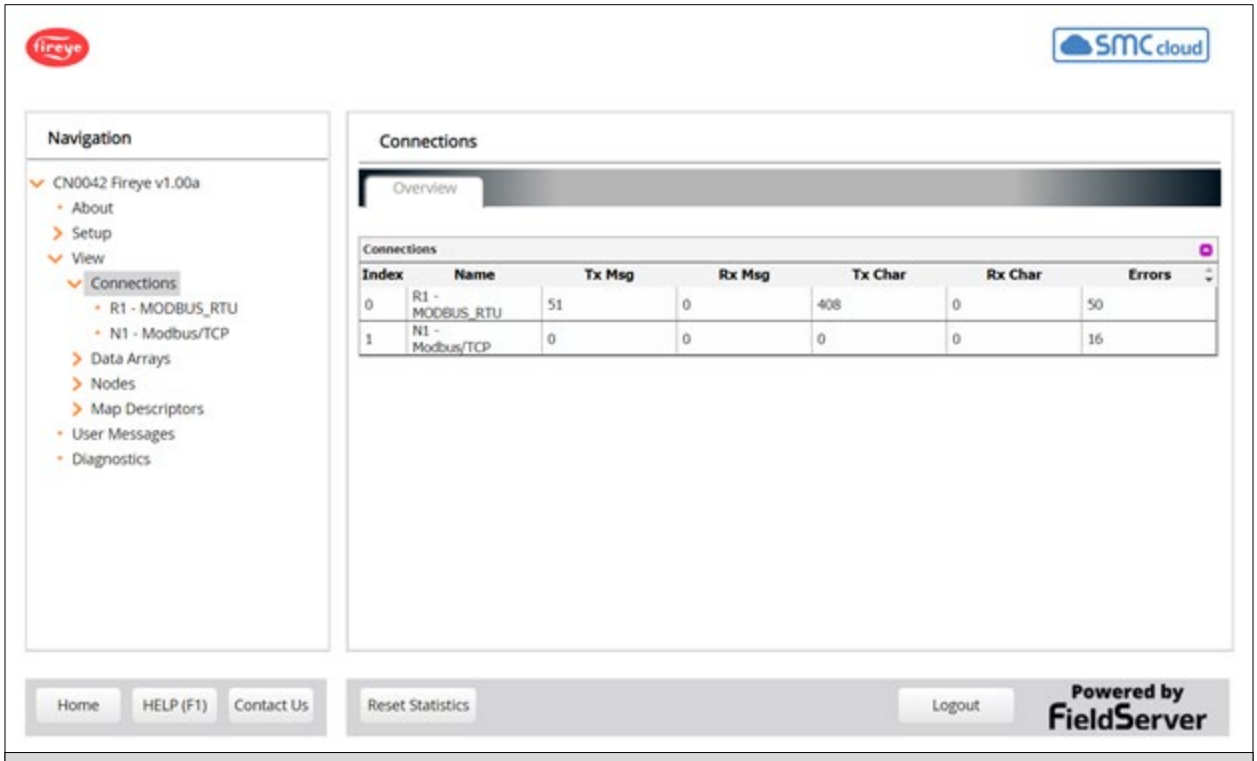


Figure 48: Error Messages Screen

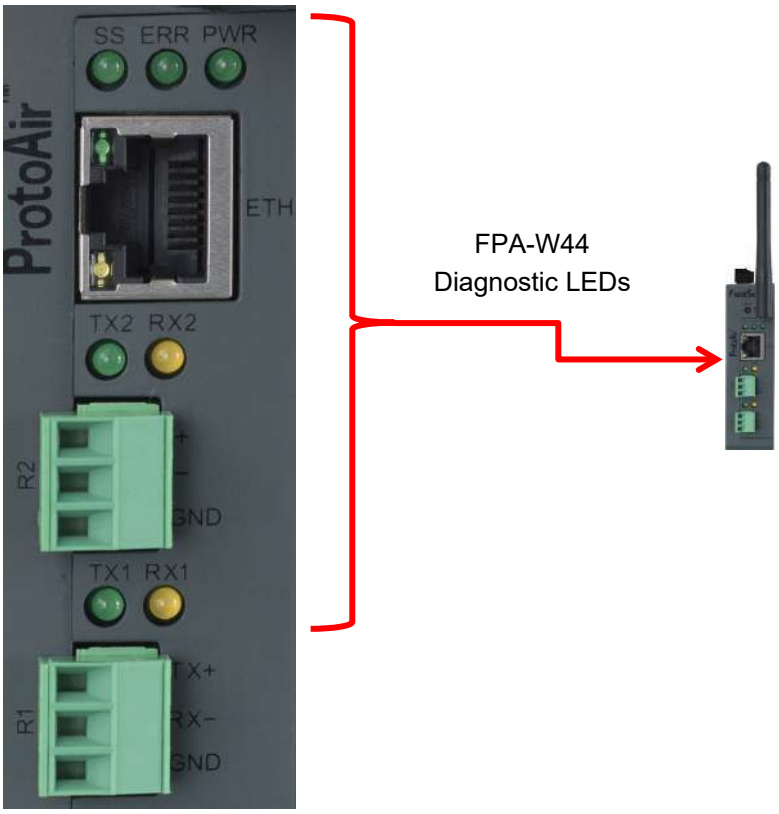
Appendix A.3 Checking Wiring and Settings

- No COMS on Modbus RTU side. If the Tx/Rx LEDs are not flashing rapidly then there is a COM issue. To fix this, check the following:
  - Visual observations of LEDs on MB485ETH-CG (**Appendix A.4**)
  - Check baud rate, parity, data bits, stop bits
  - Check Detector ID matches the correct device
  - Verify wiring
  - Verify the device was listed under the Web Configurator Active Profiles (**Section 10.3**)
- No COMS on Modbus TCP/IP side. To fix, check the following:
  - Visual observations of LEDs on the MB485ETH-CG (**Appendix A.4**)
  - Check device address
  - Verify wiring
  - Verify all the Modbus TCP/IP device(s) were listed in the Web Configurator (**Section 10.3**)
- Field COM problems:
  - Visual observations of LEDs on the MB485ETH-CG (**Appendix A.4**)
  - Verify IP Address setting
  - Verify wiring

NOTE: If the problem still exists, a Diagnostic Capture needs to be taken and sent to technical support. (Appendix A.5)

Appendix A.4 LED Diagnostics for Communications Between MB485ETH-CG and Devices

See the diagram below for MB485ETH-CG FPA-W44 LED Locations.



Tag	Description
SS	The SS LED will flash once a second to indicate that the bridge is in operation.
ERR	The SYS ERR LED will go on solid indicating there is a system error. If this occurs, immediately report the related “system error” shown in the error screen of the FS-GUI interface to support for evaluation.
PWR	The power light should always show steady green when connected to a functioning power source.
RX	The RX LED will flash when a message is received on the serial port on the 3-pin connector. **If the serial port is not used, this LED is non-operational.** RX1 applies to the R1 connection while RX2 applies to the R2 connection.
TX	The TX LED will flash when a message is sent on the serial port on the 3-pin connector. **If the serial port is not used, this LED is non-operational.** TX1 applies to the R1 connection while TX2 applies to the R2 connection.

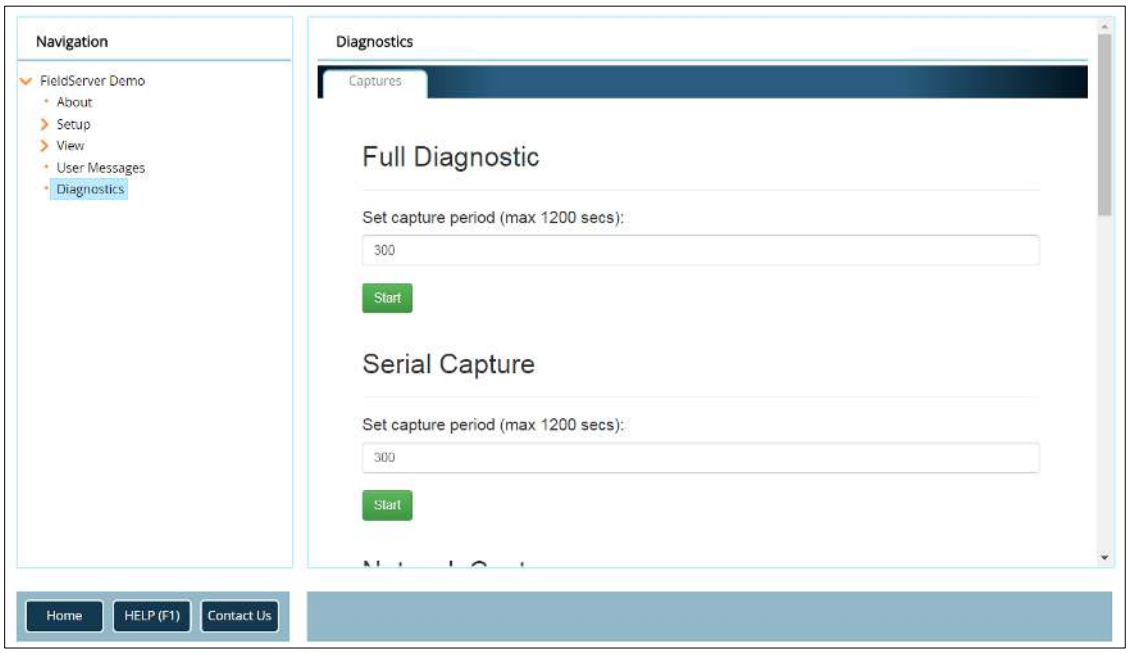
Figure 49: Diagnostic LEDs

Appendix A.5 Taking a MB485ETH-CG Diagnostic Capture

When there is a problem on-site that cannot easily be resolved, perform a Diagnostic Capture before contacting support. Once the Diagnostic Capture is complete, email it to technical support. The Diagnostic Capture will accelerate diagnosis of the problem.

If the MB485ETH-CG bios is updated/released on November 2017 or later then the Diagnostic Capture is performed via the gateway's on-board system.

- Access the MB485ETH-CG Diagnostics page via one of the following methods:
  - Open the MB485ETH-CG FS-GUI page and click on Diagnostics in the Navigation panel
  - Open the MB485ETH-CG Toolbox software and click the diagnose icon of the desired device



- Go to Full Diagnostic and select the capture period.
- Click the Start button under the Full Diagnostic heading to start the capture.
  - When the capture period is finished, a Download button will appear next to the Start button

- Click Download for the capture to be downloaded to the local PC.
- Send the diagnostic zip file to technical support.

NOTE: Diagnostic captures of BACnet MS/TP communication are output in a ".PCAP" file extension which is compatible with Wireshark.

Appendix A.5.1 Taking a Capture with Older Firmware

If the MB485ETH-CG firmware is from before November 2017, the Diagnostic Capture can be done by downloading the MB485ETH-CG Toolbox software but network connections (such as Ethernet and Wi-Fi) cannot be captured (if a network diagnostic is needed take a Wire Shark capture).

Once the Diagnostic Capture is complete, email it to technical support. The Diagnostic Capture will accelerate diagnosis of the problem.

- Ensure that MB485ETH-CG Toolbox is loaded onto the local PC. Otherwise, download the MB485ETH-CG-Toolbox.zip via the Sierra Monitor website's Software Downloads.
- Extract the executable file and complete the installation.

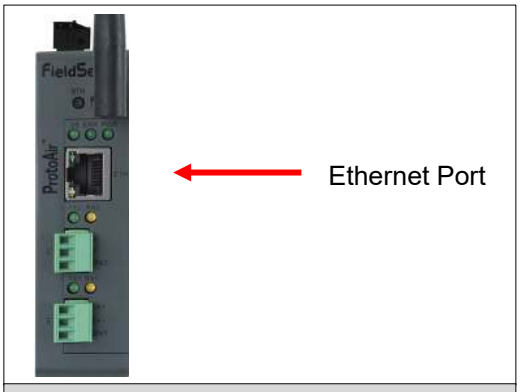
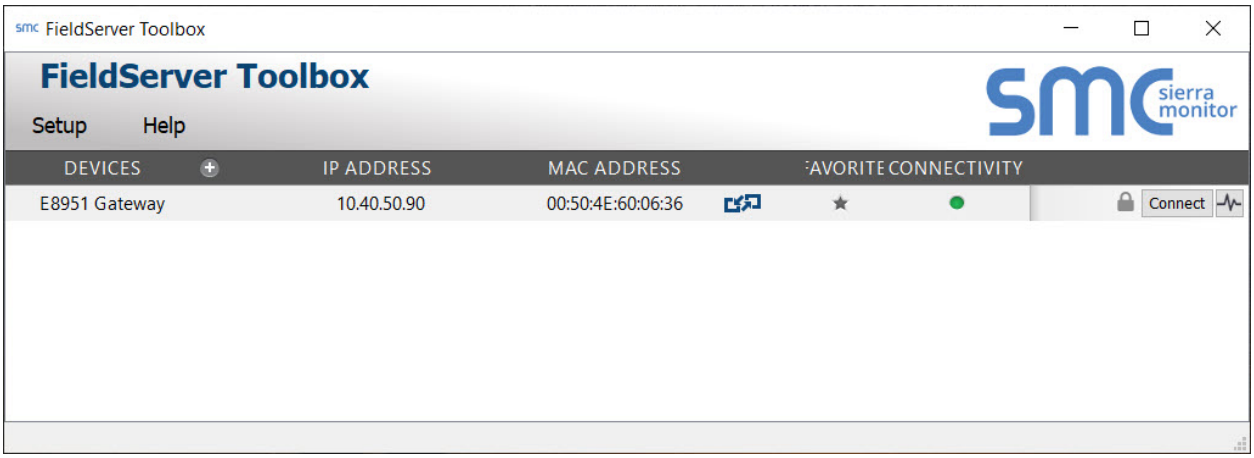


Figure 50: Ethernet Port Location

- Connect a standard Cat-5 Ethernet cable between the PC and MB485ETH-CG.
- Double click on the FS Toolbox Utility.
- **Step 1:** Take a Log
  - Click on the diagnose icon  of the desired device



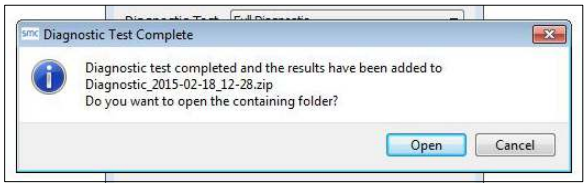
- Select “Full Diagnostic" from the drop down menu

NOTE: If desired, the default capture period can be changed.

- Click on the Start Diagnostic button

- Wait for the capture period to finish and the Diagnostic Test Complete window will appear

- **Step 2**: Send Log
  - Once the diagnostic test is complete, a .zip file is saved on the PC



  - Choose “Open” to launch explorer and have it point directly at the correct folder
  - Send the Diagnostic zip file to technical support

Appendix A.6 Wi-Fi Signal Strength

Wi-Fi
<60dBm – Excellent
<70dBm – Very good
<80dBm – Good
>80dBm – Weak
Figure 51: Wi-Fi Signal Strength Listing

NOTE: If the signal is weak or spotty, try to improve the signal strength by checking the antenna and the MB485ETH-CG position.

Appendix A.7 Factory Reset Instructions

For instructions on how to reset a MB485ETH-CG back to its factory released state, see ENOTE - MB485ETH-CG Next Gen Recovery.

Appendix A.8 Internet Browser Software Support

The following web browsers are supported:

- Chrome Rev. 57 and higher
- Firefox Rev. 35 and higher
- Microsoft Edge Rev. 41 and higher
- Safari Rev. 3 and higher

NOTE: Internet Explorer is no longer supported as recommended by Microsoft.

NOTE: Computer and network firewalls must be opened for Port 80 to allow MB485ETH-CG GUI to function.

Appendix B Additional Information

Appendix B.1 Updating Firmware

To load a new version of the firmware, follow these instructions:

1. Extract and save the new file onto the local PC.
2. Open a web browser and type the IP Address of the MB485ETH-CG in the address bar.
   - Default IP Address is 192.168.1.24
   - Use the FS Toolbox utility if the IP Address is unknown (**Appendix A.1**)
3. Click on the “Diagnostics & Debugging” button.
4. In the Navigation Tree on the left-hand side, do the following:
   a. Click on “Setup”
   b. Click on “File Transfer”
   c. Click on the “General” tab
5. In the General tab, click on “Choose Files” and select the web.img file extracted in step 1.
6. Click on the orange “Submit” button.
7. When the download is complete, click on the “System Restart” button.

Appendix B.2 BACnet: Setting Network_Number for More Than One MB485ETH-CG on the Subnet

For both BACnet MS/TP and BACnet/IP, if more than one MB485ETH-CG is connected to the same subnet, they must be assigned unique Network_Number values.

On the main Web Configuration screen, update the BACnet Network Number field and click submit. The default value is 50.

Figure 52: Web Configurator – Network Number Field

Appendix B.3 Mounting

The MB485ETH-CG can be mounted using the DIN rail mounting bracket on the back of the unit.

Figure 53: DIN Rail

Appendix B.4 Physical Dimension Drawing

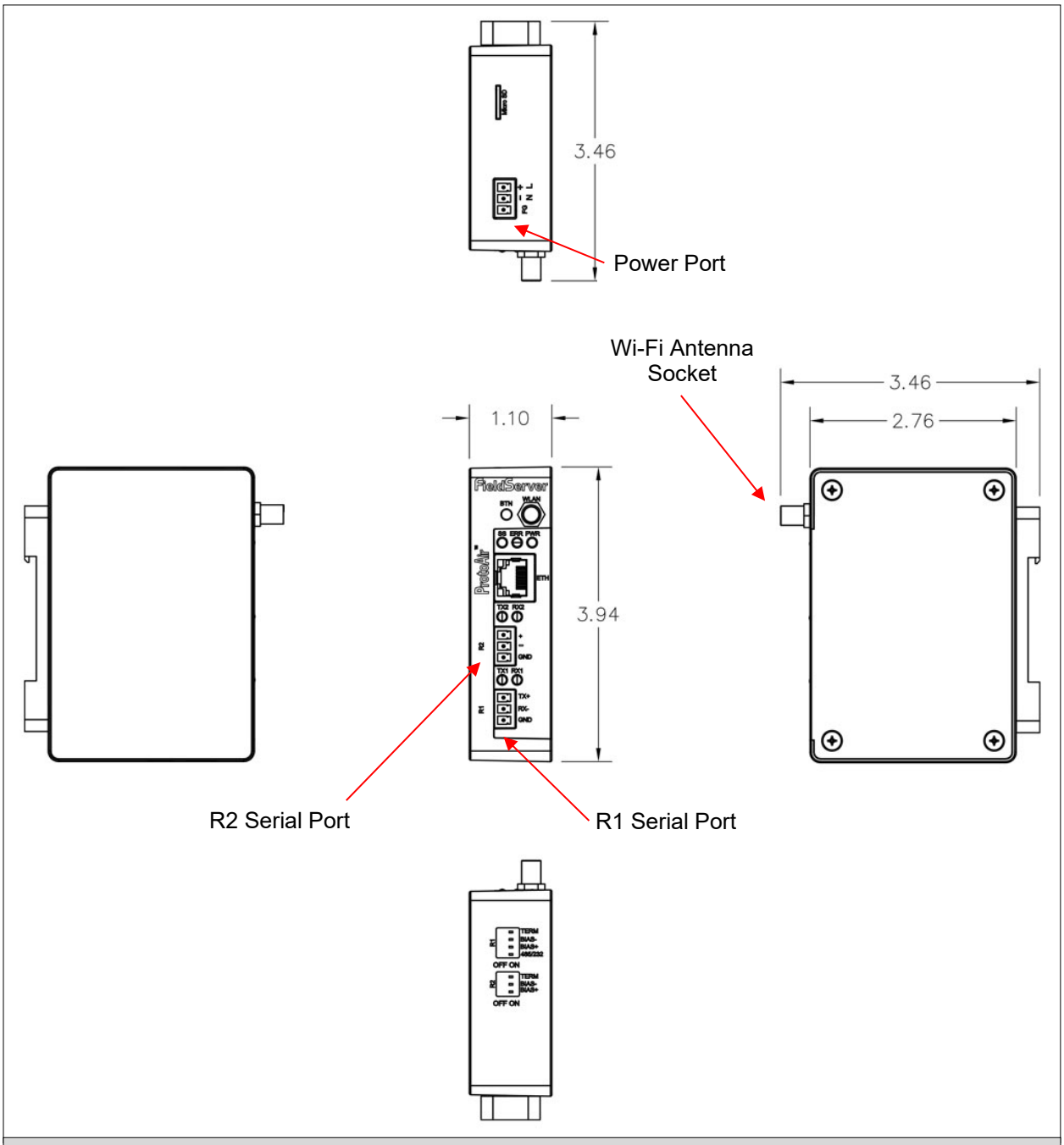


Figure 54: MB485ETH-CG FPA-W44 Dimensions

Appendix B.5 Change Web Server Security Settings After Initial Setup

NOTE: Any changes will require a MB485ETH-CG reboot to take effect.

- From the FS-GUI page, click Setup in the Navigation panel.

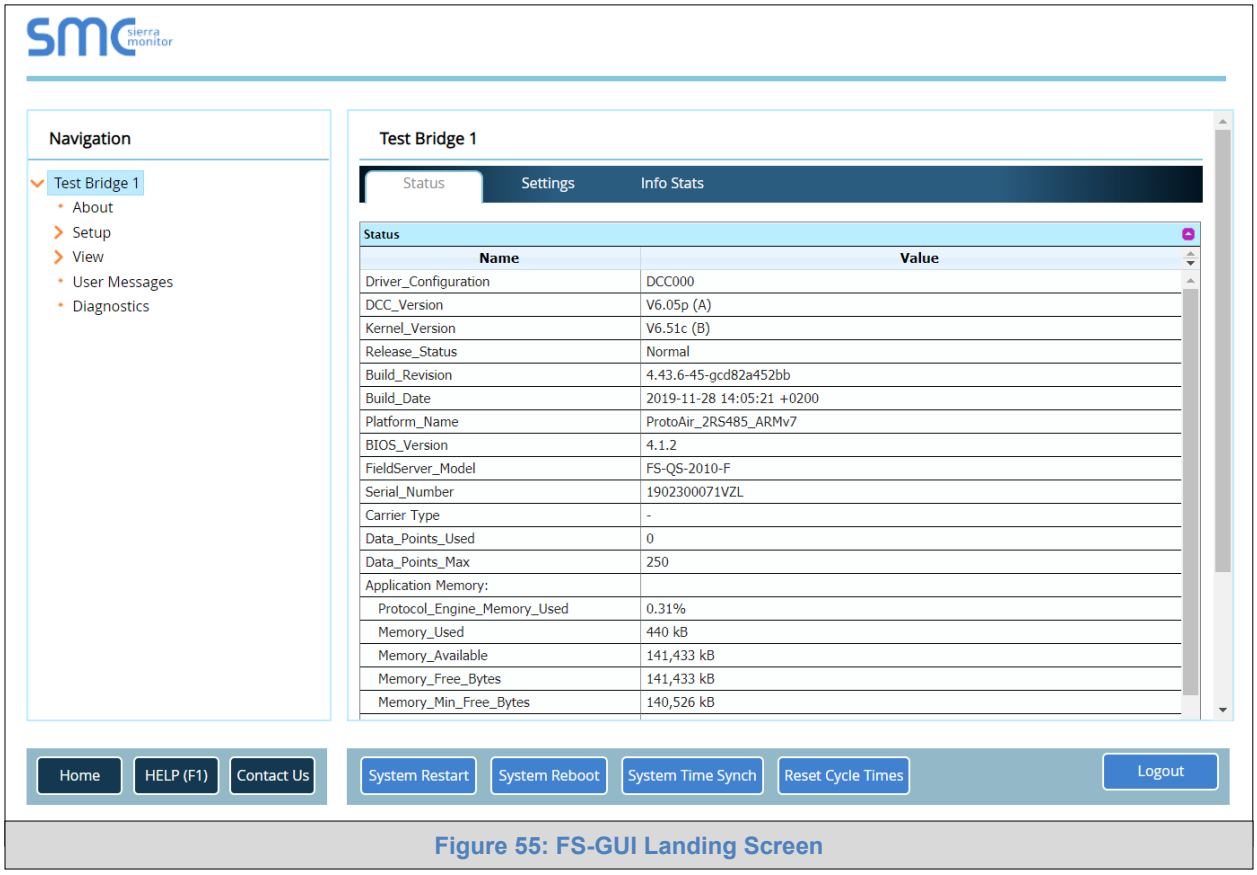


Figure 55: FS-GUI Landing Screen

Appendix B.5.1 Change Security Mode

- Click Security in the Navigation panel.

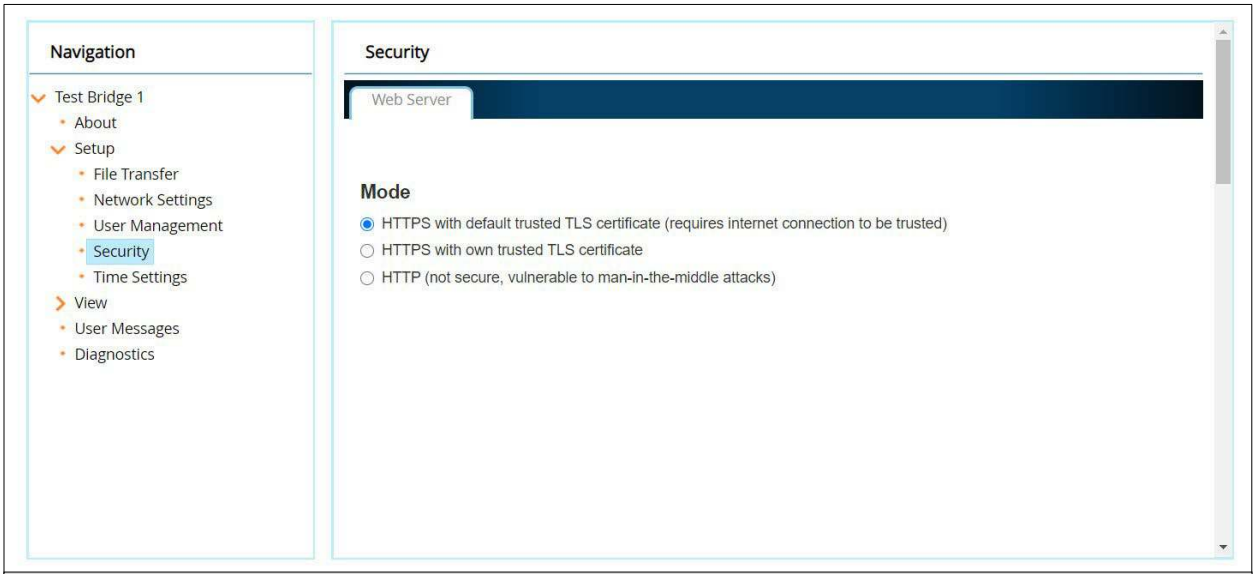


Figure 56: FS-GUI Security Setup

- Click the Mode desired.

  If HTTPS with own trusted TLS certificate is selected, follow instructions in **Section** 7.2.1

- Click the Save button.

Appendix B.5.2 Edit the Certificate Loaded onto the MB485ETH-CG

NOTE: A loaded certificate will only be available if the security mode was previously setup as HTTPS with own trusted TLS certificate.

- Click Security in the Navigation panel.

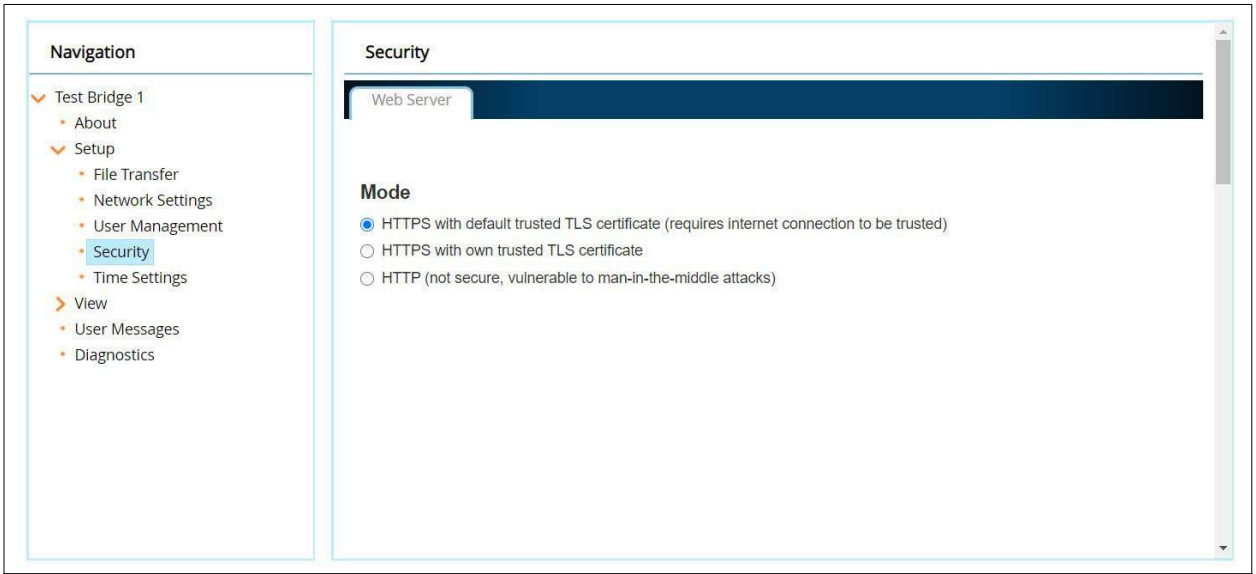


Figure 57: FS-GUI Security Setup – Certificate Loaded

- Click the Edit Certificate button to open the certificate and key fields.
- Edit the loaded certificate or key text as needed.
- Click Save.

Appendix B.6 Change User Management Settings

- From the FS-GUI page, click Setup in the Navigation panel.
- Click User Management in the navigation panel.

NOTE: If the passwords are lost, the unit can be reset to factory settings to reinstate the default unique password on the label. For ProtoNode, ProtoCessor or ProtoCarrier recovery instructions, see the MB485ETH-CG Recovery Instructions document. For ProtoNode FPC-N54 or MB485ETH-CG recovery instructions, see the MB485ETH-CG Next Gen Recovery document. If the default unique password is lost, then the unit must be mailed back to the factory.

NOTE: Any changes will require a MB485ETH-CG reboot to take effect.

Appendix B.6.1 User Management

- Check that the Users tab is selected.

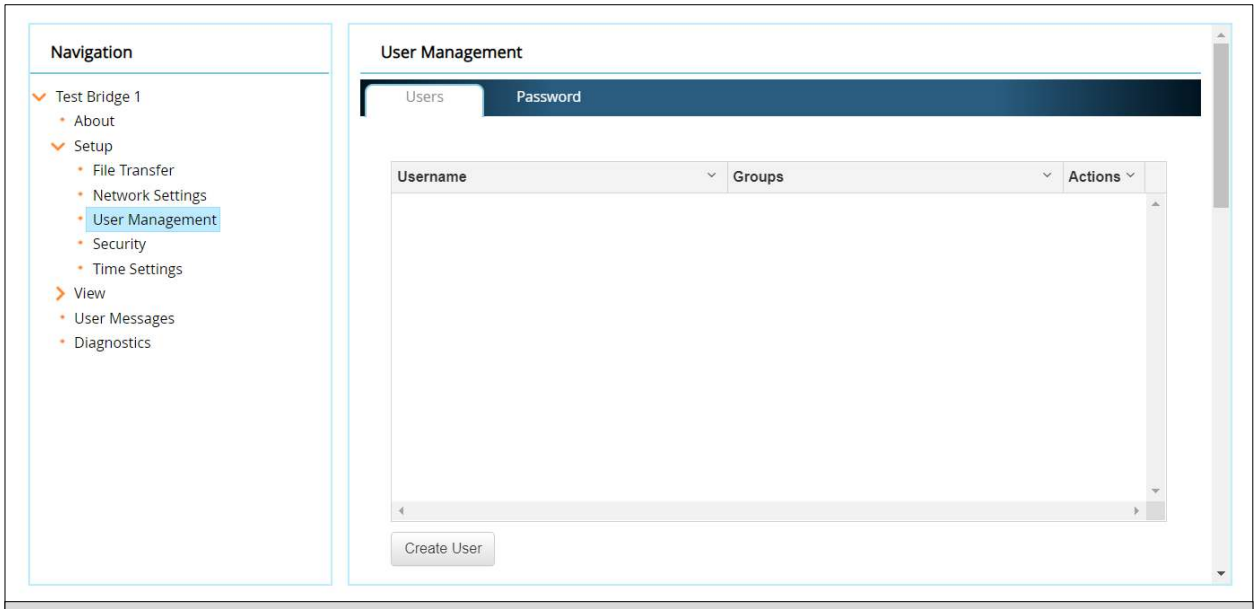


Figure 58: FS-GUI User Management

User Types:

Admin – Can modify and view any settings on the MB485ETH-CG.

Operator – Can modify and view any data in the MB485ETH-CG array(s).

Viewer – Can only view settings/readings on the MB485ETH-CG.

Appendix B.6.1.1 Create Users

- Click the Create User button.

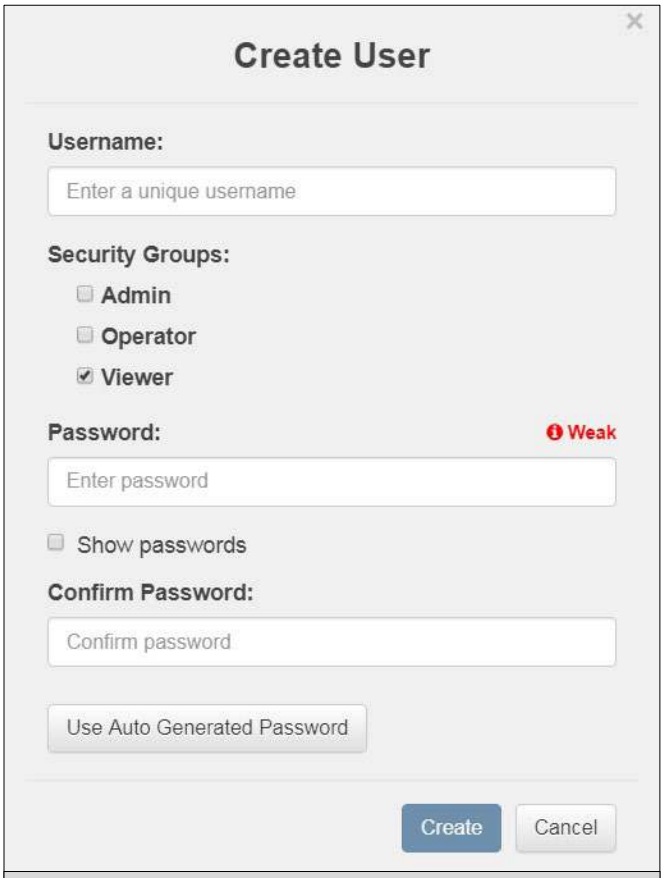


Figure 59: Create User Window

- Enter the new User fields: Name, Security Group and Password.
  - **User details are hashed and salted**

NOTE: The password must meet the minimum complexity requirements. An algorithm automatically checks the password entered and notes the level of strength on the top right of the Password text field.

- Click the Create button.
- Once the Success message appears, click OK.

Appendix B.6.2 Edit Users

- Click the pencil icon next to the desired user to open the User Edit window.

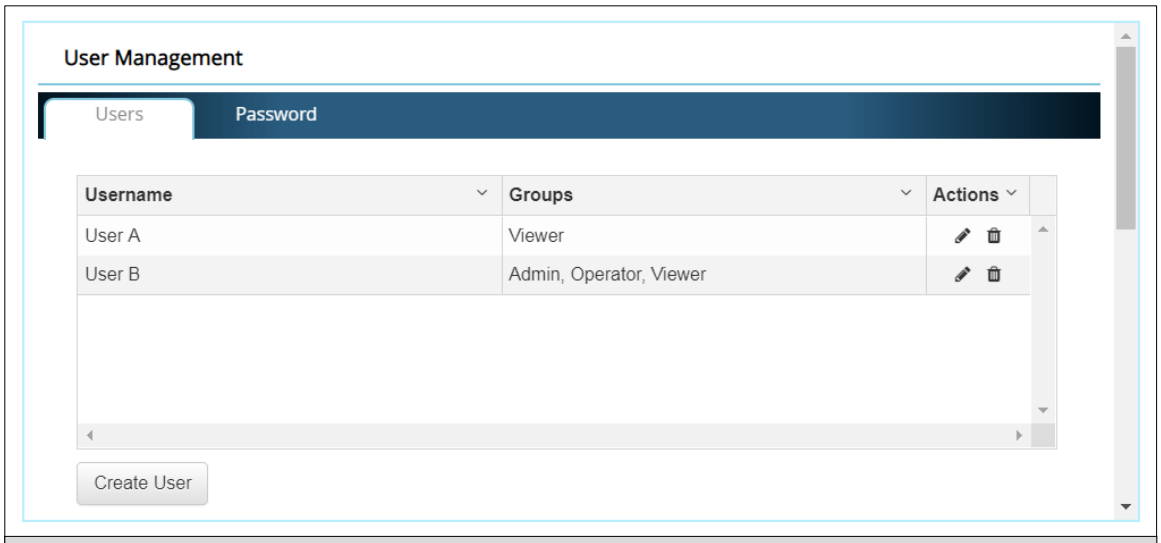


Figure 60: Setup Users

- Once the User Edit window opens, change the User Security Group and Password as needed.

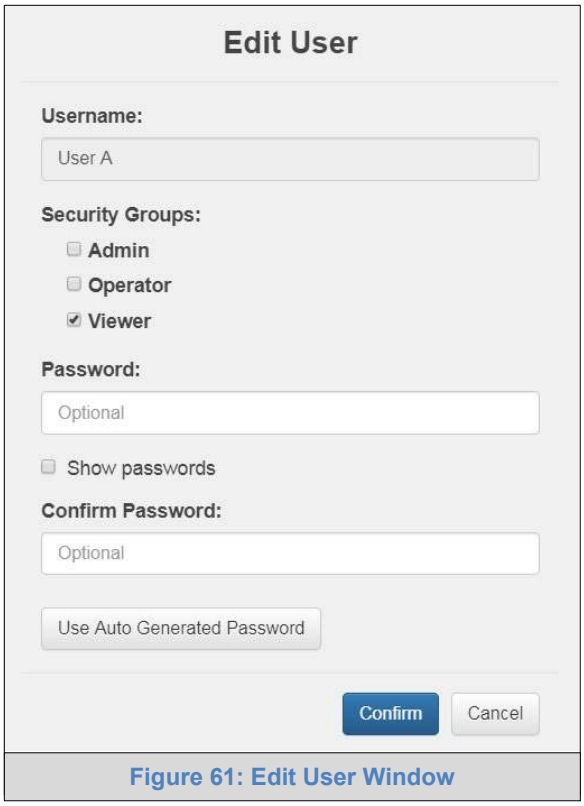


Figure 61: Edit User Window

- Click Confirm.
- Once the Success message appears, click OK.

Appendix B.6.2.1 Delete Users

- Click the trash can icon next to the desired user to delete the entry.

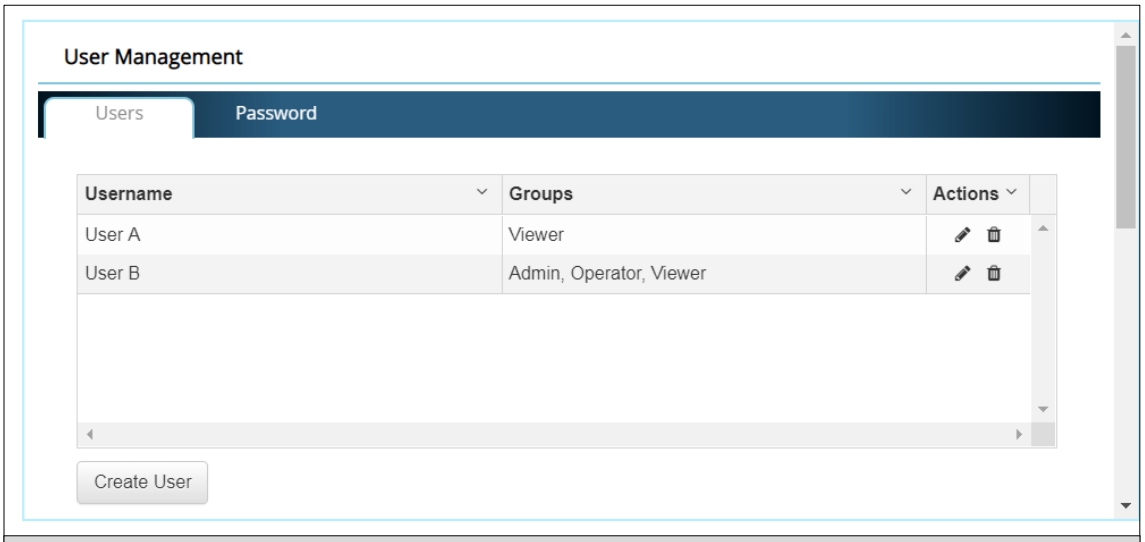


Figure 62: Setup Users

- When the warning message appears, click Confirm.

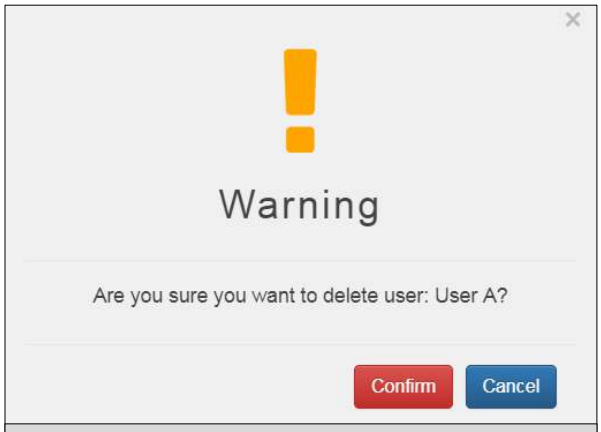


Figure 63: User Delete Warning

Appendix B.6.3 Change MB485ETH-CG Password

- Click the Password tab.

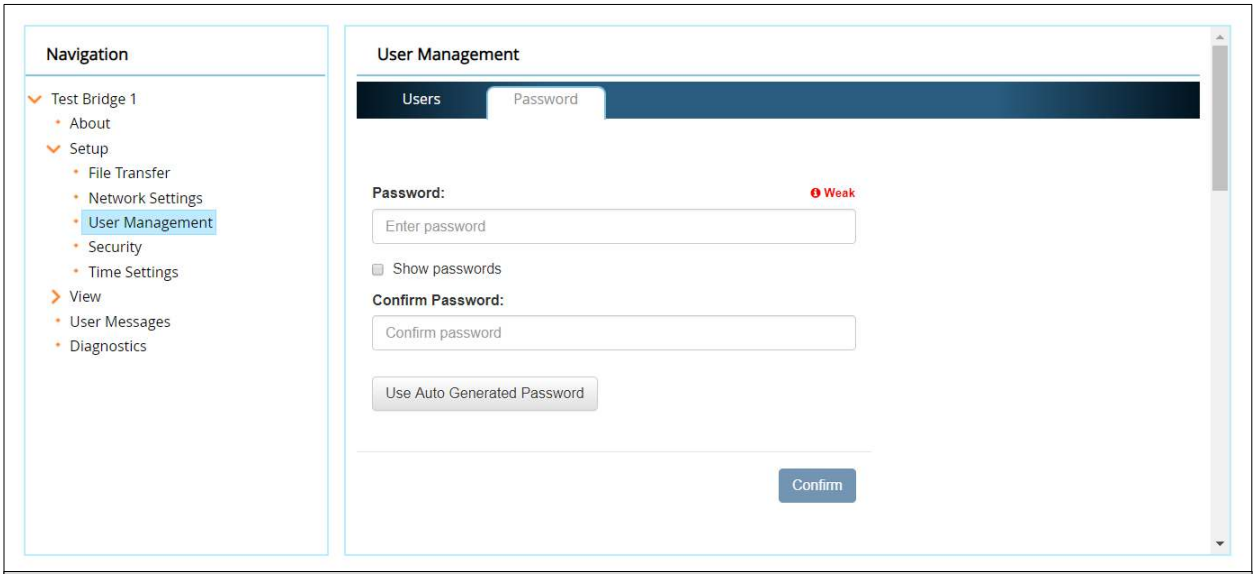


Figure 64: MB485ETH-CG Password Update via FS-GUI

- Change the general login password for the MB485ETH-CG as needed.

NOTE: The password must meet the minimum complexity requirements. An algorithm automatically checks the password entered and notes the level of strength on the top right of the Password text field.

NOTE: If a gateway in the field is updated to a secure gateway, the password will change to "admin". This change will still occur if the gateway was already setup with a unique password that was loaded in the factory and printed on the label.

Appendix B.7 SMC Cloud Connection Warning Message

- If a warning message appears instead of the page as shown in **Figure 30**, follow the suggestion that appears on screen.
    - If the MB485ETH-CG cannot reach the SMC Cloud server, the following message will appear

Figure 65: SMC Cloud Connection Problems Message

- Follow the directions presented in the warning message.
    - Go to the network settings by clicking the Settings tab and then click the Network tab
    - Check with the site's IT support that the DNS settings are setup correctly
    - Ensure that the MB485ETH-CG is properly connected to the Internet

NOTE: If changes to the network settings are done, remember to click the Save button. Then power cycle the MB485ETH-CG by clicking on the Confirm button in the window and click on the bolded "Restart" text in the yellow pop-up box that appears in the upper right corner of the screen.

Appendix B.8 System Status Button

The System Status Button can be found on any page of the web apps. This shows the level of alert/functionality for the customer device. This is an agragate of the Web App page's resource usage upon the local PC or mobile device, SMC Cloud connectivity and device alert level.

The color of the button represents the status of one to all three systems:

Green – Normal status

Yellow – Warning status

Red – Alarm status

Click on the System Status Button to open the System Status window, showing more details on the status of each system.

NOTE: If it was selected to opt out of SMC Cloud (Figure 27), the SMC Cloud status will not show in the System Status window. This means the status will show as green even if the gateway is not connected to SMC Cloud.

Appendix C Reference

Appendix C.1 Specifications

	MB485ETH-CG FPA-W44[2]
Electrical Connections	One 3-pin Phoenix connector with: RS-485/RS-232 port (TX+/RX-/gnd) One 3-pin Phoenix connector with: RS-485 (Tx+/Rx-/gnd) One 3-pin Phoenix connector with: Power port (+/-/Frame-gnd) One Ethernet 10/100 BaseT port
Power Requirements	*Input Voltage:* 9-30VDC or 24VAC *Current draw:* 24VAC 0.125A *Max Power:* 3 Watts 9-30VDC 0.25A @12VDC
Approvals	CE and FCC Class B & C Part 15, UL 60950-1, WEEE compliant, IC Canada, RoHS3 compliant, REACH compliant
Physical Dimensions	4 x 1.1 x 2.7 in (10.16 x 2.8 x 6.8 cm)
Weight	0.4 lbs (0.2 Kg)
Operating Temperature	-20°C to 70°C (-4°F to158°F)
Humidity	10-95% RH non-condensing
Wi-Fi 802.11 b/g/n	*Frequency:* 2.4 GHz *Channels:* 1 to 11 (inclusive) *Antenna Type:* SMA *Encryption:* TKIP, WPA & AES

Figure 66: Specifications

Appendix C.1.1 Compliance with UL Regulations

For UL compliance, the following instructions must be met when operating MB485ETH-CG.

- 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 MB485ETH-CG
- Furthermore, the interconnecting power cable shall:
  - Be of length not exceeding 3.05m (118.3”)
  - Be constructed of materials rated VW-1, 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.

[2] Specifications subject to change without notice.

Appendix D Device Mapping

Check the specific gateway start-up guide for the supported protocols for the gateway in use. The protocols listed below may not apply to the gateway.

NOTE: For the headings below “BACnet” references both BACnet/IP and BACnet MS/TP.

NOTE: All Modbus TCP/IP registers are the same as the Modbus RTU registers for the serial device. If this point list is needed, contact technical support. The Modbus TCP/IP node address of the device is also the same as the Modbus RTU node address.

NOTE: The profiles listed in the headings below map to BACnet/IP, BACnet MS/TP, Modbus TCP/IP, EtherNet/IP and LonWorks.

NOTE: For the EtherNet/IP points listed in the tables below, the “EIP Tag Name” is for explicit messaging while the “EIP Class”, “EIP Attribute”, “EIP Address” and “EIP Offset” are for implicit messaging.

Appendix D.1 YB110_FSG Modbus RTU Mappings to Field Protocols

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Safety_Relay	BI	1	Bit_XXX[000]	4	3	X03	0	nvoSafetyRel_XXX	SNVT_switch
Main_Valve_In	BI	2	Bit_XXX[001]	4	3	X03	1	nvoMainVlvIn_XXX	SNVT_switch
Delayed_Valve_In	BI	3	Bit_XXX[002]	4	3	X03	2	nvoDelVlvIn_XXX	SNVT_switch
Pilot_Valve_In	BI	4	Bit_XXX[003]	4	3	X03	3	nvoPltVlvIn_XXX	SNVT_switch
Ignition_In	BI	5	Bit_XXX[004]	4	3	X03	4	nvoIgnIn_XXX	SNVT_switch
Blower_In	BI	6	Bit_XXX[005]	4	3	X03	5	nvoBlwrIn_XXX	SNVT_switch
Op_Cntrl	BI	7	Bit_XXX[006]	4	3	X03	6	nvoOpCntrl_XXX	SNVT_switch
Run_Intlck	BI	8	Bit_XXX[007]	4	3	X03	7	nvoRunIntlck_XXX	SNVT_switch
Purge_Damper	BI	9	Bit_XXX[008]	4	3	X03	8	nvoPrgDmpr_XXX	SNVT_switch
Term_23	BI	10	Bit_XXX[009]	4	3	X03	9	nvoTerm23_XXX	SNVT_switch
Remote_Reset	BI	11	Bit_XXX[010]	4	3	X03	10	nvoRemReset_XXX	SNVT_switch
Start_Input	BI	12	Bit_XXX[011]	4	3	X03	11	nvoStInput_XXX	SNVT_switch
FVES_POC	BI	13	Bit_XXX[012]	4	3	X03	12	nvoFVES_POC_XXX	SNVT_switch
Pilot_Hold	BI	14	Bit_XXX[013]	4	3	X03	13	nvoPiltHld_XXX	SNVT_switch
Low_Fire_Start	BI	15	Bit_XXX[014]	4	3	X03	14	nvoLoFirStrt_XXX	SNVT_switch
Ref_AC_Line	BI	16	Bit_XXX[015]	4	3	X03	15	nvoRefACLine_XXX	SNVT_switch
Ignition_Out	BI	17	Bit_XXX[017]	4	3	X03	17	nvoIgnOut_XXX	SNVT_switch
Pilot_Valve_Out	BI	18	Bit_XXX[018]	4	3	X03	18	nvoPltVlvOut_XXX	SNVT_switch
Blower_Out	BI	19	Bit_XXX[019]	4	3	X03	19	nvoBlwrOut_XXX	SNVT_switch
Main_Valve_Out	BI	20	Bit_XXX[020]	4	3	X03	20	nvoMainVlvOt_XXX	SNVT_switch
Delayed_Valve_Out	BI	21	Bit_XXX[021]	4	3	X03	21	nvoDelVlvOut_XXX	SNVT_switch
Internal_Safety_Out	BI	22	Bit_XXX[022]	4	3	X03	22	nvoIntSftyOt_XXX	SNVT_switch
Low_Fire_Out	BI	23	Bit_XXX[024]	4	3	X03	24	nvoLoFireOut_XXX	SNVT_switch
High_Fire_Out	BI	24	Bit_XXX[025]	4	3	X03	25	nvoHiFireOut_XXX	SNVT_switch
Auto_Out	BI	25	Bit_XXX[026]	4	3	X03	26	nvoRelModOut_XXX	SNVT_switch
Alarm_Out	BI	26	Bit_XXX[027]	4	3	X03	27	nvoAlmOut_XXX	SNVT_switch
Status	AI	1	U16_XXX[000]	4	3	X01	0	nvoStatus_XXX	SNVT_count_f
Msgn	AI	2	U16_XXX[001]	4	3	X01	1	nvoMsgn_XXX	SNVT_count_f
Gstat	AI	3	U16_XXX[002]	4	3	X01	2	nvoGstat_XXX	SNVT_count_f
Timer	AI	4	U16_XXX[003]	4	3	X01	3	nvoTimer_XXX	SNVT_count_f
Flame	AI	5	U16_XXX[004]	4	3	X01	4	nvoFlame_XXX	SNVT_count_f
Logstat	AI	6	U16_XXX[005]	4	3	X01	5	nvoLogstat_XXX	SNVT_count_f
Sysmins	AI	7	U32_XXX[000]	4	3	X02	0	nvoSysmins_XXX	SNVT_time_min
Bnrmins	AI	8	U32_XXX[001]	4	3	X02	1	nvoBnrmins_XXX	SNVT_time_min
Cycles	AI	9	U32_XXX[002]	4	3	X02	2	nvoCycles_XXX	SNVT_count_f
Lockout_Count	AI	10	U16_XXX[014]	4	3	X01	14	nvoLockotCnt_XXX	SNVT_count_f
Lockout1_Msg	AI	11	U16_XXX[015]	4	3	X01	15	nvoLkot1Msg_XXX	SNVT_count_f
Lockout1_Module	AI	12	U16_XXX[016]	4	3	X01	16	nvoLkot1Mod_XXX	SNVT_count_f
Lockout1_BnrHrs	AI	13	U32_XXX[003]	4	3	X02	3	nvoLkot1BrHr_XXX	SNVT_time_hour
Lockout1_BnrCycs	AI	14	U32_XXX[004]	4	3	X02	4	nvoLkot1BrCy_XXX	SNVT_count_f
Lockout2_Msg	AI	15	U16_XXX[021]	4	3	X01	21	nvoLkot2Msg_XXX	SNVT_count_f
Lockout2_Module	AI	16	U16_XXX[022]	4	3	X01	22	nvoLkot2Mod_XXX	SNVT_count_f
Lockout2_BnrHrs	AI	17	U32_XXX[005]	4	3	X02	5	nvoLkot2BrHr_XXX	SNVT_time_hour
Lockout2_BnrCycs	AI	18	U32_XXX[006]	4	3	X02	6	nvoLkot2BrCy_XXX	SNVT_count_f
Lockout3_Msg	AI	19	U16_XXX[027]	4	3	X01	27	nvoLkot3Msg_XXX	SNVT_count_f
Lockout3_Module	AI	20	U16_XXX[028]	4	3	X01	28	nvoLkot3Mod_XXX	SNVT_count_f
Lockout3_BnrHrs	AI	21	U32_XXX[007]	4	3	X02	7	nvoLkot3BrHr_XXX	SNVT_time_hour
Lockout3_BnrCycs	AI	22	U32_XXX[008]	4	3	X02	8	nvoLkot3BrCy_XXX	SNVT_count_f
Lockout4_Msg	AI	23	U16_XXX[033]	4	3	X01	33	nvoLkot4Msg_XXX	SNVT_count_f
Lockout4_Module	AI	24	U16_XXX[034]	4	3	X01	34	nvoLkot4Mod_XXX	SNVT_count_f
Lockout4_BnrHrs	AI	25	U32_XXX[009]	4	3	X02	9	nvoLkot4BrHr_XXX	SNVT_time_hour
Lockout4_BnrCycs	AI	26	U32_XXX[010]	4	3	X02	10	nvoLkot4BrCy_XXX	SNVT_count_f
Lockout5_Msg	AI	27	U16_XXX[039]	4	3	X01	39	nvoLkot5Msg_XXX	SNVT_count_f
Lockout5_Module	AI	28	U16_XXX[040]	4	3	X01	40	nvoLkot5Mod_XXX	SNVT_count_f
Lockout5_BnrHrs	AI	29	U32_XXX[011]	4	3	X02	11	nvoLkot5BrHr_XXX	SNVT_time_hour
Lockout5_BnrCycs	AI	30	U32_XXX[012]	4	3	X02	12	nvoLkot5BrCy_XXX	SNVT_count_f
Lockout6_Msg	AI	31	U16_XXX[045]	4	3	X01	45	nvoLkot6Msg_XXX	SNVT_count_f
Lockout6_Module	AI	32	U16_XXX[046]	4	3	X01	46	nvoLkot6Mod_XXX	SNVT_count_f
Lockout6_BnrHrs	AI	33	U32_XXX[013]	4	3	X02	13	nvoLkot6BrHr_XXX	SNVT_time_hour
Lockout6_BnrCycs	AI	34	U32_XXX[014]	4	3	X02	14	nvoLkot6BrCy_XXX	SNVT_count_f
Lockout7_Msg	AI	35	U16_XXX[051]	4	3	X01	51	nvoLkot7Msg_XXX	SNVT_count_f
Lockout7_Module	AI	36	U16_XXX[052]	4	3	X01	52	nvoLkot7Mod_XXX	SNVT_count_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Lockout7_BnrHrs	AI	37	U32_XXX[015]	4	3	X02	15	nvoLkot7BrHr_XXX	SNVT_time_hour
Lockout7_BnrCycs	AI	38	U32_XXX[016]	4	3	X02	16	nvoLkot7BrCy_XXX	SNVT_count_f
Lockout8_Msg	AI	39	U16_XXX[057]	4	3	X01	57	nvoLkot8Msg_XXX	SNVT_count_f
Lockout8_Module	AI	40	U16_XXX[058]	4	3	X01	58	nvoLkot8Mod_XXX	SNVT_count_f
Lockout8_BnrHrs	AI	41	U32_XXX[017]	4	3	X02	17	nvoLkot8BrHr_XXX	SNVT_time_hour
Lockout8_BnrCycs	AI	42	U32_XXX[018]	4	3	X02	18	nvoLkot8BrCy_XXX	SNVT_count_f
Lockout9_Msg	AI	43	U16_XXX[063]	4	3	X01	63	nvoLkot9Msg_XXX	SNVT_count_f
Lockout9_Module	AI	44	U16_XXX[064]	4	3	X01	64	nvoLkot9Mod_XXX	SNVT_count_f
Lockout9_BnrHrs	AI	45	U32_XXX[019]	4	3	X02	19	nvoLkot9BrHr_XXX	SNVT_time_hour
Lockout9_BnrCycs	AI	46	U32_XXX[020]	4	3	X02	20	nvoLkot9BrCy_XXX	SNVT_count_f
Lockout10_Msg	AI	47	U16_XXX[069]	4	3	X01	69	nvoLkot10Msg_XXX	SNVT_count_f
Lockout10_Module	AI	48	U16_XXX[070]	4	3	X01	70	nvoLkot10Mod_XXX	SNVT_count_f
Lockout10_BnrHrs	AI	49	U32_XXX[021]	4	3	X02	21	nvoLko10BrHr_XXX	SNVT_time_hour
Lockout10_BnrCycs	AI	50	U32_XXX[022]	4	3	X02	22	nvoLko10BrCy_XXX	SNVT_count_f
Op_Control	BI	27	Bit_XXX[032]	4	3	X03	32	nvoOpControl_XXX	SNVT_switch
Aux_1	BI	28	Bit_XXX[033]	4	3	X03	33	nvoAux1_XXX	SNVT_switch
Aux_2	BI	29	Bit_XXX[034]	4	3	X03	34	nvoAux2_XXX	SNVT_switch
Aux_3	BI	30	Bit_XXX[035]	4	3	X03	35	nvoAux3_XXX	SNVT_switch
High_water	BI	31	Bit_XXX[036]	4	3	X03	36	nvoHiwater_XXX	SNVT_switch
Low_Water	BI	32	Bit_XXX[037]	4	3	X03	37	nvoLoWater_XXX	SNVT_switch
High_Oil_Temp	BI	33	Bit_XXX[038]	4	3	X03	38	nvoHiOilTmp_XXX	SNVT_switch
Low_Oil_Temp	BI	34	Bit_XXX[039]	4	3	X03	39	nvoLoOilTmp_XXX	SNVT_switch
Low_Oil_Press	BI	35	Bit_XXX[048]	4	3	X03	48	nvoLoOilPrs_XXX	SNVT_switch
Low_Atom_Media	BI	36	Bit_XXX[049]	4	3	X03	49	nvoLoAtomMed_XXX	SNVT_switch
Low_Gas_Press	BI	37	Bit_XXX[050]	4	3	X03	50	nvoLoGasPrs_XXX	SNVT_switch
High_Gas_Press	BI	38	Bit_XXX[051]	4	3	X03	51	nvoHiGasPrs_XXX	SNVT_switch
Aux_Gas	BI	39	Bit_XXX[052]	4	3	X03	52	nvoAuxGas_XXX	SNVT_switch
High_Press	BI	40	Bit_XXX[053]	4	3	X03	53	nvoHiPress_XXX	SNVT_switch
High_Temp	BI	41	Bit_XXX[054]	4	3	X03	54	nvoHiTemp_XXX	SNVT_switch
Aux_4	BI	42	Bit_XXX[055]	4	3	X03	55	nvoAux4_XXX	SNVT_switch
Aux_5	BI	43	Bit_XXX[064]	4	3	X03	64	nvoAux5_XXX	SNVT_switch
Aux_6	BI	44	Bit_XXX[065]	4	3	X03	65	nvoAux6_XXX	SNVT_switch
Aux_7	BI	45	Bit_XXX[066]	4	3	X03	66	nvoAux7_XXX	SNVT_switch
Air_Flow	BI	46	Bit_XXX[067]	4	3	X03	67	nvoAirFLo_XXX	SNVT_switch

Appendix D.2 PPC4000_NXF4000 Modbus RTU Mappings to Field Protocols

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Operational State	AI	1	Flt_XXX[000]	4	3	X01	0	nvoOpState_XXX	SNVT_count_f
Flame Signal Value	AI	2	Flt_XXX[001]	4	3	X01	1	nvoFlmSigVal_XXX	SNVT_count_f
System On Hours	AI	3	Flt_XXX[002]	4	3	X01	2	nvoSysHrs_XXX	SNVT_time_hour
Burner On Hours	AI	4	Flt_XXX[003]	4	3	X01	3	nvoBurnerHrs_XXX	SNVT_time_hour
Completed Burner Cycles	AI	5	Flt_XXX[004]	4	3	X01	4	nvoCmpBrnHrs_XXX	SNVT_count_f
Current Modulation Rate	AI	6	Flt_XXX[005]	4	3	X01	5	nvoCurModRat_XXX	SNVT_count_f
Current Modulation Reason Mode	AI	7	Flt_XXX[006]	4	3	X01	6	nvoModMode_XXX	SNVT_count_f
Current Internal Temp Of The Control	AI	8	Flt_XXX[007]	4	3	X01	7	nvoCrIntTmp_XXX	SNVT_temp_p
Current Profile Commission Point	AI	9	Flt_XXX[008]	4	3	X01	8	nvoCurPrCmPt_XXX	SNVT_count_f
Current Calculated CO2 Value	AI	10	Flt_XXX[009]	4	3	X01	9	nvoCrClCO2Vl_XXX	SNVT_lev_percent
Control Type	AI	11	Flt_XXX[010]	4	3	X01	10	nvoCtrlType_XXX	SNVT_count_f
Current Selected Profile	AI	12	Flt_XXX[011]	4	3	X01	11	nvoCurSelPrf_XXX	SNVT_count_f
Total # Of Commissioned Points	AI	13	Flt_XXX[012]	4	3	X01	12	nvoTotComPts_XXX	SNVT_count_f
Current Prof Comm Pnt Range	AI	14	Flt_XXX[013]	4	3	X01	13	nvoCrPrCmPRg_XXX	SNVT_count_f
Current Digital Input Values	AI	15	Flt_XXX[014]	4	3	X01	14	nvoCurrDIVal_XXX	SNVT_count_f
Current VFD 1 Position	AI	16	Flt_XXX[015]	4	3	X01	15	nvoCrVFD1Pos_XXX	SNVT_lev_percent
Commanded VFD 1 Position	AI	17	Flt_XXX[016]	4	3	X01	16	nvoCmVFD1Pos_XXX	SNVT_lev_percent
Current VFD 2 Position	AI	18	Flt_XXX[017]	4	3	X01	17	nvoCrVFD2Pos_XXX	SNVT_lev_percent
Commanded VFD 2 Position	AI	19	Flt_XXX[018]	4	3	X01	18	nvoCmVFD2Pos_XXX	SNVT_lev_percent
Boiler Efficiency	AI	20	Flt_XXX[019]	4	3	X01	19	nvoBlrEff_XXX	SNVT_lev_percent
Current O2 Target Value	AI	21	Flt_XXX[020]	4	3	X01	20	nvoCurO2TgVl_XXX	SNVT_lev_percent
Combustion Efficiency	AI	22	Flt_XXX[021]	4	3	X01	21	nvoCombEff_XXX	SNVT_lev_percent
O2 Probe Status	AI	23	Flt_XXX[022]	4	3	X01	22	nvoO2PrbStat_XXX	SNVT_count_f
O2 Probe Stack Temp	AI	24	Flt_XXX[023]	4	3	X01	23	nvoO2PrStkTp_XXX	SNVT_count_f
O2 Probe Ambient Temp	AI	25	Flt_XXX[024]	4	3	X01	24	nvoO2PrAmbTp_XXX	SNVT_count_f
O2 Probe O2 Level	AI	26	Flt_XXX[025]	4	3	X01	25	nvoO2PrO2Lvl_XXX	SNVT_count_f
Calibration Constant	AI	27	Flt_XXX[026]	4	3	X01	26	nvoCalConst_XXX	SNVT_count_f
Z Processor Firmware Major Revision	AI	28	Flt_XXX[027]	4	3	X01	27	nvoZPrFwMjRv_XXX	SNVT_count_f
Z Processor Firmware Minor Revision	AI	29	Flt_XXX[028]	4	3	X01	28	nvoZPrFwMnRv_XXX	SNVT_count_f
Sensor 1 Measured Raw Value	AI	30	Flt_XXX[029]	4	3	X01	29	nvoSen1MsRaw_XXX	SNVT_count_f
Sensor 2 Measured Raw Value	AI	31	Flt_XXX[030]	4	3	X01	30	nvoSen2MsRaw_XXX	SNVT_count_f
Sensor 3 Measured Raw Value	AI	32	Flt_XXX[031]	4	3	X01	31	nvoSen3MsRaw_XXX	SNVT_count_f
Sensor 4 Measured Raw Value	AI	33	Flt_XXX[032]	4	3	X01	32	nvoSen4MsRaw_XXX	SNVT_count_f
Sensor 5 Measured Raw Value	AI	34	Flt_XXX[033]	4	3	X01	33	nvoSen5MsRaw_XXX	SNVT_count_f
Servo 1 Current Position	AI	35	Flt_XXX[034]	4	3	X01	34	nvoSr1CurPos_XXX	SNVT_lev_percent
Servo 2 Current Position	AI	36	Flt_XXX[035]	4	3	X01	35	nvoSr2CurPos_XXX	SNVT_lev_percent
Servo 3 Current Position	AI	37	Flt_XXX[036]	4	3	X01	36	nvoSr3CurPos_XXX	SNVT_lev_percent
Servo 4 Current Position	AI	38	Flt_XXX[037]	4	3	X01	37	nvoSr4CurPos_XXX	SNVT_lev_percent
Servo 5 Current Position	AI	39	Flt_XXX[038]	4	3	X01	38	nvoSr5CurPos_XXX	SNVT_lev_percent
Servo 6 Current Position	AI	40	Flt_XXX[039]	4	3	X01	39	nvoSr6CurPos_XXX	SNVT_lev_percent
Servo 7 Current Position	AI	41	Flt_XXX[040]	4	3	X01	40	nvoSr7CurPos_XXX	SNVT_lev_percent
Servo 8 Current Position	AI	42	Flt_XXX[041]	4	3	X01	41	nvoSr8CurPos_XXX	SNVT_lev_percent
Servo 9 Current Position	AI	43	Flt_XXX[042]	4	3	X01	42	nvoSr9CurPos_XXX	SNVT_lev_percent
Servo 10 Current Position	AI	44	Flt_XXX[043]	4	3	X01	43	nvoSr10CuPos_XXX	SNVT_lev_percent
Amplifier Board Type	AI	45	Flt_XXX[044]	4	3	X01	44	nvoAmpBrdTyp_XXX	SNVT_count_f
Min Modulation For Profiles 1 & 2	AI	46	Flt_XXX[045]	4	3	X01	45	nvoMinModP12_XXX	SNVT_lev_percent
Min Modulation For Profiles 3 & 4	AI	47	Flt_XXX[046]	4	3	X01	46	nvoMinModP34_XXX	SNVT_lev_percent
8 Char Rev String For Main Microproc	AI	48	Flt_XXX[047]	4	3	X01	47	nvo8ChrRevSt_XXX	SNVT_count_f
Helper CPU Major Rev	AI	49	Flt_XXX[048]	4	3	X01	48	nvoHlCPUMjRv_XXX	SNVT_count_f
Helper CPU Minor Rev	AI	50	Flt_XXX[049]	4	3	X01	49	nvoHlCPUMnRv_XXX	SNVT_count_f
VFD CPU Rev	AI	51	Flt_XXX[050]	4	3	X01	50	nvoVFDCPURev_XXX	SNVT_count_f
FSG CPU Rev	AI	52	Flt_XXX[051]	4	3	X01	51	nvoFSGCPURev_XXX	SNVT_count_f
Error Repeat Count	AI	53	Flt_XXX[052]	4	3	X01	52	nvoErrRepCnt_XXX	SNVT_count_f
Current Active Error Number	AI	54	Flt_XXX[053]	4	3	X01	53	nvoCrActErNm_XXX	SNVT_count_f
Total Number Of Errors Detected	AI	55	Flt_XXX[054]	4	3	X01	54	nvoToNmErDet_XXX	SNVT_count_f
Fault 1	AI	56	Flt_XXX[055]	4	3	X01	55	nvoFlt1_XXX	SNVT_count_f
Fault 1 - Error Code	AI	57	Flt_XXX[056]	4	3	X01	56	nvoFt1ErCod_XXX	SNVT_count_f
Fault 1 - Time Of Fault Occurrence	AI	58	Flt_XXX[057]	4	3	X01	57	nvoFt1TimFlt_XXX	SNVT_count_f
Fault 1 - Date Of Fault Occ Day/Hour	AI	59	Flt_XXX[058]	4	3	X01	58	nvoFt1DtDyHr_XXX	SNVT_count_f
Fault 1 - Date Of Fault Occ Wk/Month	AI	60	Flt_XXX[059]	4	3	X01	59	nvoFt1DtWkMt_XXX	SNVT_count_f
Fault 1 - Year Of Fault Occ	AI	61	Flt_XXX[060]	4	3	X01	60	nvoFt1Year_XXX	SNVT_count_f
Fault 2/	AI	62	Flt_XXX[061]	4	3	X01	61	nvoFt2_XXX	SNVT_count_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Fault 2 - Error Code	AI	63	Flt_XXX[062]	4	3	X01	62	nvoFt2ErCod_XXX	SNVT_count_f
Fault 2 - Time Of Fault Occ	AI	64	Flt_XXX[063]	4	3	X01	63	nvoFt2TimFlt_XXX	SNVT_count_f
Fault 2 Date Of Fault Occ Day/Hour	AI	65	Flt_XXX[064]	4	3	X01	64	nvoFt2DtDyHr_XXX	SNVT_count_f
Fault 2 Date Of Fault Occ Wk/Month	AI	66	Flt_XXX[065]	4	3	X01	65	nvoFt2DtWkMt_XXX	SNVT_count_f
Fault 2 Year Of Fault Occ	AI	67	Flt_XXX[066]	4	3	X01	66	nvoFt2Year_XXX	SNVT_count_f
Fault 3	AI	68	Flt_XXX[067]	4	3	X01	67	nvoFt3_XXX	SNVT_count_f
Fault 3 Error Code	AI	69	Flt_XXX[068]	4	3	X01	68	nvoFt3ErCod_XXX	SNVT_count_f
Fault 3 Time Of Fault Occ	AI	70	Flt_XXX[069]	4	3	X01	69	nvoFt3TimFlt_XXX	SNVT_count_f
Fault 3 Date Of Fault Occ Day/Hour	AI	71	Flt_XXX[070]	4	3	X01	70	nvoFt3DtDyHr_XXX	SNVT_count_f
Fault 3 Date Of Fault Occ Wk/Month	AI	72	Flt_XXX[071]	4	3	X01	71	nvoFt3DtWkMt_XXX	SNVT_count_f
Fault 3 Year Of Fault Occ	AI	73	Flt_XXX[072]	4	3	X01	72	nvoFt3Year_XXX	SNVT_count_f
Fault 4	AI	74	Flt_XXX[073]	4	3	X01	73	nvoFt4_XXX	SNVT_count_f
Fault 4 Error Code	AI	75	Flt_XXX[074]	4	3	X01	74	nvoFt4ErCod_XXX	SNVT_count_f
Fault 4 Time Of Fault Occ	AI	76	Flt_XXX[075]	4	3	X01	75	nvoFt4TimFlt_XXX	SNVT_count_f
Fault 4 Date Of Fault Occ Day/Hour	AI	77	Flt_XXX[076]	4	3	X01	76	nvoFt4DtDyHr_XXX	SNVT_count_f
Fault 4 Date Of Fault Occ Wk/Month	AI	78	Flt_XXX[077]	4	3	X01	77	nvoFt4DtWkMt_XXX	SNVT_count_f
Fault 4 Year Of Fault Occ	AI	79	Flt_XXX[078]	4	3	X01	78	nvoFt4Year_XXX	SNVT_count_f
Fault 5	AI	80	Flt_XXX[079]	4	3	X01	79	nvoFt5_XXX	SNVT_count_f
Fault 5 Error Code	AI	81	Flt_XXX[080]	4	3	X01	80	nvoFt5ErCod_XXX	SNVT_count_f
Fault 5 Time Of Fault Occ	AI	82	Flt_XXX[081]	4	3	X01	81	nvoFt5TimFlt_XXX	SNVT_count_f
Fault 5 Date Of Fault Occ Day/Hour	AI	83	Flt_XXX[082]	4	3	X01	82	nvoFt5DtDyHr_XXX	SNVT_count_f
Fault 5 Date Of Fault Occ Wk/Month	AI	84	Flt_XXX[083]	4	3	X01	83	nvoFt5DtWkMt_XXX	SNVT_count_f
Fault 5 Year Of Fault Occ	AI	85	Flt_XXX[084]	4	3	X01	84	nvoFt5Year_XXX	SNVT_count_f
Fault 6	AI	86	Flt_XXX[085]	4	3	X01	85	nvoFt6_XXX	SNVT_count_f
Fault 6 Error Code	AI	87	Flt_XXX[086]	4	3	X01	86	nvoFt6ErCod_XXX	SNVT_count_f
Fault 6 Time Of Fault Occ	AI	88	Flt_XXX[087]	4	3	X01	87	nvoFt6TimFlt_XXX	SNVT_count_f
Fault 6 - Date Of Fault Occ Day/Hour	AI	89	Flt_XXX[088]	4	3	X01	88	nvoFt6DtDyHr_XXX	SNVT_count_f
Fault 6 - Date Of Fault Occ Wk/Month	AI	90	Flt_XXX[089]	4	3	X01	89	nvoFt6DtWkMt_XXX	SNVT_count_f
Fault 6 - Year Of Fault Occ	AI	91	Flt_XXX[090]	4	3	X01	90	nvoFt6Year_XXX	SNVT_count_f
Fault 7	AI	92	Flt_XXX[091]	4	3	X01	91	nvoFlt7_XXX	SNVT_count_f
Fault 7 - Error Code	AI	93	Flt_XXX[092]	4	3	X01	92	nvoFt7ErCod_XXX	SNVT_count_f
Fault 7 - Time Of Fault Occ	AI	94	Flt_XXX[093]	4	3	X01	93	nvoFt7TimFlt_XXX	SNVT_count_f
Fault 7 - Date Of Fault Occ Day/Hour	AI	95	Flt_XXX[094]	4	3	X01	94	nvoFt7DtDyHr_XXX	SNVT_count_f
Fault 7 - Date Of Fault Occ Wk/Month	AI	96	Flt_XXX[095]	4	3	X01	95	nvoFt7DtWkMt_XXX	SNVT_count_f
Fault 7 - Year Of Fault Occ	AI	97	Flt_XXX[096]	4	3	X01	96	nvoFt7Year_XXX	SNVT_count_f
Fault 8	AI	98	Flt_XXX[097]	4	3	X01	97	nvoFt8_XXX	SNVT_count_f
Fault 8 - Error Code	AI	99	Flt_XXX[098]	4	3	X01	98	nvoFt8ErCod_XXX	SNVT_count_f
Fault 8 - Time Of Fault Occ	AI	100	Flt_XXX[099]	4	3	X01	99	nvoFt8TimFlt_XXX	SNVT_count_f
Fault 8 - Date Of Fault Occ Day/Hour	AI	101	Flt_XXX[100]	4	3	X01	100	nvoFt8DtDyHr_XXX	SNVT_count_f
Fault 8 - Date Of Fault Occ Wk/Month	AI	102	Flt_XXX[101]	4	3	X01	101	nvoFt8DtWkMt_XXX	SNVT_count_f
Fault 8 - Year Of Fault Occ	AI	103	Flt_XXX[102]	4	3	X01	102	nvoFt8Year_XXX	SNVT_count_f
Fault 9	AI	104	Flt_XXX[103]	4	3	X01	103	nvoFt9_XXX	SNVT_count_f
Fault 9 - Error Code	AI	105	Flt_XXX[104]	4	3	X01	104	nvoFt9ErCod_XXX	SNVT_count_f
Fault 9 - Time Of Fault Occ	AI	106	Flt_XXX[105]	4	3	X01	105	nvoFt9TimFlt_XXX	SNVT_count_f
Fault 9 - Date Of Fault Occ Day/Hour	AI	107	Flt_XXX[106]	4	3	X01	106	nvoFt9DtDyHr_XXX	SNVT_count_f
Fault 9 - Date Of Fault Occ Wk/Month	AI	108	Flt_XXX[107]	4	3	X01	107	nvoFt9DtWkMt_XXX	SNVT_count_f
Fault 9 - Year Of Fault Occ	AI	109	Flt_XXX[108]	4	3	X01	108	nvoFt9Year_XXX	SNVT_count_f
Fault 10	AI	110	Flt_XXX[109]	4	3	X01	109	nvoFt10_XXX	SNVT_count_f
Fault 10 - Error Code	AI	111	Flt_XXX[110]	4	3	X01	110	nvoFt10ErCod_XXX	SNVT_count_f
Fault 10 - Time Of Fault Occ	AI	112	Flt_XXX[111]	4	3	X01	111	nvoFt10TimFlt_XXX	SNVT_count_f
Fault 10 - Date Of Fault Occ Day/Hr	AI	113	Flt_XXX[112]	4	3	X01	112	nvoFt10DtDyHr_XXX	SNVT_count_f
Fault 10 - Date Of Fault Occ Wk/Mnth	AI	114	Flt_XXX[113]	4	3	X01	113	nvoFt10DtWkMt_XXX	SNVT_count_f
Fault 10 - Year Of Fault Occ	AI	115	Flt_XXX[114]	4	3	X01	114	nvoFt10Year_XXX	SNVT_count_f
Unit Of Measurement	AI	116	Flt_XXX[115]	4	3	X01	115	nvoUnitMeas_XXX	SNVT_count_f
Sensor 1 Type & Range	AI	117	Flt_XXX[116]	4	3	X01	116	nvoSen1TyRng_XXX	SNVT_count_f
Sensor 2 Type & Range	AI	118	Flt_XXX[117]	4	3	X01	117	nvoSen2TyRng_XXX	SNVT_count_f
Sensor 3 Type & Range	AI	119	Flt_XXX[118]	4	3	X01	118	nvoSen3TyRng_XXX	SNVT_count_f
Sensor 4 Type & Range	AI	120	Flt_XXX[119]	4	3	X01	119	nvoSen4TyRng_XXX	SNVT_count_f
Sensor 5 Type & Range	AI	121	Flt_XXX[120]	4	3	X01	120	nvoSen5TyRng_XXX	SNVT_count_f
Setpoint 1 Sensor Usage	AI	122	Flt_XXX[121]	4	3	X01	121	nvoSP1SenUsg_XXX	SNVT_count_f
Setpoint 1 Derivative & Integral	AI	123	Flt_XXX[122]	4	3	X01	122	nvoSP1DerInt_XXX	SNVT_count_f
Sensor 1 Set Point Value	AI	124	Flt_XXX[123]	4	3	X01	123	nvoSn1SPVl_XXX	SNVT_count_f
Sensor 1 Cut In Value	AI	125	Flt_XXX[124]	4	3	X01	124	nvoSn1CtInVl_XXX	SNVT_count_f
Sensor 1 Cut Out Value	AI	126	Flt_XXX[125]	4	3	X01	125	nvoSn1CtOtVl_XXX	SNVT_count_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Sensor 1 Margin Alarm Value	AI	127	Flt_XXX[126]	4	3	X01	126	nvoSn1MgAlVl_XXX	SNVT_count_f
Sensor 1 Limit Alarm Value	AI	128	Flt_XXX[127]	4	3	X01	127	nvoSn1LmAlVl_XXX	SNVT_count_f
Sensor 2 Set Point Value	AI	129	Flt_XXX[128]	4	3	X01	128	nvoSn2SPVl_XXX	SNVT_count_f
Sensor 2 Cut In Value	AI	130	Flt_XXX[129]	4	3	X01	129	nvoSn2CtInVl_XXX	SNVT_count_f
Sensor 2 Cut Out Value	AI	131	Flt_XXX[130]	4	3	X01	130	nvoSn2CtOtVl_XXX	SNVT_count_f
Sensor 2 Margin Alarm Value	AI	132	Flt_XXX[131]	4	3	X01	131	nvoSn2MgAlVl_XXX	SNVT_count_f
Sensor 2 Limit Alarm Value	AI	133	Flt_XXX[132]	4	3	X01	132	nvoSn2LmAlVl_XXX	SNVT_count_f
Sensor 3 Set Point Value	AI	134	Flt_XXX[133]	4	3	X01	133	nvoSn3SPVl_XXX	SNVT_count_f
Sensor 3 Cut In Value	AI	135	Flt_XXX[134]	4	3	X01	134	nvoSn3CtInVl_XXX	SNVT_count_f
Sensor 3 Cut Out Value	AI	136	Flt_XXX[135]	4	3	X01	135	nvoSn3CtOtVl_XXX	SNVT_count_f
Sensor 3 Margin Alarm Value	AI	137	Flt_XXX[136]	4	3	X01	136	nvoSn3MgAlVl_XXX	SNVT_count_f
Sensor 3 Limit Alarm Value	AI	138	Flt_XXX[137]	4	3	X01	137	nvoSn3LmAlVl_XXX	SNVT_count_f
Sensor 4 Set Point Value	AI	139	Flt_XXX[138]	4	3	X01	138	nvoSn4SPVl_XXX	SNVT_count_f
Sensor 4 Cut In Value	AI	140	Flt_XXX[139]	4	3	X01	139	nvoSn4CtInVl_XXX	SNVT_count_f
Sensor 4 Cut Out Value	AI	141	Flt_XXX[140]	4	3	X01	140	nvoSn4CtOtVl_XXX	SNVT_count_f
Sensor 4 Margin Alarm Value	AI	142	Flt_XXX[141]	4	3	X01	141	nvoSn4MgAlVl_XXX	SNVT_count_f
Sensor 4 Limit Alarm Value	AI	143	Flt_XXX[142]	4	3	X01	142	nvoSn4LmAlVl_XXX	SNVT_count_f
Sensor 5 Set Point Value	AI	144	Flt_XXX[143]	4	3	X01	143	nvoSn5SPVl_XXX	SNVT_count_f
Sensor 5 Cut In Value	AI	145	Flt_XXX[144]	4	3	X01	144	nvoSn5CtInVl_XXX	SNVT_count_f
Sensor 5 Cut Out Value	AI	146	Flt_XXX[145]	4	3	X01	145	nvoSn5CtOtVl_XXX	SNVT_count_f
Sensor 5 Margin Alarm Value	AI	147	Flt_XXX[146]	4	3	X01	146	nvoSn5MgAlVl_XXX	SNVT_count_f
Sensor 5 Limit Alarm Value	AI	148	Flt_XXX[147]	4	3	X01	147	nvoSn5LmAlVl_XXX	SNVT_count_f
Valve Proving Testtime 1 & 2	AI	149	Flt_XXX[148]	4	3	X01	148	nvoVlPrTsT12_XXX	SNVT_count_f
Valve Prov Test Method And Duration	AI	150	Flt_XXX[149]	4	3	X01	149	nvoVlPrTsMth_XXX	SNVT_count_f
Pcv Setpoint String	AI	151	Flt_XXX[150]	4	3	X01	150	nvoPCV_SPStr_XXX	SNVT_count_f
Pcv Measured Value String	AI	152	Flt_XXX[151]	4	3	X01	151	nvoPCVMsVlSt_XXX	SNVT_count_f
Max Modulation Rate & Name 1	AI	153	Flt_XXX[152]	4	3	X01	152	nvoMxMdRtNm1_XXX	SNVT_count_f
Max Modulation Rate & Name 2	AI	154	Flt_XXX[153]	4	3	X01	153	nvoMxMdRtNm2_XXX	SNVT_count_f
Max Modulation Rate & Name 3	AI	155	Flt_XXX[154]	4	3	X01	154	nvoMxMdRtNm3_XXX	SNVT_count_f
Max Modulation Rate & Name 4	AI	156	Flt_XXX[155]	4	3	X01	155	nvoMxMdRtNm4_XXX	SNVT_count_f
Post Purge Time & Prove Perm Input	AI	157	Flt_XXX[156]	4	3	X01	156	nvoPstPrgTme_XXX	SNVT_count_f
Ptfi Time & Recycle	AI	158	Flt_XXX[157]	4	3	X01	157	nvoPtfiTmRec_XXX	SNVT_count_f
Mtfi Time & Intermittent Pilot	AI	159	Flt_XXX[158]	4	3	X01	158	nvoMtfiTime_XXX	SNVT_count_f
Profile Select & Ffrt Time	AI	160	Flt_XXX[159]	4	3	X01	159	nvoPrSelFfTm_XXX	SNVT_count_f
Prove Airflow	AI	161	Flt_XXX[160]	4	3	X01	160	nvoPrveArFlw_XXX	SNVT_count_f
Purge Time	AI	162	Flt_XXX[161]	4	3	X01	161	nvoPrgTime_XXX	SNVT_count_f
Reset	AV	163	Flt_XXX[162]	4	3	X01	162	nvi/nvoReset_XXX	SNVT_count_f
Burner Control On/Off	AV	164	Flt_XXX[163]	4	3	X01	163	nvi/nvoBnCtOnOff_XXX	SNVT_count_f
Burner Control Low Fire	AV	165	Flt_XXX[164]	4	3	X01	164	nvi/nvoBrCtLoFir_XXX	SNVT_count_f
Burner Control Lead Lag	AV	166	Flt_XXX[165]	4	3	X01	165	nvi/nvoBrCtlLdLg_XXX	SNVT_count_f
Burner Control Auto Manual	AV	167	Flt_XXX[166]	4	3	X01	166	nvi/nvoBrCtAutMn_XXX	SNVT_count_f
Manual Modulation Rate	AV	168	Flt_XXX[167]	4	3	X01	167	nviManModRat_XXX	SNVT_count_f

Appendix D.3 ZB110_FSG Modbus RTU Mappings to Field Protocols

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
STATUS	AV	1	U16_XXX[000]	4	3	X01	0	nvoStatus_XXX	SNVT_count_f
MSGN	AV	2	U16_XXX[001]	4	3	X01	1	nvoMsgn_XXX	SNVT_count_f
GSTAT	AV	3	U16_XXX[002]	4	3	X01	2	nvoGstat_XXX	SNVT_count_f
TIMER	AV	4	U16_XXX[003]	4	3	X01	3	nvoTimer_XXX	SNVT_time_sec
FLAME	AV	5	U16_XXX[004]	4	3	X01	4	nvoFlame_XXX	SNVT_count_f
LOGSTAT	AV	6	U16_XXX[005]	4	3	X01	5	nvoLogstat_XXX	SNVT_count_f
IN_SFTY_RELAY	BV	7	Bit_XXX[000]	4	3	X03	0	nvoIN_SftRel_XXX	SNVT_switch
IN_MAIN_VLV	BV	8	Bit_XXX[001]	4	3	X03	1	nvoIN_ManVlv_XXX	SNVT_switch
IN_DELAY_VLV	BV	9	Bit_XXX[002]	4	3	X03	2	nvoIN_DelVlv_XXX	SNVT_switch
IN_PLT_VLV	BV	10	Bit_XXX[003]	4	3	X03	3	nvoIN_PltVlv_XXX	SNVT_switch
IN_IGNITION	BV	11	Bit_XXX[004]	4	3	X03	4	nvoIN_Ignitn_XXX	SNVT_switch
IN_BLOWER	BV	12	Bit_XXX[005]	4	3	X03	5	nvoIN_Blowr_XXX	SNVT_switch
IN_OP_CTRL	BV	13	Bit_XXX[006]	4	3	X03	6	nvoIN_OpCtrl_XXX	SNVT_switch
IN_RUN_INTRLK	BV	14	Bit_XXX[007]	4	3	X03	7	nvoIN_RnInlk_XXX	SNVT_switch
IN_LAG1	BV	15	Bit_XXX[008]	4	3	X03	8	nvoIN_LAG1_XXX	SNVT_switch
IN_TERM_23	BV	16	Bit_XXX[009]	4	3	X03	9	nvoIN_TERM23_XXX	SNVT_switch
IN_TERM_22	BV	17	Bit_XXX[010]	4	3	X03	10	nvoIN_TERM22_XXX	SNVT_switch
IN_LAG2	BV	18	Bit_XXX[011]	4	3	X03	11	nvoIN_LAG2_XXX	SNVT_switch
IN_FVES_POC	BV	19	Bit_XXX[012]	4	3	X03	12	nvoIN_FvePoc_XXX	SNVT_switch
IN_HI_FIRE_INTLCK	BV	20	Bit_XXX[013]	4	3	X03	13	nvoIN_HiFrIn_XXX	SNVT_switch
IN_LO_FIRE_START	BV	21	Bit_XXX[014]	4	3	X03	14	nvoIN_LoFrSt_XXX	SNVT_switch
IN_REF	BV	22	Bit_XXX[015]	4	3	X03	15	nvoIN_Ref_XXX	SNVT_switch
OUT_BIT0	BV	23	Bit_XXX[016]	4	3	X03	16	nvoOUT_Bit0_XXX	SNVT_switch
OUT_IGNITION	BV	24	Bit_XXX[017]	4	3	X03	17	nvoOUT_Igntn_XXX	SNVT_switch
OUT_PLT_VLV	BV	25	Bit_XXX[018]	4	3	X03	18	nvoOUT_PltVl_XXX	SNVT_switch
OUT_BLOWER	BV	26	Bit_XXX[019]	4	3	X03	19	nvoOUT_Blwr_XXX	SNVT_switch
OUT_MAIN_VLV	BV	27	Bit_XXX[020]	4	3	X03	20	nvoOUT_MnVlv_XXX	SNVT_switch
OUT_DELAY_VLV	BV	28	Bit_XXX[021]	4	3	X03	21	nvoOUT_DelVl_XXX	SNVT_switch
OUT_INT_SAFE	BV	29	Bit_XXX[022]	4	3	X03	22	nvoOUT_IntSf_XXX	SNVT_switch
OUT_BIT7	BV	30	Bit_XXX[023]	4	3	X03	23	nvoOUT_Bit7_XXX	SNVT_switch
OUT_LO_FIRE	BV	31	Bit_XXX[024]	4	3	X03	24	nvoOUT_LoFir_XXX	SNVT_switch
OUT_HI_FIRE	BV	32	Bit_XXX[025]	4	3	X03	25	nvoOUT_HiFir_XXX	SNVT_switch
OUT_AUTO	BV	33	Bit_XXX[026]	4	3	X03	26	nvoOUT_Auto_XXX	SNVT_switch
OUT_ALARM	BV	34	Bit_XXX[027]	4	3	X03	27	nvoOUT_Alarm_XXX	SNVT_switch
OUT_BIT12	BV	35	Bit_XXX[028]	4	3	X03	28	nvoOUT_Bit12_XXX	SNVT_switch
OUT_BIT13	BV	36	Bit_XXX[029]	4	3	X03	29	nvoOUT_Bit13_XXX	SNVT_switch
OUT_BIT14	BV	37	Bit_XXX[030]	4	3	X03	30	nvoOUT_Bit14_XXX	SNVT_switch
OUT_BIT15	BV	38	Bit_XXX[031]	4	3	X03	31	nvoOUT_Bit15_XXX	SNVT_switch
SYSMINS	AV	39	U32_XXX[000]	4	3	X02	0	nvoSysMins_XXX	SNVT_time_min
BNRMINS	AV	40	U32_XXX[001]	4	3	X02	1	nvoBnrMins_XXX	SNVT_time_min
CYCLES	AV	41	U32_XXX[002]	4	3	X02	2	nvoCycles_XXX	SNVT_count_f
LCKOUT_CNT	AV	42	U16_XXX[014]	4	3	X01	14	nvoLckoutCnt_XXX	SNVT_count_f
Rcnt_LCKOUT_MSG	AV	43	U16_XXX[015]	4	3	X01	15	nvoLkot_Msg_XXX	SNVT_count_f
Rcnt_LCKOUT_MOD	AV	44	U16_XXX[016]	4	3	X01	16	nvoLkot_Mod_XXX	SNVT_count_f
Rcnt_LCKOUT_BHRS	AV	45	U32_XXX[003]	4	3	X02	3	nvoLkot_Bhrs_XXX	SNVT_time_hour
Rcnt_LCKOUT_BCYC	AV	46	U32_XXX[004]	4	3	X02	4	nvoLkot_Bcyc_XXX	SNVT_count_f
02nd_LCKOUT_MSG	AV	47	U16_XXX[021]	4	3	X01	21	nvo2Lkot_Msg_XXX	SNVT_count_f
02nd_LCKOUT_MOD	AV	48	U16_XXX[022]	4	3	X01	22	nvo2Lkot_Mod_XXX	SNVT_count_f
02nd_LCKOUT_BHRS	AV	49	U32_XXX[005]	4	3	X02	5	nvo2Lkot_Bhr_XXX	SNVT_time_hour
02nd_LCKOUT_BCYC	AV	50	U32_XXX[006]	4	3	X02	6	nvo2Lkot_Bcy_XXX	SNVT_count_f
03rd_LCKOUT_MSG	AV	51	U16_XXX[027]	4	3	X01	27	nvo3Lkot_Msg_XXX	SNVT_count_f
03rd_LCKOUT_MOD	AV	52	U16_XXX[028]	4	3	X01	28	nvo3Lkot_Mod_XXX	SNVT_count_f
03rd_LCKOUT_BHRS	AV	53	U32_XXX[007]	4	3	X02	7	nvo3Lkot_Bhr_XXX	SNVT_time_hour
03rd_LCKOUT_BCYC	AV	54	U32_XXX[008]	4	3	X02	8	nvo3Lkot_Bcy_XXX	SNVT_count_f
04th_LCKOUT_MSG	AV	55	U16_XXX[033]	4	3	X01	33	nvo4Lkot_Msg_XXX	SNVT_count_f
04th_LCKOUT_MOD	AV	56	U16_XXX[034]	4	3	X01	34	nvo4Lkot_Mod_XXX	SNVT_count_f
04th_LCKOUT_BHRS	AV	57	U32_XXX[009]	4	3	X02	9	nvo4Lkot_Bhr_XXX	SNVT_time_hour
04th_LCKOUT_BCYC	AV	58	U32_XXX[010]	4	3	X02	10	nvo4Lkot_Bcy_XXX	SNVT_count_f
05th_LCKOUT_MSG	AV	59	U16_XXX[039]	4	3	X01	39	nvo5Lkot_Msg_XXX	SNVT_count_f
05th_LCKOUT_MOD	AV	60	U16_XXX[040]	4	3	X01	40	nvo5Lkot_Mod_XXX	SNVT_count_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
05th_LCKOUT_BHRS	AV	61	U32_XXX[011]	4	3	X02	11	nvo5Lkot_Bhr_XXX	SNVT_time_hour
05th_LCKOUT_BCYC	AV	62	U32_XXX[012]	4	3	X02	12	nvo5Lkot_Bcy_XXX	SNVT_count_f
06th_LCKOUT_MSG	AV	63	U16_XXX[045]	4	3	X01	45	nvo6Lkot_Msg_XXX	SNVT_count_f
06th_LCKOUT_MOD	AV	64	U16_XXX[046]	4	3	X01	46	nvo6Lkot_Mod_XXX	SNVT_count_f
06th_LCKOUT_BHRS	AV	65	U32_XXX[013]	4	3	X02	13	nvo6Lkot_Bhr_XXX	SNVT_time_hour
06th_LCKOUT_BCYC	AV	66	U32_XXX[014]	4	3	X02	14	nvo6Lkot_Bcy_XXX	SNVT_count_f
07th_LCKOUT_MSG	AV	67	U16_XXX[051]	4	3	X01	51	nvo7Lkot_Msg_XXX	SNVT_count_f
07th_LCKOUT_MOD	AV	68	U16_XXX[052]	4	3	X01	52	nvo7Lkot_Mod_XXX	SNVT_count_f
07th_LCKOUT_BHRS	AV	69	U32_XXX[015]	4	3	X02	15	nvo7Lkot_Bhr_XXX	SNVT_time_hour
07th_LCKOUT_BCYC	AV	70	U32_XXX[016]	4	3	X02	16	nvo7Lkot_Bcy_XXX	SNVT_count_f
08th_LCKOUT_MSG	AV	71	U16_XXX[057]	4	3	X01	57	nvo8Lkot_Msg_XXX	SNVT_count_f
08th_LCKOUT_MOD	AV	72	U16_XXX[058]	4	3	X01	58	nvo8Lkot_Mod_XXX	SNVT_count_f
08th_LCKOUT_BHRS	AV	73	U32_XXX[017]	4	3	X02	17	nvo8Lkot_Bhr_XXX	SNVT_time_hour
08th_LCKOUT_BCYC	AV	74	U32_XXX[018]	4	3	X02	18	nvo8Lkot_Bcy_XXX	SNVT_count_f
09th_LCKOUT_MSG	AV	75	U16_XXX[063]	4	3	X01	63	nvo9Lkot_Msg_XXX	SNVT_count_f
09th_LCKOUT_MOD	AV	76	U16_XXX[064]	4	3	X01	64	nvo9Lkot_Mod_XXX	SNVT_count_f
09th_LCKOUT_BHRS	AV	77	U32_XXX[019]	4	3	X02	19	nvo9Lkot_Bhr_XXX	SNVT_time_hour
09th_LCKOUT_BCYC	AV	78	U32_XXX[020]	4	3	X02	20	nvo9Lkot_Bcy_XXX	SNVT_count_f
10th_LCKOUT_MSG	AV	79	U16_XXX[069]	4	3	X01	69	nvo10LkotMsg_XXX	SNVT_count_f
10th_LCKOUT_MOD	AV	80	U16_XXX[070]	4	3	X01	70	nvo10LkotMod_XXX	SNVT_count_f
10th_LCKOUT_BHRS	AV	81	U32_XXX[021]	4	3	X02	21	nvo10LkotBhr_XXX	SNVT_time_hour
10th_LCKOUT_BCYC	AV	82	U32_XXX[022]	4	3	X02	22	nvo10LkotBcy_XXX	SNVT_count_f
YZ300 Op Control	BV	83	Bit_XXX[032]	4	3	X03	32	nvoYZ300OpCt_XXX	SNVT_switch
YZ300 Aux 1	BV	84	Bit_XXX[033]	4	3	X03	33	nvoYZ300Aux1_XXX	SNVT_switch
YZ300 Aux 2	BV	85	Bit_XXX[034]	4	3	X03	34	nvoYZ300Aux2_XXX	SNVT_switch
YZ300 Aux 3	BV	86	Bit_XXX[035]	4	3	X03	35	nvoYZ300Aux3_XXX	SNVT_switch
YZ300 Hi Water	BV	87	Bit_XXX[036]	4	3	X03	36	nvoYZ300HiWt_XXX	SNVT_switch
YZ300 Lo Water	BV	88	Bit_XXX[037]	4	3	X03	37	nvoYZ300LoWt_XXX	SNVT_switch
YZ300 Hi Oil Temp	BV	89	Bit_XXX[038]	4	3	X03	38	nvoYZHiOlTmp_XXX	SNVT_switch
YZ300 Lo Oil Temp	BV	90	Bit_XXX[039]	4	3	X03	39	nvoYZLoOlTmp_XXX	SNVT_switch
YZ300 Lo Oil Press	BV	91	Bit_XXX[040]	4	3	X03	40	nvoYZLoOlPrs_XXX	SNVT_switch
YZ300 Lo Atom Media	BV	92	Bit_XXX[041]	4	3	X03	41	nvoYZLoAtMed_XXX	SNVT_switch
YZ300 Lo Gas Press	BV	93	Bit_XXX[042]	4	3	X03	42	nvoYZLoGsPrs_XXX	SNVT_switch
YZ300 Hi Gas Pres	BV	94	Bit_XXX[043]	4	3	X03	43	nvoYZHiGsPrs_XXX	SNVT_switch
YZ300 Aux Gas	BV	95	Bit_XXX[044]	4	3	X03	44	nvoYZAuxGas_XXX	SNVT_switch
YZ300 Hi Press	BV	96	Bit_XXX[045]	4	3	X03	45	nvoYZHiPr_XXX	SNVT_switch
YZ300 Hi Temp	BV	97	Bit_XXX[046]	4	3	X03	46	nvoYZHiTmp_XXX	SNVT_switch
YZ300 Aux 4	BV	98	Bit_XXX[047]	4	3	X03	47	nvoYZAux4_XXX	SNVT_switch
YZ300 Aux 5	BV	99	Bit_XXX[048]	4	3	X03	48	nvoYZAux5_XXX	SNVT_switch
YZ300 Aux 6	BV	100	Bit_XXX[049]	4	3	X03	49	nvoYZAux6_XXX	SNVT_switch
YZ300 Aux 7	BV	101	Bit_XXX[050]	4	3	X03	50	nvoYZAux7_XXX	SNVT_switch
YZ300 Air Flow	BV	102	Bit_XXX[051]	4	3	X03	51	nvoYZAirFlo_XXX	SNVT_switch
Calibration Constant	AI	103	U16_XXX[078]	4	3	X01	78	nvoCalibCons_XXX	SNVT_count_f
Pri sensor Raw A/D reading	AI	104	U16_XXX[079]	4	3	X01	79	nvoPriSen_XXX	SNVT_count_f
AUX 1 sensor Raw A/D reading	AI	105	U16_XXX[080]	4	3	X01	80	nvoAux1Sen_XXX	SNVT_count_f
AUX 2 sensor Raw A/D reading	AI	106	U16_XXX[081]	4	3	X01	81	nvoAux2Sen_XXX	SNVT_count_f
LEAD / LAG status	AI	107	U16_XXX[082]	4	3	X01	82	nvoLLStatus_XXX	SNVT_count_f
Current Modulation Rate	AI	108	U16_XXX[083]	4	3	X01	83	nvoCurModRat_XXX	SNVT_count_f
LAGx START DELAY	AI	109	U16_XXX[084]	4	3	X01	84	nvoLagStrDel_XXX	SNVT_count_f
Current Control Variable	AI	110	U16_XXX[085]	4	3	X01	85	nvoCurCtlVar_XXX	SNVT_count_f
Pri Sensor Use	AV	111	U16_XXX[086]	4	3	X01	86	nvoPriSenUse_XXX	SNVT_count_f
Pri Sensor Type	AV	112	U16_XXX[087]	4	3	X01	87	nvoPriSenTyp_XXX	SNVT_count_f
Pri Sensor SP	AV	113	U16_XXX[088]	4	3	X01	88	nvoPriSenSp_XXX	SNVT_count_f
Pri Sensor Cut In	AV	114	U16_XXX[089]	4	3	X01	89	nvoPriSnCtIn_XXX	SNVT_count_f
Pri Sensor Cut Out	AV	115	U16_XXX[090]	4	3	X01	90	nvoPriSnCtOt_XXX	SNVT_count_f
Pri Sensor Mod Range	AV	116	U16_XXX[091]	4	3	X01	91	nvoPrSnMdRng_XXX	SNVT_count_f
Pri Sensor Marginal ALM	AV	117	U16_XXX[092]	4	3	X01	92	nvoPrSnMgAlm_XXX	SNVT_count_f
Pri Sensor Limit ALM	AV	118	U16_XXX[093]	4	3	X01	93	nvoPrSnLmAlm_XXX	SNVT_count_f
AUX 1 Sensor Use	AV	119	U16_XXX[094]	4	3	X01	94	nvoAux1SnUse_XXX	SNVT_count_f
AUX 1 Sensor Type	AV	120	U16_XXX[095]	4	3	X01	95	nvoAux1SnTyp_XXX	SNVT_count_f
AUX 1 Sensor SP	AV	121	U16_XXX[096]	4	3	X01	96	nvoAux1SnSp_XXX	SNVT_count_f
AUX 1 Sensor Cut In	AV	122	U16_XXX[097]	4	3	X01	97	nvoAx1SnCtIn_XXX	SNVT_count_f
AUX 1 Sensor Cut Out	AV	123	U16_XXX[098]	4	3	X01	98	nvoAx1SnCtOt_XXX	SNVT_count_f
AUX 1 Sensor Mod Range	AV	124	U16_XXX[099]	4	3	X01	99	nvoAx1SnMdRg_XXX	SNVT_count_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
AUX 1 Sensor Marginal ALM	AV	125	U16_XXX[100]	4	3	X01	100	nvoAx1SnMgAl_XXX	SNVT_count_f
AUX 1 Sensor Limit ALM	AV	126	U16_XXX[101]	4	3	X01	101	nvoAx1SnLmAl_XXX	SNVT_count_f
AUX 2 Sensor Use	AV	127	U16_XXX[102]	4	3	X01	102	nvoAux2SnUse_XXX	SNVT_count_f
AUX 2 Sensor Type	AV	128	U16_XXX[103]	4	3	X01	103	nvoAux2SnTyp_XXX	SNVT_count_f
AUX 2 Sensor SP	AV	129	U16_XXX[104]	4	3	X01	104	nvoAux2SnSp_XXX	SNVT_count_f
AUX 2 Sensor Cut In	AV	130	U16_XXX[105]	4	3	X01	105	nvoAx2SnCtIn_XXX	SNVT_count_f
AUX 2 Sensor Cut Out	AV	131	U16_XXX[106]	4	3	X01	106	nvoAx2SnCtOt_XXX	SNVT_count_f
AUX 2 Sensor Mod Range	AV	132	U16_XXX[107]	4	3	X01	107	nvoAx2SnMdRg_XXX	SNVT_count_f
AUX 2 Sensor Marginal ALM	AV	133	U16_XXX[108]	4	3	X01	108	nvoAx2SnMgAl_XXX	SNVT_count_f
AUX 2 Sensor Limit ALM	AV	134	U16_XXX[109]	4	3	X01	109	nvoAx2SnLmAl_XXX	SNVT_count_f
LAG 1 Lag Mode	AV	135	U16_XXX[110]	4	3	X01	110	nvoL1LagMode_XXX	SNVT_count_f
LAG 1 Start Delay	AV	136	U16_XXX[111]	4	3	X01	111	nvoL1StrtDel_XXX	SNVT_count_f
LAG 1 Lead to Lag Delay	AV	137	U16_XXX[112]	4	3	X01	112	nvoL1LLDel_XXX	SNVT_count_f
LAG 1 Sensor SP	AV	138	U16_XXX[113]	4	3	X01	113	nvoL1SenSP_XXX	SNVT_count_f
LAG 1 Sensor Cut In	AV	139	U16_XXX[114]	4	3	X01	114	nvoL1SenCtIn_XXX	SNVT_count_f
LAG 1 Sensor Cut Out	AV	140	U16_XXX[115]	4	3	X01	115	nvoL1SenCtOt_XXX	SNVT_count_f
LAG 1 Sensor Mode Range	AV	141	U16_XXX[116]	4	3	X01	116	nvoL1SenMdRg_XXX	SNVT_count_f
LAG 1 Mod Max	AV	142	U16_XXX[117]	4	3	X01	117	nvoL1Modmax_XXX	SNVT_count_f
LAG 2 Lag Mode	AV	143	U16_XXX[118]	4	3	X01	118	nvoL2LagMode_XXX	SNVT_count_f
LAG 2 Start Delay	AV	144	U16_XXX[119]	4	3	X01	119	nvoL2StrtDel_XXX	SNVT_count_f
LAG 2 Lead to Lag Delay	AV	145	U16_XXX[120]	4	3	X01	120	nvoL2LLDel_XXX	SNVT_count_f
LAG 2 Sensor SP	AV	146	U16_XXX[121]	4	3	X01	121	nvoL2SenSP_XXX	SNVT_count_f
LAG 2 Sensor Cut In	AV	147	U16_XXX[122]	4	3	X01	122	nvoL2SenCtIn_XXX	SNVT_count_f
LAG 2 Sensor Cut Out	AV	148	U16_XXX[123]	4	3	X01	123	nvoL2SenCtOt_XXX	SNVT_count_f
LAG 2 Sensor Mode Range	AV	149	U16_XXX[124]	4	3	X01	124	nvoL2SenMdRg_XXX	SNVT_count_f
LAG 2 Mod Max	AV	150	U16_XXX[125]	4	3	X01	125	nvoL2Modmax_XXX	SNVT_count_f
Thermal Shock Method	AV	151	U16_XXX[126]	4	3	X01	126	nvoThShkMeth_XXX	SNVT_count_f
Thermal Shock Start Point	AV	152	U16_XXX[127]	4	3	X01	127	nvoThShkStPt_XXX	SNVT_count_f
Thermal Shock Exit Point	AV	153	U16_XXX[128]	4	3	X01	128	nvoThShkExPt_XXX	SNVT_count_f
Thermal Shock Low Fire Min	AV	154	U16_XXX[129]	4	3	X01	129	nvoThShLFiMn_XXX	SNVT_count_f
Thermal Shock Override Time	AV	155	U16_XXX[130]	4	3	X01	130	nvoThShkOvTm_XXX	SNVT_count_f
Modulation Mode	AV	156	U16_XXX[131]	4	3	X01	131	nvoModMode_XXX	SNVT_count_f
Integral Gain	AV	157	U16_XXX[132]	4	3	X01	132	nvoIntGain_XXX	SNVT_count_f
Derivative Gain	AV	158	U16_XXX[133]	4	3	X01	133	nvoDerGain_XXX	SNVT_count_f
Modulation MaxPosition	AV	159	U16_XXX[134]	4	3	X01	134	nvoModMaxPos_XXX	SNVT_count_f
Units of Measurement	AV	160	U16_XXX[135]	4	3	X01	135	nvoUnitsMeas_XXX	SNVT_count_f
Manual Mod Position	AV	161	U16_XXX[136]	4	3	X01	136	nvoManModPos_XXX	SNVT_count_f
Password Level 1	AV	162	U16_XXX[137]	4	3	X01	137	nvoPswdLev1_XXX	SNVT_count_f
Password Level 2	AV	163	U16_XXX[138]	4	3	X01	138	nvoPswdLev2_XXX	SNVT_count_f

Appendix D.4 PPC6000_NX6100 Modbus RTU Mappings to Field Protocols

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Setpoint Select	BV	1	Bit_XXX[000]	4	3	X04	0	nvi/nvoSPSelect_XXX	SNVT_switch
Release to Ignite	BV	2	Bit_XXX[001]	4	3	X04	1	nvi/nvoRel2Ignit_XXX	SNVT_switch
Low Fire Hold	BV	3	Bit_XXX[002]	4	3	X04	2	nvi/nvoLoFireHld_XXX	SNVT_switch
Lead boiler Select	BV	4	Bit_XXX[003]	4	3	X04	3	nvi/nvoLdBlrSel_XXX	SNVT_switch
Mute/Reset	BV	5	Bit_XXX[004]	4	3	X04	4	nvi/nvoMuteReset_XXX	SNVT_switch
Oxygen Trim Enable	BV	6	Bit_XXX[005]	4	3	X04	5	nvi/nvoOxyTrmEn_XXX	SNVT_switch
Boiler Sequencing Enable	BV	7	Bit_XXX[006]	4	3	X04	6	nvi/nvoBlrSeqEn_XXX	SNVT_switch
Burner ON/OFF	BV	8	Bit_XXX[007]	4	3	X04	7	nvi/nvoBrnrOnOff_XXX	SNVT_switch
Select profile 1	BV	9	Bit_XXX[011]	4	3	X04	11	nvi/nvoSelProf1_XXX	SNVT_switch
Select profile 2	BV	10	Bit_XXX[012]	4	3	X04	12	nvi/nvoSelProf2_XXX	SNVT_switch
Select profile 3	BV	11	Bit_XXX[013]	4	3	X04	13	nvi/nvoSelProf3_XXX	SNVT_switch
Select profile 4	BV	12	Bit_XXX[014]	4	3	X04	14	nvi/nvoSelProf4_XXX	SNVT_switch
Reset Modbus	BV	13	Bit_XXX[015]	4	3	X04	15	nviModRate_XXX	SNVT_switch
Drive 0 Position	AI	1	AI_XXX[000]	4	3	X01	0	nvoDrive0Pos_XXX	SNVT_count_f
Drive 1 Position	AI	2	AI_XXX[001]	4	3	X01	1	nvoDrive1Pos_XXX	SNVT_count_f
Drive 2 Position	AI	3	AI_XXX[002]	4	3	X01	2	nvoDrive2Pos_XXX	SNVT_count_f
Drive 3 Position	AI	4	AI_XXX[003]	4	3	X01	3	nvoDrive3Pos_XXX	SNVT_count_f
Drive 4 Position	AI	5	AI_XXX[004]	4	3	X01	4	nvoDrive4Pos_XXX	SNVT_count_f
Drive 5 Position	AI	6	AI_XXX[005]	4	3	X01	5	nvoDrive5Pos_XXX	SNVT_count_f
Drive 6 Position	AI	7	AI_XXX[006]	4	3	X01	6	nvoDrive6Pos_XXX	SNVT_count_f
Drive 7 Position	AI	8	AI_XXX[007]	4	3	X01	7	nvoDrive7Pos_XXX	SNVT_count_f
Drive 8 Position	AI	9	AI_XXX[008]	4	3	X01	8	nvoDrive8Pos_XXX	SNVT_count_f
Drive 9 Position	AI	10	AI_XXX[009]	4	3	X01	9	nvoDrive9Pos_XXX	SNVT_count_f
Measured Value	AI	11	AI_XXX[012]	4	3	X01	12	nvoMeasVal_XXX	SNVT_count_f
Efficiency	AI	12	AI_XXX[013]	4	3	X01	13	nvoEfficienc_XXX	SNVT_count_f
Inlet Temp	AI	13	AI_XXX[014]	4	3	X01	14	nvoInletTemp_XXX	SNVT_count_f
O2 Level	AI	14	AI_XXX[015]	4	3	X01	15	nvoO2Level_XXX	SNVT_count_f
CO2 Level	AI	15	AI_XXX[016]	4	3	X01	16	nvoCO2Level_XXX	SNVT_count_f
Hours Run	AI	16	AI_XXX[018]	4	3	X01	18	nvoHoursRun_XXX	SNVT_count_f
Burner Status	AI	17	AI_XXX[019]	4	3	X01	19	nvoBrnrStat_XXX	SNVT_count_f
Trim	AI	18	AI_XXX[020]	4	3	X01	20	nvoTrim_XXX	SNVT_count_f
Setpoint	AI	19	AI_XXX[021]	4	3	X01	21	nvoSetpoint_XXX	SNVT_count_f
Flue Temp	AI	20	AI_XXX[022]	4	3	X01	22	nvoFlueTemp_XXX	SNVT_count_f
Fault Number	AI	21	AI_XXX[023]	4	3	X01	23	nvoFltNumber_XXX	SNVT_count_f
Profile Number	AI	22	AI_XXX[027]	4	3	X01	27	nvoProNumber_XXX	SNVT_count_f
Modulation Rate	AI	23	AI_XXX[030]	4	3	X01	30	nvoModRateRd_XXX	SNVT_count_f
Gas Pressure	AI	24	AI_XXX[035]	4	3	X01	35	nvoGasPres_XXX	SNVT_count_f
Valve Prove Status	AI	25	AI_XXX[036]	4	3	X01	36	nvoValPrvSta_XXX	SNVT_count_f
Flame Signal	AI	26	AI_XXX[037]	4	3	X01	37	nvoFlameSig_XXX	SNVT_count_f
2nd Flame Signal	AI	27	AI_XXX[038]	4	3	X01	38	nvo2FlameSig_XXX	SNVT_count_f
Engineers Key 000	AI	28	AI_XXX[050]	4	3	X01	50	nvoEngKey000_XXX	SNVT_count_f
Engineers Key 001	AI	29	AI_XXX[051]	4	3	X01	51	nvoEngKey001_XXX	SNVT_count_f
Engineers Key 002	AI	30	AI_XXX[052]	4	3	X01	52	nvoEngKey002_XXX	SNVT_count_f
Engineers Key 003	AI	31	AI_XXX[053]	4	3	X01	53	nvoEngKey003_XXX	SNVT_count_f
Engineers Key 004	AI	32	AI_XXX[054]	4	3	X01	54	nvoEngKey004_XXX	SNVT_count_f
Engineers Key 005	AI	33	AI_XXX[055]	4	3	X01	55	nvoEngKey005_XXX	SNVT_count_f
Engineers Key 006	AI	34	AI_XXX[056]	4	3	X01	56	nvoEngKey006_XXX	SNVT_count_f
Engineers Key 007	AI	35	AI_XXX[057]	4	3	X01	57	nvoEngKey007_XXX	SNVT_count_f
Engineers Key 008	AI	36	AI_XXX[058]	4	3	X01	58	nvoEngKey008_XXX	SNVT_count_f
Engineers Key 009	AI	37	AI_XXX[059]	4	3	X01	59	nvoEngKey009_XXX	SNVT_count_f
Engineers Key 010	AI	38	AI_XXX[060]	4	3	X01	60	nvoEngKey010_XXX	SNVT_count_f
Engineers Key 011	AI	39	AI_XXX[061]	4	3	X01	61	nvoEngKey011_XXX	SNVT_count_f
Engineers Key 012	AI	40	AI_XXX[062]	4	3	X01	62	nvoEngKey012_XXX	SNVT_count_f
Engineers Key 013	AI	41	AI_XXX[063]	4	3	X01	63	nvoEngKey013_XXX	SNVT_count_f
Engineers Key 014	AI	42	AI_XXX[064]	4	3	X01	64	nvoEngKey014_XXX	SNVT_count_f
Engineers Key 015	AI	43	AI_XXX[065]	4	3	X01	65	nvoEngKey015_XXX	SNVT_count_f
Engineers Key 016	AI	44	AI_XXX[066]	4	3	X01	66	nvoEngKey016_XXX	SNVT_count_f
Engineers Key 017	AI	45	AI_XXX[067]	4	3	X01	67	nvoEngKey017_XXX	SNVT_count_f
Engineers Key 018	AI	46	AI_XXX[068]	4	3	X01	68	nvoEngKey018_XXX	SNVT_count_f
Engineers Key 019	AI	47	AI_XXX[069]	4	3	X01	69	nvoEngKey019_XXX	SNVT_count_f
Engineers Key 020	AI	48	AI_XXX[070]	4	3	X01	70	nvoEngKey020_XXX	SNVT_count_f
Engineers Key 021	AI	49	AI_XXX[071]	4	3	X01	71	nvoEngKey021_XXX	SNVT_count_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Engineers Key 022	AI	50	AI_XXX[072]	4	3	X01	72	nvoEngKey022_XXX	SNVT_count_f
Engineers Key 023	AI	51	AI_XXX[073]	4	3	X01	73	nvoEngKey023_XXX	SNVT_count_f
Engineers Key 024	AI	52	AI_XXX[074]	4	3	X01	74	nvoEngKey024_XXX	SNVT_count_f
Engineers Key 025	AI	53	AI_XXX[075]	4	3	X01	75	nvoEngKey025_XXX	SNVT_count_f
Engineers Key 026	AI	54	AI_XXX[076]	4	3	X01	76	nvoEngKey026_XXX	SNVT_count_f
Engineers Key 027	AI	55	AI_XXX[077]	4	3	X01	77	nvoEngKey027_XXX	SNVT_count_f
Engineers Key 028	AI	56	AI_XXX[078]	4	3	X01	78	nvoEngKey028_XXX	SNVT_count_f
Engineers Key 029	AI	57	AI_XXX[079]	4	3	X01	79	nvoEngKey029_XXX	SNVT_count_f
Engineers Key 030	AI	58	AI_XXX[080]	4	3	X01	80	nvoEngKey030_XXX	SNVT_count_f
Engineers Key 031	AI	59	AI_XXX[081]	4	3	X01	81	nvoEngKey031_XXX	SNVT_count_f
Engineers Key 032	AI	60	AI_XXX[082]	4	3	X01	82	nvoEngKey032_XXX	SNVT_count_f
Engineers Key 033	AI	61	AI_XXX[083]	4	3	X01	83	nvoEngKey033_XXX	SNVT_count_f
Engineers Key 034	AI	62	AI_XXX[084]	4	3	X01	84	nvoEngKey034_XXX	SNVT_count_f
Engineers Key 035	AI	63	AI_XXX[085]	4	3	X01	85	nvoEngKey035_XXX	SNVT_count_f
Engineers Key 036	AI	64	AI_XXX[086]	4	3	X01	86	nvoEngKey036_XXX	SNVT_count_f
Engineers Key 037	AI	65	AI_XXX[087]	4	3	X01	87	nvoEngKey037_XXX	SNVT_count_f
Engineers Key 038	AI	66	AI_XXX[088]	4	3	X01	88	nvoEngKey038_XXX	SNVT_count_f
Engineers Key 039	AI	67	AI_XXX[089]	4	3	X01	89	nvoEngKey039_XXX	SNVT_count_f
Engineers Key 040	AI	68	AI_XXX[090]	4	3	X01	90	nvoEngKey040_XXX	SNVT_count_f
Engineers Key 041	AI	69	AI_XXX[091]	4	3	X01	91	nvoEngKey041_XXX	SNVT_count_f
Engineers Key 042	AI	70	AI_XXX[092]	4	3	X01	92	nvoEngKey042_XXX	SNVT_count_f
Engineers Key 043	AI	71	AI_XXX[093]	4	3	X01	93	nvoEngKey043_XXX	SNVT_count_f
Engineers Key 044	AI	72	AI_XXX[094]	4	3	X01	94	nvoEngKey044_XXX	SNVT_count_f
Engineers Key 045	AI	73	AI_XXX[095]	4	3	X01	95	nvoEngKey045_XXX	SNVT_count_f
Engineers Key 046	AI	74	AI_XXX[096]	4	3	X01	96	nvoEngKey046_XXX	SNVT_count_f
Engineers Key 047	AI	75	AI_XXX[097]	4	3	X01	97	nvoEngKey047_XXX	SNVT_count_f
Engineers Key 048	AI	76	AI_XXX[098]	4	3	X01	98	nvoEngKey048_XXX	SNVT_count_f
Engineers Key 049	AI	77	AI_XXX[099]	4	3	X01	99	nvoEngKey049_XXX	SNVT_count_f
Engineers Key 050	AI	78	AI_XXX[100]	4	3	X01	100	nvoEngKey050_XXX	SNVT_count_f
Engineers Key 051	AI	79	AI_XXX[101]	4	3	X01	101	nvoEngKey051_XXX	SNVT_count_f
Engineers Key 052	AI	80	AI_XXX[102]	4	3	X01	102	nvoEngKey052_XXX	SNVT_count_f
Engineers Key 053	AI	81	AI_XXX[103]	4	3	X01	103	nvoEngKey053_XXX	SNVT_count_f
Engineers Key 054	AI	82	AI_XXX[104]	4	3	X01	104	nvoEngKey054_XXX	SNVT_count_f
Engineers Key 055	AI	83	AI_XXX[105]	4	3	X01	105	nvoEngKey055_XXX	SNVT_count_f
Engineers Key 056	AI	84	AI_XXX[106]	4	3	X01	106	nvoEngKey056_XXX	SNVT_count_f
Engineers Key 057	AI	85	AI_XXX[107]	4	3	X01	107	nvoEngKey057_XXX	SNVT_count_f
Engineers Key 058	AI	86	AI_XXX[108]	4	3	X01	108	nvoEngKey058_XXX	SNVT_count_f
Engineers Key 059	AI	87	AI_XXX[109]	4	3	X01	109	nvoEngKey059_XXX	SNVT_count_f
Engineers Key 060	AI	88	AI_XXX[110]	4	3	X01	110	nvoEngKey060_XXX	SNVT_count_f
Engineers Key 061	AI	89	AI_XXX[111]	4	3	X01	111	nvoEngKey061_XXX	SNVT_count_f
Engineers Key 062	AI	90	AI_XXX[112]	4	3	X01	112	nvoEngKey062_XXX	SNVT_count_f
Engineers Key 063	AI	91	AI_XXX[113]	4	3	X01	113	nvoEngKey063_XXX	SNVT_count_f
Engineers Key 064	AI	92	AI_XXX[114]	4	3	X01	114	nvoEngKey064_XXX	SNVT_count_f
Engineers Key 065	AI	93	AI_XXX[115]	4	3	X01	115	nvoEngKey065_XXX	SNVT_count_f
Engineers Key 066	AI	94	AI_XXX[116]	4	3	X01	116	nvoEngKey066_XXX	SNVT_count_f
Engineers Key 067	AI	95	AI_XXX[117]	4	3	X01	117	nvoEngKey067_XXX	SNVT_count_f
Engineers Key 068	AI	96	AI_XXX[118]	4	3	X01	118	nvoEngKey068_XXX	SNVT_count_f
Engineers Key 069	AI	97	AI_XXX[119]	4	3	X01	119	nvoEngKey069_XXX	SNVT_count_f
Engineers Key 070	AI	98	AI_XXX[120]	4	3	X01	120	nvoEngKey070_XXX	SNVT_count_f
Engineers Key 071	AI	99	AI_XXX[121]	4	3	X01	121	nvoEngKey071_XXX	SNVT_count_f
Engineers Key 072	AI	100	AI_XXX[122]	4	3	X01	122	nvoEngKey072_XXX	SNVT_count_f
Engineers Key 073	AI	101	AI_XXX[123]	4	3	X01	123	nvoEngKey073_XXX	SNVT_count_f
Engineers Key 074	AI	102	AI_XXX[124]	4	3	X01	124	nvoEngKey074_XXX	SNVT_count_f
Engineers Key 075	AI	103	AI_XXX[125]	4	3	X01	125	nvoEngKey075_XXX	SNVT_count_f
Engineers Key 076	AI	104	AI_XXX[126]	4	3	X01	126	nvoEngKey076_XXX	SNVT_count_f
Engineers Key 077	AI	105	AI_XXX[127]	4	3	X01	127	nvoEngKey077_XXX	SNVT_count_f
Engineers Key 078	AI	106	AI_XXX[128]	4	3	X01	128	nvoEngKey078_XXX	SNVT_count_f
Engineers Key 079	AI	107	AI_XXX[129]	4	3	X01	129	nvoEngKey079_XXX	SNVT_count_f
Engineers Key 080	AI	108	AI_XXX[130]	4	3	X01	130	nvoEngKey080_XXX	SNVT_count_f
Engineers Key 081	AI	109	AI_XXX[131]	4	3	X01	131	nvoEngKey081_XXX	SNVT_count_f
Engineers Key 082	AI	110	AI_XXX[132]	4	3	X01	132	nvoEngKey082_XXX	SNVT_count_f
Engineers Key 083	AI	111	AI_XXX[133]	4	3	X01	133	nvoEngKey083_XXX	SNVT_count_f
Engineers Key 084	AI	112	AI_XXX[134]	4	3	X01	134	nvoEngKey084_XXX	SNVT_count_f
Engineers Key 085	AI	113	AI_XXX[135]	4	3	X01	135	nvoEngKey085_XXX	SNVT_count_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Engineers Key 086	AI	114	AI_XXX[136]	4	3	X01	136	nvoEngKey086_XXX	SNVT_count_f
Engineers Key 087	AI	115	AI_XXX[137]	4	3	X01	137	nvoEngKey087_XXX	SNVT_count_f
Engineers Key 088	AI	116	AI_XXX[138]	4	3	X01	138	nvoEngKey088_XXX	SNVT_count_f
Engineers Key 089	AI	117	AI_XXX[139]	4	3	X01	139	nvoEngKey089_XXX	SNVT_count_f
Engineers Key 090	AI	118	AI_XXX[140]	4	3	X01	140	nvoEngKey090_XXX	SNVT_count_f
Engineers Key 091	AI	119	AI_XXX[141]	4	3	X01	141	nvoEngKey091_XXX	SNVT_count_f
Engineers Key 092	AI	120	AI_XXX[142]	4	3	X01	142	nvoEngKey092_XXX	SNVT_count_f
Engineers Key 093	AI	121	AI_XXX[143]	4	3	X01	143	nvoEngKey093_XXX	SNVT_count_f
Engineers Key 094	AI	122	AI_XXX[144]	4	3	X01	144	nvoEngKey094_XXX	SNVT_count_f
Engineers Key 095	AI	123	AI_XXX[145]	4	3	X01	145	nvoEngKey095_XXX	SNVT_count_f
Engineers Key 096	AI	124	AI_XXX[146]	4	3	X01	146	nvoEngKey096_XXX	SNVT_count_f
Engineers Key 097	AI	125	AI_XXX[147]	4	3	X01	147	nvoEngKey097_XXX	SNVT_count_f
Engineers Key 098	AI	126	AI_XXX[148]	4	3	X01	148	nvoEngKey098_XXX	SNVT_count_f
Engineers Key 099	AI	127	AI_XXX[149]	4	3	X01	149	nvoEngKey099_XXX	SNVT_count_f
Engineers Key 100	AI	128	AI_XXX[150]	4	3	X01	150	nvoEngKey100_XXX	SNVT_count_f
Engineers Key 101	AI	129	AI_XXX[151]	4	3	X01	151	nvoEngKey101_XXX	SNVT_count_f
Engineers Key 102	AI	130	AI_XXX[152]	4	3	X01	152	nvoEngKey102_XXX	SNVT_count_f
Engineers Key 103	AI	131	AI_XXX[153]	4	3	X01	153	nvoEngKey103_XXX	SNVT_count_f
Engineers Key 104	AI	132	AI_XXX[154]	4	3	X01	154	nvoEngKey104_XXX	SNVT_count_f
Engineers Key 105	AI	133	AI_XXX[155]	4	3	X01	155	nvoEngKey105_XXX	SNVT_count_f
Engineers Key 106	AI	134	AI_XXX[156]	4	3	X01	156	nvoEngKey106_XXX	SNVT_count_f
Engineers Key 107	AI	135	AI_XXX[157]	4	3	X01	157	nvoEngKey107_XXX	SNVT_count_f
Engineers Key 108	AI	136	AI_XXX[158]	4	3	X01	158	nvoEngKey108_XXX	SNVT_count_f
Engineers Key 109	AI	137	AI_XXX[159]	4	3	X01	159	nvoEngKey109_XXX	SNVT_count_f
Engineers Key 110	AI	138	AI_XXX[160]	4	3	X01	160	nvoEngKey110_XXX	SNVT_count_f
Engineers Key 111	AI	139	AI_XXX[161]	4	3	X01	161	nvoEngKey111_XXX	SNVT_count_f
Engineers Key 112	AI	140	AI_XXX[162]	4	3	X01	162	nvoEngKey112_XXX	SNVT_count_f
Engineers Key 113	AI	141	AI_XXX[163]	4	3	X01	163	nvoEngKey113_XXX	SNVT_count_f
Engineers Key 114	AI	142	AI_XXX[164]	4	3	X01	164	nvoEngKey114_XXX	SNVT_count_f
Engineers Key 115	AI	143	AI_XXX[165]	4	3	X01	165	nvoEngKey115_XXX	SNVT_count_f
Engineers Key 116	AI	144	AI_XXX[166]	4	3	X01	166	nvoEngKey116_XXX	SNVT_count_f
Engineers Key 117	AI	145	AI_XXX[167]	4	3	X01	167	nvoEngKey117_XXX	SNVT_count_f
Engineers Key 118	AI	146	AI_XXX[168]	4	3	X01	168	nvoEngKey118_XXX	SNVT_count_f
Engineers Key 119	AI	147	AI_XXX[169]	4	3	X01	169	nvoEngKey119_XXX	SNVT_count_f
Engineers Key 120	AI	148	AI_XXX[170]	4	3	X01	170	nvoEngKey120_XXX	SNVT_count_f
Engineers Key 121	AI	149	AI_XXX[171]	4	3	X01	171	nvoEngKey121_XXX	SNVT_count_f
Engineers Key 122	AI	150	AI_XXX[172]	4	3	X01	172	nvoEngKey122_XXX	SNVT_count_f
Engineers Key 123	AI	151	AI_XXX[173]	4	3	X01	173	nvoEngKey123_XXX	SNVT_count_f
Engineers Key 124	AI	152	AI_XXX[174]	4	3	X01	174	nvoEngKey124_XXX	SNVT_count_f
Engineers Key 125	AI	153	AI_XXX[175]	4	3	X01	175	nvoEngKey125_XXX	SNVT_count_f
Engineers Key 126	AI	154	AI_XXX[176]	4	3	X01	176	nvoEngKey126_XXX	SNVT_count_f
Engineers Key 127	AI	155	AI_XXX[177]	4	3	X01	177	nvoEngKey127_XXX	SNVT_count_f
Engineers Key 128	AI	156	AI_XXX[178]	4	3	X01	178	nvoEngKey128_XXX	SNVT_count_f
Engineers Key 129	AI	157	AI_XXX[179]	4	3	X01	179	nvoEngKey129_XXX	SNVT_count_f
Engineers Key 130	AI	158	AI_XXX[180]	4	3	X01	180	nvoEngKey130_XXX	SNVT_count_f
Engineers Key 131	AI	159	AI_XXX[181]	4	3	X01	181	nvoEngKey131_XXX	SNVT_count_f
Engineers Key 132	AI	160	AI_XXX[182]	4	3	X01	182	nvoEngKey132_XXX	SNVT_count_f
Engineers Key 133	AI	161	AI_XXX[183]	4	3	X01	183	nvoEngKey133_XXX	SNVT_count_f
Engineers Key 134	AI	162	AI_XXX[184]	4	3	X01	184	nvoEngKey134_XXX	SNVT_count_f
Engineers Key 135	AI	163	AI_XXX[185]	4	3	X01	185	nvoEngKey135_XXX	SNVT_count_f
Engineers Key 136	AI	164	AI_XXX[186]	4	3	X01	186	nvoEngKey136_XXX	SNVT_count_f
Engineers Key 137	AI	165	AI_XXX[187]	4	3	X01	187	nvoEngKey137_XXX	SNVT_count_f
Engineers Key 138	AI	166	AI_XXX[188]	4	3	X01	188	nvoEngKey138_XXX	SNVT_count_f
Engineers Key 139	AI	167	AI_XXX[189]	4	3	X01	189	nvoEngKey139_XXX	SNVT_count_f
Engineers Key 140	AI	168	AI_XXX[190]	4	3	X01	190	nvoEngKey140_XXX	SNVT_count_f
Engineers Key 141	AI	169	AI_XXX[191]	4	3	X01	191	nvoEngKey141_XXX	SNVT_count_f
Engineers Key 142	AI	170	AI_XXX[192]	4	3	X01	192	nvoEngKey142_XXX	SNVT_count_f
Engineers Key 143	AI	171	AI_XXX[193]	4	3	X01	193	nvoEngKey143_XXX	SNVT_count_f
Engineers Key 144	AI	172	AI_XXX[194]	4	3	X01	194	nvoEngKey144_XXX	SNVT_count_f
Engineers Key 145	AI	173	AI_XXX[195]	4	3	X01	195	nvoEngKey145_XXX	SNVT_count_f
Engineers Key 146	AI	174	AI_XXX[196]	4	3	X01	196	nvoEngKey146_XXX	SNVT_count_f
Engineers Key 147	AI	175	AI_XXX[197]	4	3	X01	197	nvoEngKey147_XXX	SNVT_count_f
Engineers Key 148	AI	176	AI_XXX[198]	4	3	X01	198	nvoEngKey148_XXX	SNVT_count_f
Engineers Key 149	AI	177	AI_XXX[199]	4	3	X01	199	nvoEngKey149_XXX	SNVT_count_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Engineers Key 150	AI	178	AI_XXX[200]	4	3	X01	200	nvoEngKey150_XXX	SNVT_count_f
Engineers Key 151	AI	179	AI_XXX[201]	4	3	X01	201	nvoEngKey151_XXX	SNVT_count_f
Engineers Key 152	AI	180	AI_XXX[202]	4	3	X01	202	nvoEngKey152_XXX	SNVT_count_f
Engineers Key 153	AI	181	AI_XXX[203]	4	3	X01	203	nvoEngKey153_XXX	SNVT_count_f
Engineers Key 154	AI	182	AI_XXX[204]	4	3	X01	204	nvoEngKey154_XXX	SNVT_count_f
Engineers Key 155	AI	183	AI_XXX[205]	4	3	X01	205	nvoEngKey155_XXX	SNVT_count_f
Engineers Key 156	AI	184	AI_XXX[206]	4	3	X01	206	nvoEngKey156_XXX	SNVT_count_f
Engineers Key 157	AI	185	AI_XXX[207]	4	3	X01	207	nvoEngKey157_XXX	SNVT_count_f
Engineers Key 158	AI	186	AI_XXX[208]	4	3	X01	208	nvoEngKey158_XXX	SNVT_count_f
Engineers Key 159	AI	187	AI_XXX[209]	4	3	X01	209	nvoEngKey159_XXX	SNVT_count_f
Engineers Key 160	AI	188	AI_XXX[210]	4	3	X01	210	nvoEngKey160_XXX	SNVT_count_f
Engineers Key 161	AI	189	AI_XXX[211]	4	3	X01	211	nvoEngKey161_XXX	SNVT_count_f
Engineers Key 162	AI	190	AI_XXX[212]	4	3	X01	212	nvoEngKey162_XXX	SNVT_count_f
Engineers Key 163	AI	191	AI_XXX[213]	4	3	X01	213	nvoEngKey163_XXX	SNVT_count_f
Engineers Key 164	AI	192	AI_XXX[214]	4	3	X01	214	nvoEngKey164_XXX	SNVT_count_f
Engineers Key 165	AI	193	AI_XXX[215]	4	3	X01	215	nvoEngKey165_XXX	SNVT_count_f
Engineers Key 166	AI	194	AI_XXX[216]	4	3	X01	216	nvoEngKey166_XXX	SNVT_count_f
Engineers Key 167	AI	195	AI_XXX[217]	4	3	X01	217	nvoEngKey167_XXX	SNVT_count_f
Engineers Key 168	AI	196	AI_XXX[218]	4	3	X01	218	nvoEngKey168_XXX	SNVT_count_f
Engineers Key 169	AI	197	AI_XXX[219]	4	3	X01	219	nvoEngKey169_XXX	SNVT_count_f
Engineers Key 170	AI	198	AI_XXX[220]	4	3	X01	220	nvoEngKey170_XXX	SNVT_count_f
Engineers Key 171	AI	199	AI_XXX[221]	4	3	X01	221	nvoEngKey171_XXX	SNVT_count_f
Engineers Key 172	AI	200	AI_XXX[222]	4	3	X01	222	nvoEngKey172_XXX	SNVT_count_f
Engineers Key 173	AI	201	AI_XXX[223]	4	3	X01	223	nvoEngKey173_XXX	SNVT_count_f
Engineers Key 174	AI	202	AI_XXX[224]	4	3	X01	224	nvoEngKey174_XXX	SNVT_count_f
Engineers Key 175	AI	203	AI_XXX[225]	4	3	X01	225	nvoEngKey175_XXX	SNVT_count_f
Engineers Key 176	AI	204	AI_XXX[226]	4	3	X01	226	nvoEngKey176_XXX	SNVT_count_f
Engineers Key 177	AI	205	AI_XXX[227]	4	3	X01	227	nvoEngKey177_XXX	SNVT_count_f
Engineers Key 178	AI	206	AI_XXX[228]	4	3	X01	228	nvoEngKey178_XXX	SNVT_count_f
Engineers Key 179	AI	207	AI_XXX[229]	4	3	X01	229	nvoEngKey179_XXX	SNVT_count_f
Engineers Key 180	AI	208	AI_XXX[230]	4	3	X01	230	nvoEngKey180_XXX	SNVT_count_f
Engineers Key 181	AI	209	AI_XXX[231]	4	3	X01	231	nvoEngKey181_XXX	SNVT_count_f
Engineers Key 182	AI	210	AI_XXX[232]	4	3	X01	232	nvoEngKey182_XXX	SNVT_count_f
Engineers Key 183	AI	211	AI_XXX[233]	4	3	X01	233	nvoEngKey183_XXX	SNVT_count_f
Engineers Key 184	AI	212	AI_XXX[234]	4	3	X01	234	nvoEngKey184_XXX	SNVT_count_f
Engineers Key 185	AI	213	AI_XXX[235]	4	3	X01	235	nvoEngKey185_XXX	SNVT_count_f
Engineers Key 186	AI	214	AI_XXX[236]	4	3	X01	236	nvoEngKey186_XXX	SNVT_count_f
Engineers Key 187	AI	215	AI_XXX[237]	4	3	X01	237	nvoEngKey187_XXX	SNVT_count_f
Engineers Key 188	AI	216	AI_XXX[238]	4	3	X01	238	nvoEngKey188_XXX	SNVT_count_f
Engineers Key 189	AI	217	AI_XXX[239]	4	3	X01	239	nvoEngKey189_XXX	SNVT_count_f
Engineers Key 190	AI	218	AI_XXX[240]	4	3	X01	240	nvoEngKey190_XXX	SNVT_count_f
Engineers Key 191	AI	219	AI_XXX[241]	4	3	X01	241	nvoEngKey191_XXX	SNVT_count_f
Engineers Key 192	AI	220	AI_XXX[242]	4	3	X01	242	nvoEngKey192_XXX	SNVT_count_f
Engineers Key 193	AI	221	AI_XXX[243]	4	3	X01	243	nvoEngKey193_XXX	SNVT_count_f
Engineers Key 194	AI	222	AI_XXX[244]	4	3	X01	244	nvoEngKey194_XXX	SNVT_count_f
Engineers Key 195	AI	223	AI_XXX[245]	4	3	X01	245	nvoEngKey195_XXX	SNVT_count_f
Engineers Key 196	AI	224	AI_XXX[246]	4	3	X01	246	nvoEngKey196_XXX	SNVT_count_f
Engineers Key 197	AI	225	AI_XXX[247]	4	3	X01	247	nvoEngKey197_XXX	SNVT_count_f
Engineers Key 198	AI	226	AI_XXX[248]	4	3	X01	248	nvoEngKey198_XXX	SNVT_count_f
Engineers Key 199	AI	227	AI_XXX[249]	4	3	X01	249	nvoEngKey199_XXX	SNVT_count_f
Fault Log Item 00 Fault Num	AI	1001	Log_XXX[000]	4	3	X02	0	nvoF00FltNum_XXX	SNVT_count_f
Fault Log Item 00 Condition	AI	1002	Log_XXX[001]	4	3	X02	1	nvoF00Cond_XXX	SNVT_count_f
Fault Log Item 00 Year	AI	1003	Log_XXX[002]	4	3	X02	2	nvoF00Year_XXX	SNVT_count_f
Fault Log Item 00 Month	AI	1004	Log_XXX[003]	4	3	X02	3	nvoF00Month_XXX	SNVT_count_f
Fault Log Item 00 Day	AI	1005	Log_XXX[004]	4	3	X02	4	nvoF00Day_XXX	SNVT_count_f
Fault Log Item 00 Hour	AI	1006	Log_XXX[005]	4	3	X02	5	nvoF00Hour_XXX	SNVT_count_f
Fault Log Item 00 Minute	AI	1007	Log_XXX[006]	4	3	X02	6	nvoF00Minute_XXX	SNVT_count_f
Fault Log Item 00 Subset	AI	1008	Log_XXX[007]	4	3	X02	7	nvoF00Subset_XXX	SNVT_count_f
Fault Log Item 01 Fault Num	AI	1009	Log_XXX[008]	4	3	X02	8	nvoF01FltNum_XXX	SNVT_count_f
Fault Log Item 01 Condition	AI	1010	Log_XXX[009]	4	3	X02	9	nvoF01Cond_XXX	SNVT_count_f
Fault Log Item 01 Year	AI	1011	Log_XXX[010]	4	3	X02	10	nvoF01Year_XXX	SNVT_count_f
Fault Log Item 01 Month	AI	1012	Log_XXX[011]	4	3	X02	11	nvoF01Month_XXX	SNVT_count_f
Fault Log Item 01 Day	AI	1013	Log_XXX[012]	4	3	X02	12	nvoF01Day_XXX	SNVT_count_f
Fault Log Item 01 Hour	AI	1014	Log_XXX[013]	4	3	X02	13	nvoF01Hour_XXX	SNVT_count_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Fault Log Item 01 Minute	AI	1015	Log_XXX[014]	4	3	X02	14	nvoF01Minute_XXX	SNVT_count_f
Fault Log Item 01 Subset	AI	1016	Log_XXX[015]	4	3	X02	15	nvoF01Subset_XXX	SNVT_count_f
Fault Log Item 02 Fault Num	AI	1017	Log_XXX[016]	4	3	X02	16	nvoF02FltNum_XXX	SNVT_count_f
Fault Log Item 02 Condition	AI	1018	Log_XXX[017]	4	3	X02	17	nvoF02Cond_XXX	SNVT_count_f
Fault Log Item 02 Year	AI	1019	Log_XXX[018]	4	3	X02	18	nvoF02Year_XXX	SNVT_count_f
Fault Log Item 02 Month	AI	1020	Log_XXX[019]	4	3	X02	19	nvoF02Month_XXX	SNVT_count_f
Fault Log Item 02 Day	AI	1021	Log_XXX[020]	4	3	X02	20	nvoF02Day_XXX	SNVT_count_f
Fault Log Item 02 Hour	AI	1022	Log_XXX[021]	4	3	X02	21	nvoF02Hour_XXX	SNVT_count_f
Fault Log Item 02 Minute	AI	1023	Log_XXX[022]	4	3	X02	22	nvoF02Minute_XXX	SNVT_count_f
Fault Log Item 02 Subset	AI	1024	Log_XXX[023]	4	3	X02	23	nvoF02Subset_XXX	SNVT_count_f
Fault Log Item 03 Fault Num	AI	1025	Log_XXX[024]	4	3	X02	24	nvoF03FltNum_XXX	SNVT_count_f
Fault Log Item 03 Condition	AI	1026	Log_XXX[025]	4	3	X02	25	nvoF03Cond_XXX	SNVT_count_f
Fault Log Item 03 Year	AI	1027	Log_XXX[026]	4	3	X02	26	nvoF03Year_XXX	SNVT_count_f
Fault Log Item 03 Month	AI	1028	Log_XXX[027]	4	3	X02	27	nvoF03Month_XXX	SNVT_count_f
Fault Log Item 03 Day	AI	1029	Log_XXX[028]	4	3	X02	28	nvoF03Day_XXX	SNVT_count_f
Fault Log Item 03 Hour	AI	1030	Log_XXX[029]	4	3	X02	29	nvoF03Hour_XXX	SNVT_count_f
Fault Log Item 03 Minute	AI	1031	Log_XXX[030]	4	3	X02	30	nvoF03Minute_XXX	SNVT_count_f
Fault Log Item 03 Subset	AI	1032	Log_XXX[031]	4	3	X02	31	nvoF03Subset_XXX	SNVT_count_f
Fault Log Item 04 Fault Num	AI	1033	Log_XXX[032]	4	3	X02	32	nvoF04FltNum_XXX	SNVT_count_f
Fault Log Item 04 Condition	AI	1034	Log_XXX[033]	4	3	X02	33	nvoF04Cond_XXX	SNVT_count_f
Fault Log Item 04 Year	AI	1035	Log_XXX[034]	4	3	X02	34	nvoF04Year_XXX	SNVT_count_f
Fault Log Item 04 Month	AI	1036	Log_XXX[035]	4	3	X02	35	nvoF04Month_XXX	SNVT_count_f
Fault Log Item 04 Day	AI	1037	Log_XXX[036]	4	3	X02	36	nvoF04Day_XXX	SNVT_count_f
Fault Log Item 04 Hour	AI	1038	Log_XXX[037]	4	3	X02	37	nvoF04Hour_XXX	SNVT_count_f
Fault Log Item 04 Minute	AI	1039	Log_XXX[038]	4	3	X02	38	nvoF04Minute_XXX	SNVT_count_f
Fault Log Item 04 Subset	AI	1040	Log_XXX[039]	4	3	X02	39	nvoF04Subset_XXX	SNVT_count_f
Fault Log Item 05 Fault Num	AI	1041	Log_XXX[040]	4	3	X02	40	nvoF05FltNum_XXX	SNVT_count_f
Fault Log Item 05 Condition	AI	1042	Log_XXX[041]	4	3	X02	41	nvoF05Cond_XXX	SNVT_count_f
Fault Log Item 05 Year	AI	1043	Log_XXX[042]	4	3	X02	42	nvoF05Year_XXX	SNVT_count_f
Fault Log Item 05 Month	AI	1044	Log_XXX[043]	4	3	X02	43	nvoF05Month_XXX	SNVT_count_f
Fault Log Item 05 Day	AI	1045	Log_XXX[044]	4	3	X02	44	nvoF05Day_XXX	SNVT_count_f
Fault Log Item 05 Hour	AI	1046	Log_XXX[045]	4	3	X02	45	nvoF05Hour_XXX	SNVT_count_f
Fault Log Item 05 Minute	AI	1047	Log_XXX[046]	4	3	X02	46	nvoF05Minute_XXX	SNVT_count_f
Fault Log Item 05 Subset	AI	1048	Log_XXX[047]	4	3	X02	47	nvoF05Subset_XXX	SNVT_count_f
Fault Log Item 06 Fault Num	AI	1049	Log_XXX[048]	4	3	X02	48	nvoF06FltNum_XXX	SNVT_count_f
Fault Log Item 06 Condition	AI	1050	Log_XXX[049]	4	3	X02	49	nvoF06Cond_XXX	SNVT_count_f
Fault Log Item 06 Year	AI	1051	Log_XXX[050]	4	3	X02	50	nvoF06Year_XXX	SNVT_count_f
Fault Log Item 06 Month	AI	1052	Log_XXX[051]	4	3	X02	51	nvoF06Month_XXX	SNVT_count_f
Fault Log Item 06 Day	AI	1053	Log_XXX[052]	4	3	X02	52	nvoF06Day_XXX	SNVT_count_f
Fault Log Item 06 Hour	AI	1054	Log_XXX[053]	4	3	X02	53	nvoF06Hour_XXX	SNVT_count_f
Fault Log Item 06 Minute	AI	1055	Log_XXX[054]	4	3	X02	54	nvoF06Minute_XXX	SNVT_count_f
Fault Log Item 06 Subset	AI	1056	Log_XXX[055]	4	3	X02	55	nvoF06Subset_XXX	SNVT_count_f
Fault Log Item 07 Fault Num	AI	1057	Log_XXX[056]	4	3	X02	56	nvoF07FltNum_XXX	SNVT_count_f
Fault Log Item 07 Condition	AI	1058	Log_XXX[057]	4	3	X02	57	nvoF07Cond_XXX	SNVT_count_f
Fault Log Item 07 Year	AI	1059	Log_XXX[058]	4	3	X02	58	nvoF07Year_XXX	SNVT_count_f
Fault Log Item 07 Month	AI	1060	Log_XXX[059]	4	3	X02	59	nvoF07Month_XXX	SNVT_count_f
Fault Log Item 07 Day	AI	1061	Log_XXX[060]	4	3	X02	60	nvoF07Day_XXX	SNVT_count_f
Fault Log Item 07 Hour	AI	1062	Log_XXX[061]	4	3	X02	61	nvoF07Hour_XXX	SNVT_count_f
Fault Log Item 07 Minute	AI	1063	Log_XXX[062]	4	3	X02	62	nvoF07Minute_XXX	SNVT_count_f
Fault Log Item 07 Subset	AI	1064	Log_XXX[063]	4	3	X02	63	nvoF07Subset_XXX	SNVT_count_f
Fault Log Item 08 Fault Num	AI	1065	Log_XXX[064]	4	3	X02	64	nvoF08FltNum_XXX	SNVT_count_f
Fault Log Item 08 Condition	AI	1066	Log_XXX[065]	4	3	X02	65	nvoF08Cond_XXX	SNVT_count_f
Fault Log Item 08 Year	AI	1067	Log_XXX[066]	4	3	X02	66	nvoF08Year_XXX	SNVT_count_f
Fault Log Item 08 Month	AI	1068	Log_XXX[067]	4	3	X02	67	nvoF08Month_XXX	SNVT_count_f
Fault Log Item 08 Day	AI	1069	Log_XXX[068]	4	3	X02	68	nvoF08Day_XXX	SNVT_count_f
Fault Log Item 08 Hour	AI	1070	Log_XXX[069]	4	3	X02	69	nvoF08Hour_XXX	SNVT_count_f
Fault Log Item 08 Minute	AI	1071	Log_XXX[070]	4	3	X02	70	nvoF08Minute_XXX	SNVT_count_f
Fault Log Item 08 Subset	AI	1072	Log_XXX[071]	4	3	X02	71	nvoF08Subset_XXX	SNVT_count_f
Fault Log Item 09 Fault Num	AI	1073	Log_XXX[072]	4	3	X02	72	nvoF09FltNum_XXX	SNVT_count_f
Fault Log Item 09 Condition	AI	1074	Log_XXX[073]	4	3	X02	73	nvoF09Cond_XXX	SNVT_count_f
Fault Log Item 09 Year	AI	1075	Log_XXX[074]	4	3	X02	74	nvoF09Year_XXX	SNVT_count_f
Fault Log Item 09 Month	AI	1076	Log_XXX[075]	4	3	X02	75	nvoF09Month_XXX	SNVT_count_f
Fault Log Item 09 Day	AI	1077	Log_XXX[076]	4	3	X02	76	nvoF09Day_XXX	SNVT_count_f
Fault Log Item 09 Hour	AI	1078	Log_XXX[077]	4	3	X02	77	nvoF09Hour_XXX	SNVT_count_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Fault Log Item 09 Minute	AI	1079	Log_XXX[078]	4	3	X02	78	nvoF09Minute_XXX	SNVT_count_f
Fault Log Item 09 Subset	AI	1080	Log_XXX[079]	4	3	X02	79	nvoF09Subset_XXX	SNVT_count_f
Fault Log Item 10 Fault Num	AI	1081	Log_XXX[080]	4	3	X02	80	nvoF10FltNum_XXX	SNVT_count_f
Fault Log Item 10 Condition	AI	1082	Log_XXX[081]	4	3	X02	81	nvoF10Cond_XXX	SNVT_count_f
Fault Log Item 10 Year	AI	1083	Log_XXX[082]	4	3	X02	82	nvoF10Year_XXX	SNVT_count_f
Fault Log Item 10 Month	AI	1084	Log_XXX[083]	4	3	X02	83	nvoF10Month_XXX	SNVT_count_f
Fault Log Item 10 Day	AI	1085	Log_XXX[084]	4	3	X02	84	nvoF10Day_XXX	SNVT_count_f
Fault Log Item 10 Hour	AI	1086	Log_XXX[085]	4	3	X02	85	nvoF10Hour_XXX	SNVT_count_f
Fault Log Item 10 Minute	AI	1087	Log_XXX[086]	4	3	X02	86	nvoF10Minute_XXX	SNVT_count_f
Fault Log Item 10 Subset	AI	1088	Log_XXX[087]	4	3	X02	87	nvoF10Subset_XXX	SNVT_count_f
Fault Log Item 11 Fault Num	AI	1089	Log_XXX[088]	4	3	X02	88	nvoF11FltNum_XXX	SNVT_count_f
Fault Log Item 11 Condition	AI	1090	Log_XXX[089]	4	3	X02	89	nvoF11Cond_XXX	SNVT_count_f
Fault Log Item 11 Year	AI	1091	Log_XXX[090]	4	3	X02	90	nvoF11Year_XXX	SNVT_count_f
Fault Log Item 11 Month	AI	1092	Log_XXX[091]	4	3	X02	91	nvoF11Month_XXX	SNVT_count_f
Fault Log Item 11 Day	AI	1093	Log_XXX[092]	4	3	X02	92	nvoF11Day_XXX	SNVT_count_f
Fault Log Item 11 Hour	AI	1094	Log_XXX[093]	4	3	X02	93	nvoF11Hour_XXX	SNVT_count_f
Fault Log Item 11 Minute	AI	1095	Log_XXX[094]	4	3	X02	94	nvoF11Minute_XXX	SNVT_count_f
Fault Log Item 11 Subset	AI	1096	Log_XXX[095]	4	3	X02	95	nvoF11Subset_XXX	SNVT_count_f
Fault Log Item 12 Fault Num	AI	1097	Log_XXX[096]	4	3	X02	96	nvoF12FltNum_XXX	SNVT_count_f
Fault Log Item 12 Condition	AI	1098	Log_XXX[097]	4	3	X02	97	nvoF12Cond_XXX	SNVT_count_f
Fault Log Item 12 Year	AI	1099	Log_XXX[098]	4	3	X02	98	nvoF12Year_XXX	SNVT_count_f
Fault Log Item 12 Month	AI	1100	Log_XXX[099]	4	3	X02	99	nvoF12Month_XXX	SNVT_count_f
Fault Log Item 12 Day	AI	1101	Log_XXX[100]	4	3	X02	100	nvoF12Day_XXX	SNVT_count_f
Fault Log Item 12 Hour	AI	1102	Log_XXX[101]	4	3	X02	101	nvoF12Hour_XXX	SNVT_count_f
Fault Log Item 12 Minute	AI	1103	Log_XXX[102]	4	3	X02	102	nvoF12Minute_XXX	SNVT_count_f
Fault Log Item 12 Subset	AI	1104	Log_XXX[103]	4	3	X02	103	nvoF12Subset_XXX	SNVT_count_f
Fault Log Item 13 Fault Num	AI	1105	Log_XXX[104]	4	3	X02	104	nvoF13FltNum_XXX	SNVT_count_f
Fault Log Item 13 Condition	AI	1106	Log_XXX[105]	4	3	X02	105	nvoF13Cond_XXX	SNVT_count_f
Fault Log Item 13 Year	AI	1107	Log_XXX[106]	4	3	X02	106	nvoF13Year_XXX	SNVT_count_f
Fault Log Item 13 Month	AI	1108	Log_XXX[107]	4	3	X02	107	nvoF13Month_XXX	SNVT_count_f
Fault Log Item 13 Day	AI	1109	Log_XXX[108]	4	3	X02	108	nvoF13Day_XXX	SNVT_count_f
Fault Log Item 13 Hour	AI	1110	Log_XXX[109]	4	3	X02	109	nvoF13Hour_XXX	SNVT_count_f
Fault Log Item 13 Minute	AI	1111	Log_XXX[110]	4	3	X02	110	nvoF13Minute_XXX	SNVT_count_f
Fault Log Item 13 Subset	AI	1112	Log_XXX[111]	4	3	X02	111	nvoF13Subset_XXX	SNVT_count_f
Fault Log Item 14 Fault Num	AI	1113	Log_XXX[112]	4	3	X02	112	nvoF14FltNum_XXX	SNVT_count_f
Fault Log Item 14 Condition	AI	1114	Log_XXX[113]	4	3	X02	113	nvoF14Cond_XXX	SNVT_count_f
Fault Log Item 14 Year	AI	1115	Log_XXX[114]	4	3	X02	114	nvoF14Year_XXX	SNVT_count_f
Fault Log Item 14 Month	AI	1116	Log_XXX[115]	4	3	X02	115	nvoF14Month_XXX	SNVT_count_f
Fault Log Item 14 Day	AI	1117	Log_XXX[116]	4	3	X02	116	nvoF14Day_XXX	SNVT_count_f
Fault Log Item 14 Hour	AI	1118	Log_XXX[117]	4	3	X02	117	nvoF14Hour_XXX	SNVT_count_f
Fault Log Item 14 Minute	AI	1119	Log_XXX[118]	4	3	X02	118	nvoF14Minute_XXX	SNVT_count_f
Fault Log Item 14 Subset	AI	1120	Log_XXX[119]	4	3	X02	119	nvoF14Subset_XXX	SNVT_count_f
Fault Log Item 15 Fault Num	AI	1121	Log_XXX[120]	4	3	X02	120	nvoF15FltNum_XXX	SNVT_count_f
Fault Log Item 15 Condition	AI	1122	Log_XXX[121]	4	3	X02	121	nvoF15Cond_XXX	SNVT_count_f
Fault Log Item 15 Year	AI	1123	Log_XXX[122]	4	3	X02	122	nvoF15Year_XXX	SNVT_count_f
Fault Log Item 15 Month	AI	1124	Log_XXX[123]	4	3	X02	123	nvoF15Month_XXX	SNVT_count_f
Fault Log Item 15 Day	AI	1125	Log_XXX[124]	4	3	X02	124	nvoF15Day_XXX	SNVT_count_f
Fault Log Item 15 Hour	AI	1126	Log_XXX[125]	4	3	X02	125	nvoF15Hour_XXX	SNVT_count_f
Fault Log Item 15 Minute	AI	1127	Log_XXX[126]	4	3	X02	126	nvoF15Minute_XXX	SNVT_count_f
Fault Log Item 15 Subset	AI	1128	Log_XXX[127]	4	3	X02	127	nvoF15Subset_XXX	SNVT_count_f
Fault Log Item 16 Fault Num	AI	1129	Log_XXX[128]	4	3	X02	128	nvoF16FltNum_XXX	SNVT_count_f
Fault Log Item 16 Condition	AI	1130	Log_XXX[129]	4	3	X02	129	nvoF16Cond_XXX	SNVT_count_f
Fault Log Item 16 Year	AI	1131	Log_XXX[130]	4	3	X02	130	nvoF16Year_XXX	SNVT_count_f
Fault Log Item 16 Month	AI	1132	Log_XXX[131]	4	3	X02	131	nvoF16Month_XXX	SNVT_count_f
Fault Log Item 16 Day	AI	1133	Log_XXX[132]	4	3	X02	132	nvoF16Day_XXX	SNVT_count_f
Fault Log Item 16 Hour	AI	1134	Log_XXX[133]	4	3	X02	133	nvoF16Hour_XXX	SNVT_count_f
Fault Log Item 16 Minute	AI	1135	Log_XXX[134]	4	3	X02	134	nvoF16Minute_XXX	SNVT_count_f
Fault Log Item 16 Subset	AI	1136	Log_XXX[135]	4	3	X02	135	nvoF16Subset_XXX	SNVT_count_f
Fault Log Item 17 Fault Num	AI	1137	Log_XXX[136]	4	3	X02	136	nvoF17FltNum_XXX	SNVT_count_f
Fault Log Item 17 Condition	AI	1138	Log_XXX[137]	4	3	X02	137	nvoF17Cond_XXX	SNVT_count_f
Fault Log Item 17 Year	AI	1139	Log_XXX[138]	4	3	X02	138	nvoF17Year_XXX	SNVT_count_f
Fault Log Item 17 Month	AI	1140	Log_XXX[139]	4	3	X02	139	nvoF17Month_XXX	SNVT_count_f
Fault Log Item 17 Day	AI	1141	Log_XXX[140]	4	3	X02	140	nvoF17Day_XXX	SNVT_count_f
Fault Log Item 17 Hour	AI	1142	Log_XXX[141]	4	3	X02	141	nvoF17Hour_XXX	SNVT_count_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Fault Log Item 17 Minute	AI	1143	Log_XXX[142]	4	3	X02	142	nvoF17Minute_XXX	SNVT_count_f
Fault Log Item 17 Subset	AI	1144	Log_XXX[143]	4	3	X02	143	nvoF17Subset_XXX	SNVT_count_f
Fault Log Item 18 Fault Num	AI	1145	Log_XXX[144]	4	3	X02	144	nvoF18FltNum_XXX	SNVT_count_f
Fault Log Item 18 Condition	AI	1146	Log_XXX[145]	4	3	X02	145	nvoF18Cond_XXX	SNVT_count_f
Fault Log Item 18 Year	AI	1147	Log_XXX[146]	4	3	X02	146	nvoF18Year_XXX	SNVT_count_f
Fault Log Item 18 Month	AI	1148	Log_XXX[147]	4	3	X02	147	nvoF18Month_XXX	SNVT_count_f
Fault Log Item 18 Day	AI	1149	Log_XXX[148]	4	3	X02	148	nvoF18Day_XXX	SNVT_count_f
Fault Log Item 18 Hour	AI	1150	Log_XXX[149]	4	3	X02	149	nvoF18Hour_XXX	SNVT_count_f
Fault Log Item 18 Minute	AI	1151	Log_XXX[150]	4	3	X02	150	nvoF18Minute_XXX	SNVT_count_f
Fault Log Item 18 Subset	AI	1152	Log_XXX[151]	4	3	X02	151	nvoF18Subset_XXX	SNVT_count_f
Fault Log Item 19 Fault Num	AI	1153	Log_XXX[152]	4	3	X02	152	nvoF19FltNum_XXX	SNVT_count_f
Fault Log Item 19 Condition	AI	1154	Log_XXX[153]	4	3	X02	153	nvoF19Cond_XXX	SNVT_count_f
Fault Log Item 19 Year	AI	1155	Log_XXX[154]	4	3	X02	154	nvoF19Year_XXX	SNVT_count_f
Fault Log Item 19 Month	AI	1156	Log_XXX[155]	4	3	X02	155	nvoF19Month_XXX	SNVT_count_f
Fault Log Item 19 Day	AI	1157	Log_XXX[156]	4	3	X02	156	nvoF19Day_XXX	SNVT_count_f
Fault Log Item 19 Hour	AI	1158	Log_XXX[157]	4	3	X02	157	nvoF19Hour_XXX	SNVT_count_f
Fault Log Item 19 Minute	AI	1159	Log_XXX[158]	4	3	X02	158	nvoF19Minute_XXX	SNVT_count_f
Fault Log Item 19 Subset	AI	1160	Log_XXX[159]	4	3	X02	159	nvoF19Subset_XXX	SNVT_count_f
Fault Log Item 20 Fault Num	AI	1161	Log_XXX[160]	4	3	X02	160	nvoF20FltNum_XXX	SNVT_count_f
Fault Log Item 20 Condition	AI	1162	Log_XXX[161]	4	3	X02	161	nvoF20Cond_XXX	SNVT_count_f
Fault Log Item 20 Year	AI	1163	Log_XXX[162]	4	3	X02	162	nvoF20Year_XXX	SNVT_count_f
Fault Log Item 20 Month	AI	1164	Log_XXX[163]	4	3	X02	163	nvoF20Month_XXX	SNVT_count_f
Fault Log Item 20 Day	AI	1165	Log_XXX[164]	4	3	X02	164	nvoF20Day_XXX	SNVT_count_f
Fault Log Item 20 Hour	AI	1166	Log_XXX[165]	4	3	X02	165	nvoF20Hour_XXX	SNVT_count_f
Fault Log Item 20 Minute	AI	1167	Log_XXX[166]	4	3	X02	166	nvoF20Minute_XXX	SNVT_count_f
Fault Log Item 20 Subset	AI	1168	Log_XXX[167]	4	3	X02	167	nvoF20Subset_XXX	SNVT_count_f
Fault Log Item 21 Fault Num	AI	1169	Log_XXX[168]	4	3	X02	168	nvoF21FltNum_XXX	SNVT_count_f
Fault Log Item 21 Condition	AI	1170	Log_XXX[169]	4	3	X02	169	nvoF21Cond_XXX	SNVT_count_f
Fault Log Item 21 Year	AI	1171	Log_XXX[170]	4	3	X02	170	nvoF21Year_XXX	SNVT_count_f
Fault Log Item 21 Month	AI	1172	Log_XXX[171]	4	3	X02	171	nvoF21Month_XXX	SNVT_count_f
Fault Log Item 21 Day	AI	1173	Log_XXX[172]	4	3	X02	172	nvoF21Day_XXX	SNVT_count_f
Fault Log Item 21 Hour	AI	1174	Log_XXX[173]	4	3	X02	173	nvoF21Hour_XXX	SNVT_count_f
Fault Log Item 21 Minute	AI	1175	Log_XXX[174]	4	3	X02	174	nvoF21Minute_XXX	SNVT_count_f
Fault Log Item 21 Subset	AI	1176	Log_XXX[175]	4	3	X02	175	nvoF21Subset_XXX	SNVT_count_f
Fault Log Item 22 Fault Num	AI	1177	Log_XXX[176]	4	3	X02	176	nvoF22FltNum_XXX	SNVT_count_f
Fault Log Item 22 Condition	AI	1178	Log_XXX[177]	4	3	X02	177	nvoF22Cond_XXX	SNVT_count_f
Fault Log Item 22 Year	AI	1179	Log_XXX[178]	4	3	X02	178	nvoF22Year_XXX	SNVT_count_f
Fault Log Item 22 Month	AI	1180	Log_XXX[179]	4	3	X02	179	nvoF22Month_XXX	SNVT_count_f
Fault Log Item 22 Day	AI	1181	Log_XXX[180]	4	3	X02	180	nvoF22Day_XXX	SNVT_count_f
Fault Log Item 22 Hour	AI	1182	Log_XXX[181]	4	3	X02	181	nvoF22Hour_XXX	SNVT_count_f
Fault Log Item 22 Minute	AI	1183	Log_XXX[182]	4	3	X02	182	nvoF22Minute_XXX	SNVT_count_f
Fault Log Item 22 Subset	AI	1184	Log_XXX[183]	4	3	X02	183	nvoF22Subset_XXX	SNVT_count_f
Fault Log Item 23 Fault Num	AI	1185	Log_XXX[184]	4	3	X02	184	nvoF23FltNum_XXX	SNVT_count_f
Fault Log Item 23 Condition	AI	1186	Log_XXX[185]	4	3	X02	185	nvoF23Cond_XXX	SNVT_count_f
Fault Log Item 23 Year	AI	1187	Log_XXX[186]	4	3	X02	186	nvoF23Year_XXX	SNVT_count_f
Fault Log Item 23 Month	AI	1188	Log_XXX[187]	4	3	X02	187	nvoF23Month_XXX	SNVT_count_f
Fault Log Item 23 Day	AI	1189	Log_XXX[188]	4	3	X02	188	nvoF23Day_XXX	SNVT_count_f
Fault Log Item 23 Hour	AI	1190	Log_XXX[189]	4	3	X02	189	nvoF23Hour_XXX	SNVT_count_f
Fault Log Item 23 Minute	AI	1191	Log_XXX[190]	4	3	X02	190	nvoF23Minute_XXX	SNVT_count_f
Fault Log Item 23 Subset	AI	1192	Log_XXX[191]	4	3	X02	191	nvoF23Subset_XXX	SNVT_count_f
SP 1 Ctrl Value	AV	1	Scl_XXX[000]	4	3	X03	0	nvi/nvoSP1CtrlVl_XXX	SNVT_count_f
SP 2 Ctrl Value	AV	2	Scl_XXX[001]	4	3	X03	1	nvi/nvoSP2CtrlVl_XXX	SNVT_count_f
SP 1 Low Ctrl Limit	AV	3	Scl_XXX[002]	4	3	X03	2	nvi/nvoSP1LoCtLm_XXX	SNVT_count_f
SP 2 Low Ctrl Limit	AV	4	Scl_XXX[003]	4	3	X03	3	nvi/nvoSP2LoCtLm_XXX	SNVT_count_f
SP 1 High Ctrl Limit	AV	5	Scl_XXX[004]	4	3	X03	4	nvi/nvoSP1HiCtLm_XXX	SNVT_count_f
SP 2 High Ctrl Limit	AV	6	Scl_XXX[005]	4	3	X03	5	nvi/nvoSP2HiCtLm_XXX	SNVT_count_f
Modulation Rate Cmd	AV	7	Scl_XXX[006]	4	3	X03	6	nvi/nvoModRate_XXX	SNVT_count_f

Appendix D.5 E110 Modbus RTU Mappings to Field Protocols

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
STATUS	AV	1	U16_XXX[000]	4	3	X01	0	nvoStatus_XXX	SNVT_count_f
MSGN	AV	2	U16_XXX[001]	4	3	X01	1	nvoMsgn_XXX	SNVT_count_f
GSTAT	AV	3	U16_XXX[002]	4	3	X01	2	nvoGstat_XXX	SNVT_count_f
TIMER	AV	4	U16_XXX[003]	4	3	X01	3	nvoTimer_XXX	SNVT_count_f
FLAME	AV	5	U16_XXX[004]	4	3	X01	4	nvoFlame_XXX	SNVT_count_f
LOGSTAT	AV	6	U16_XXX[005]	4	3	X01	5	nvoLogstat_XXX	SNVT_count_f
IN_Op Ctrl	BV	7	Bit_XXX[000]	4	3	X03	0	nvoIN_OpCtrl_XXX	SNVT_switch
IN_FVES or POC	BV	8	Bit_XXX[001]	4	3	X03	1	nvoIN_FVES_XXX	SNVT_switch
IN_Main Fuel	BV	9	Bit_XXX[002]	4	3	X03	2	nvoIN_MainFl_XXX	SNVT_switch
IN_High Fire	BV	10	Bit_XXX[003]	4	3	X03	3	nvoIN_HiFire_XXX	SNVT_switch
IN_Ref	BV	11	Bit_XXX[004]	4	3	X03	4	nvoIN_Ref_XXX	SNVT_switch
IN_Low Fire	BV	12	Bit_XXX[005]	4	3	X03	5	nvoIN_LoFire_XXX	SNVT_switch
IN_Ignition	BV	13	Bit_XXX[006]	4	3	X03	6	nvoIN_Ign_XXX	SNVT_switch
IN_Air Flow	BV	14	Bit_XXX[007]	4	3	X03	7	nvoIN_AirFlw_XXX	SNVT_switch
OUT_High Fire	BV	15	Bit_XXX[016]	4	3	X03	16	nvoOUT_HiFir_XXX	SNVT_switch
OUT_Alarm	BV	16	Bit_XXX[017]	4	3	X03	17	nvoOUT_Alarm_XXX	SNVT_switch
OUT_Main Fuel	BV	17	Bit_XXX[018]	4	3	X03	18	nvoOUT_MnFl_XXX	SNVT_switch
OUT_Pilot	BV	18	Bit_XXX[019]	4	3	X03	19	nvoOUT_Pilot_XXX	SNVT_switch
OUT_FVES	BV	19	Bit_XXX[020]	4	3	X03	20	nvoOUT_FVES_XXX	SNVT_switch
OUT_Ignition	BV	20	Bit_XXX[021]	4	3	X03	21	nvoOUT_Ign_XXX	SNVT_switch
OUT_Blower	BV	21	Bit_XXX[022]	4	3	X03	22	nvoOUT_Blwr_XXX	SNVT_switch
OUT_Auto	BV	22	Bit_XXX[023]	4	3	X03	23	nvoOUT_Auto_XXX	SNVT_switch
SYSMINS	AV	23	U32_XXX[000]	4	3	X02	0	nvoSysMins_XXX	SNVT_count_f
BNRMINS	AV	24	U32_XXX[001]	4	3	X02	1	nvoBnrMins_XXX	SNVT_count_f
CYCLES	AV	25	U32_XXX[002]	4	3	X02	2	nvoCycles_XXX	SNVT_count_f
LOCKOUT_COUNT	AV	26	U16_XXX[014]	4	3	X01	14	nvoLckotCount_XXX	SNVT_count_f
LOCKOUT_HISTORY_1	AV	27	U16_XXX[015]	4	3	X01	15	nvoLckotHst1_XXX	SNVT_count_f
LOCKOUT_HISTORY_2	AV	28	U16_XXX[016]	4	3	X01	16	nvoLckotHst2_XXX	SNVT_count_f
LOCKOUT_HISTORY_3	AV	29	U16_XXX[017]	4	3	X01	17	nvoLckotHst3_XXX	SNVT_count_f
LOCKOUT_HISTORY_4	AV	30	U16_XXX[018]	4	3	X01	18	nvoLckotHst4_XXX	SNVT_count_f
LOCKOUT_HISTORY_5	AV	31	U16_XXX[019]	4	3	X01	19	nvoLckotHst5_XXX	SNVT_count_f
LOCKOUT_HISTORY_6	AV	32	U16_XXX[020]	4	3	X01	20	nvoLckotHst6_XXX	SNVT_count_f
DEVTYP	AV	33	U16_XXX[021]	4	3	X01	21	nvoDevTyp_XXX	SNVT_count_f
AMPTYP	AV	34	U16_XXX[022]	4	3	X01	22	nvoAmpTyp_XXX	SNVT_count_f
PTFI Flame Signal Average	AV	35	U16_XXX[023]	4	3	X01	23	nvoPTFISgAvg_XXX	SNVT_count_f
Auto Flame Signal Average	AV	36	U16_XXX[024]	4	3	X01	24	nvoAtFlSgAvg_XXX	SNVT_count_f
Rcnt_LCKOUT_MSG	AV	37	U16_XXX[025]	4	3	X01	25	nvoRcLckMsg_XXX	SNVT_count_f
Rcnt_LCKOUT_MOD	AV	38	U16_XXX[026]	4	3	X01	26	nvoRcLckMod_XXX	SNVT_count_f
Rcnt_LCKOUT_BHRS	AV	39	U32_XXX[003]	4	3	X02	3	nvoRcLckBhrs_XXX	SNVT_count_f
Rcnt_LCKOUT_BCYC	AV	40	U32_XXX[004]	4	3	X02	4	nvoRcLckBcyc_XXX	SNVT_count_f
02nd_LCKOUT_MSG	AV	41	U16_XXX[031]	4	3	X01	31	nvo2LckMsg_XXX	SNVT_count_f
02nd_LCKOUT_MOD	AV	42	U16_XXX[032]	4	3	X01	32	nvo2LckMod_XXX	SNVT_count_f
02nd_LCKOUT_BHRS	AV	43	U32_XXX[005]	4	3	X02	5	nvo2LckBhrs_XXX	SNVT_count_f
02nd_LCKOUT_BCYC	AV	44	U32_XXX[006]	4	3	X02	6	nvo2LckBcyc_XXX	SNVT_count_f
03rd_LCKOUT_MSG	AV	45	U16_XXX[037]	4	3	X01	37	nvo3LckMsg_XXX	SNVT_count_f
03rd_LCKOUT_MOD	AV	46	U16_XXX[038]	4	3	X01	38	nvo3LckMod_XXX	SNVT_count_f
03rd_LCKOUT_BHRS	AV	47	U32_XXX[007]	4	3	X02	7	nvo3LckBhrs_XXX	SNVT_count_f
03rd_LCKOUT_BCYC	AV	48	U32_XXX[008]	4	3	X02	8	nvo3LckBcyc_XXX	SNVT_count_f
04th_LCKOUT_MSG	AV	49	U16_XXX[043]	4	3	X01	43	nvo4LckMsg_XXX	SNVT_count_f
04th_LCKOUT_MOD	AV	50	U16_XXX[044]	4	3	X01	44	nvo4LckMod_XXX	SNVT_count_f
04th_LCKOUT_BHRS	AV	51	U32_XXX[009]	4	3	X02	9	nvo4LckBhrs_XXX	SNVT_count_f
04th_LCKOUT_BCYC	AV	52	U32_XXX[010]	4	3	X02	10	nvo4LckBcyc_XXX	SNVT_count_f
05th_LCKOUT_MSG	AV	53	U16_XXX[049]	4	3	X01	49	nvo5LckMsg_XXX	SNVT_count_f
05th_LCKOUT_MOD	AV	54	U16_XXX[050]	4	3	X01	50	nvo5LckMod_XXX	SNVT_count_f
05th_LCKOUT_BHRS	AV	55	U32_XXX[011]	4	3	X02	11	nvo5LckBhrs_XXX	SNVT_count_f
05th_LCKOUT_BCYC	AV	56	U32_XXX[012]	4	3	X02	12	nvo5LckBcyc_XXX	SNVT_count_f
06th_LCKOUT_MSG	AV	57	U16_XXX[055]	4	3	X01	55	nvo6LckMsg_XXX	SNVT_count_f
06th_LCKOUT_MOD	AV	58	U16_XXX[056]	4	3	X01	56	nvo6LckMod_XXX	SNVT_count_f
06th_LCKOUT_BHRS	AV	59	U32_XXX[013]	4	3	X02	13	nvo6LckBhrs_XXX	SNVT_count_f
06th_LCKOUT_BCYC	AV	60	U32_XXX[014]	4	3	X02	14	nvo6LckBcyc_XXX	SNVT_count_f
Input Limits	AV	61	U16_XXX[061]	4	3	X01	61	nvoInputLim_XXX	SNVT_count_f
E300 Op Control	BV	62	Bit_XXX[032]	4	3	X03	32	nvoE3OpCtr_XXX	SNVT_switch

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
E300 Aux 1	BV	63	Bit_XXX[033]	4	3	X03	33	nvoE3Aux1_XXX	SNVT_switch
E300 Aux 2	BV	64	Bit_XXX[034]	4	3	X03	34	nvoE3Aux2_XXX	SNVT_switch
E300 High Water	BV	65	Bit_XXX[035]	4	3	X03	35	nvoE3HiWtr_XXX	SNVT_switch
E300 High Temp	BV	66	Bit_XXX[036]	4	3	X03	36	nvoE3HiTmp_XXX	SNVT_switch
E300 Aux 4	BV	67	Bit_XXX[037]	4	3	X03	37	nvoE3Aux4_XXX	SNVT_switch
E300 Aux 5	BV	68	Bit_XXX[038]	4	3	X03	38	nvoE3Aux5_XXX	SNVT_switch
E300 Aux 6	BV	69	Bit_XXX[039]	4	3	X03	39	nvoE3Aux6_XXX	SNVT_switch
E300 Low Water	BV	70	Bit_XXX[040]	4	3	X03	40	nvoE3LoWtr_XXX	SNVT_switch
E300 Gas Selected	BV	71	Bit_XXX[041]	4	3	X03	41	nvoE3GasSl_XXX	SNVT_switch
E300 Oil Selected	BV	72	Bit_XXX[042]	4	3	X03	42	nvoE3OilSl_XXX	SNVT_switch
E300 High Gas Pressure	BV	73	Bit_XXX[043]	4	3	X03	43	nvoE3HiGsPrs_XXX	SNVT_switch
E300 Low Oil Pressure	BV	74	Bit_XXX[044]	4	3	X03	44	nvoE3LoOlPrs_XXX	SNVT_switch
E300 Low Oil Temp	BV	75	Bit_XXX[045]	4	3	X03	45	nvoE3LoOlTmp_XXX	SNVT_switch
E300 LowGasPrs Low Atm Media	BV	76	Bit_XXX[046]	4	3	X03	46	nvoE3LoGsPLA_XXX	SNVT_switch
E300 High Pressure	BV	77	Bit_XXX[047]	4	3	X03	47	nvoE3HiPrs_XXX	SNVT_switch

Appendix D.6 MicroM Modbus RTU Mappings to Field Protocols

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
STATUS	AV	1	U16_XXX[000]	4	3	X01	0	nvoStatus_XXX	SNVT_count_f
MSGN	AV	2	U16_XXX[001]	4	3	X01	1	nvoMsgn_XXX	SNVT_count_f
GSTAT	AV	3	U16_XXX[002]	4	3	X01	2	nvoGstat_XXX	SNVT_count_f
TIMER	AV	4	U16_XXX[003]	4	3	X01	3	nvoTimer_XXX	SNVT_count_f
FLAME	AV	5	U16_XXX[004]	4	3	X01	4	nvoFlame_XXX	SNVT_count_f
LOGSTAT	AV	6	U16_XXX[005]	4	3	X01	5	nvoLogstat_XXX	SNVT_count_f
IN_Ref	BV	7	Bit_XXX[000]	4	3	X03	0	nvoIN_Ref_XXX	SNVT_switch
IN_Op Cntrl	BV	8	Bit_XXX[001]	4	3	X03	1	nvoIN_OpCntl_XXX	SNVT_switch
IN_Air Flow	BV	9	Bit_XXX[002]	4	3	X03	2	nvoIN_AirFlw_XXX	SNVT_switch
IN_Pilot	BV	10	Bit_XXX[003]	4	3	X03	3	nvoIN_Pilot_XXX	SNVT_switch
IN_Rf	BV	11	Bit_XXX[004]	4	3	X03	4	nvoIN_Rf_XXX	SNVT_switch
IN_Mode	BV	12	Bit_XXX[005]	4	3	X03	5	nvoIN_Mode_XXX	SNVT_switch
IN_Scrl	BV	13	Bit_XXX[006]	4	3	X03	6	nvoIN_Scrl_XXX	SNVT_switch
IN_Reset	BV	14	Bit_XXX[007]	4	3	X03	7	nvoIN_Reset_XXX	SNVT_switch
OUT_MTFI	BV	15	Bit_XXX[016]	4	3	X03	16	nvoOUT_MTFI_XXX	SNVT_switch
OUT_Main Fuel	BV	16	Bit_XXX[017]	4	3	X03	17	nvoOUT_MnFl_XXX	SNVT_switch
OUT_Pilot	BV	17	Bit_XXX[018]	4	3	X03	18	nvoOUT_Pilot_XXX	SNVT_switch
OUT_Alarm	BV	18	Bit_XXX[019]	4	3	X03	19	nvoOUT_Alarm_XXX	SNVT_switch
OUT_Blower	BV	19	Bit_XXX[020]	4	3	X03	20	nvoOUT_Blwr_XXX	SNVT_switch
SYSMINS	AV	20	U32_XXX[000]	4	3	X02	0	nvoSysMins_XXX	SNVT_count_f
BNRMINS	AV	21	U32_XXX[001]	4	3	X02	1	nvoBnrMins_XXX	SNVT_count_f
CYCLES	AV	22	U32_XXX[002]	4	3	X02	2	nvoCycles_XXX	SNVT_count_f
LOCKOUT_COUNT	AV	23	U16_XXX[014]	4	3	X01	14	nvoLckotCount_XXX	SNVT_count_f
LOCKOUT_HISTORY_1	AV	24	U16_XXX[015]	4	3	X01	15	nvoLckotHst1_XXX	SNVT_count_f
LOCKOUT_HISTORY_2	AV	25	U16_XXX[016]	4	3	X01	16	nvoLckotHst2_XXX	SNVT_count_f
LOCKOUT_HISTORY_3	AV	26	U16_XXX[017]	4	3	X01	17	nvoLckotHst3_XXX	SNVT_count_f
LOCKOUT_HISTORY_4	AV	27	U16_XXX[018]	4	3	X01	18	nvoLckotHst4_XXX	SNVT_count_f
LOCKOUT_HISTORY_5	AV	28	U16_XXX[019]	4	3	X01	19	nvoLckotHst5_XXX	SNVT_count_f
LOCKOUT_HISTORY_6	AV	29	U16_XXX[020]	4	3	X01	20	nvoLckotHst6_XXX	SNVT_count_f
DEVTYP	AV	30	U16_XXX[021]	4	3	X01	21	nvoDevTyp_XXX	SNVT_count_f
AMPTYP	AV	31	U16_XXX[022]	4	3	X01	22	nvoAmpTyp_XXX	SNVT_count_f
PROGTYP	AV	32	U16_XXX[023]	4	3	X01	23	nvoProgTyp_XXX	SNVT_count_f

Appendix D.7 BurnerPRO_Gen_3 Modbus RTU Mappings to Field Protocols

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Burner On/Off	BV	1	U16_XXX[000]	4	3	X01	0	nvi/nvoBrnOnOff_XXX	SNVT_switch
Lockout Reset	BV	2	U16_XXX[001]	4	3	X01	1	nvi/nvoLckotRes_XXX	SNVT_switch
Product Id	AI	3	U16_XXX[002]	4	3	X01	2	nvoProdId_XXX	SNVT_count_f
Hardware Id	AI	4	U16_XXX[003]	4	3	X01	3	nvoHwId_XXX	SNVT_count_f
Firmware Revision	AI	5	U16_XXX[004]	4	3	X01	4	nvoFwRev_XXX	SNVT_count_f
Burner State	AI	6	U16_XXX[005]	4	3	X01	5	nvoBrnState_XXX	SNVT_count_f
Actuator Position	AI	7	U16_XXX[006]	4	3	X01	6	nvoActPos_XXX	SNVT_count_f
Ignition	BI	8	U16_XXX[007]	4	3	X01	7	nvoIgnition_XXX	SNVT_switch
Pilot	BI	9	U16_XXX[008]	4	3	X01	8	nvoPilot_XXX	SNVT_switch
Main Fuel Valve 1 (MV1)	BI	10	U16_XXX[009]	4	3	X01	9	nvoMnFlVlv1_XXX	SNVT_switch
Main Fuel Valve 2 (MV2)	BI	11	U16_XXX[010]	4	3	X01	10	nvoMnFlVlv2_XXX	SNVT_switch
Auto	BI	12	U16_XXX[011]	4	3	X01	11	nvoAuto_XXX	SNVT_switch
Recycle Limit	BI	13	U16_XXX[012]	4	3	X01	12	nvoRecLim_XXX	SNVT_switch
POC	BI	14	U16_XXX[013]	4	3	X01	13	nvoPOC_XXX	SNVT_switch
CAST	BI	15	U16_XXX[014]	4	3	X01	14	nvoCAST_XXX	SNVT_switch
CAP	BI	16	U16_XXX[015]	4	3	X01	15	nvoCAP_XXX	SNVT_switch
Actuator Feedback	BI	17	U16_XXX[016]	4	3	X01	16	nvoActFdbk_XXX	SNVT_switch
Valve Proving States	AI	18	U16_XXX[017]	4	3	X01	17	nvoVlvPrvSt_XXX	SNVT_count_f
Valve Prove Test Counter	AI	19	U16_XXX[018]	4	3	X01	18	nvoVlvPrTsCt_XXX	SNVT_count_f
Actuator Feedback Counter	AI	20	U16_XXX[019]	4	3	X01	19	nvoActFdbkCt_XXX	SNVT_count_f
Cast Timer	AI	21	U16_XXX[020]	4	3	X01	20	nvoCastTmr_XXX	SNVT_count_f
Cap Timer	AI	22	U16_XXX[021]	4	3	X01	21	nvoCapTmr_XXX	SNVT_count_f
Poc Counter	AI	23	U16_XXX[022]	4	3	X01	22	nvoPOCCntr_XXX	SNVT_count_f
Pre-Purge Counter	AI	24	U16_XXX[023]	4	3	X01	23	nvoPrePrgCnt_XXX	SNVT_count_f
Post-Purge Counter	AI	25	U16_XXX[024]	4	3	X01	24	nvoPstPrgCnt_XXX	SNVT_count_f
Check Mode Timer	AI	26	U16_XXX[025]	4	3	X01	25	nvoChkMdeTmr_XXX	SNVT_count_f
Remote Reset Attempts	AI	27	U16_XXX[026]	4	3	X01	26	nvoRemResAtt_XXX	SNVT_count_f
Reset Inhibit Timer	AI	28	U16_XXX[027]	4	3	X01	27	nvoResInhTmr_XXX	SNVT_count_f
Burner Minutes	AI	29	U16_XXX[028]	4	3	X01	28	nvoBrnMin_XXX	SNVT_count_f
Burner Seconds	AI	30	U16_XXX[029]	4	3	X01	29	nvoBrnSec_XXX	SNVT_count_f
System Minutes	AI	31	U16_XXX[030]	4	3	X01	30	nvoSysMin_XXX	SNVT_count_f
System Seconds	AI	32	U16_XXX[031]	4	3	X01	31	nvoSysSec_XXX	SNVT_count_f
Operating Frequency (MCU 1)	AI	33	U16_XXX[032]	4	3	X01	32	nvoOpFrqMCU1_XXX	SNVT_count_f
Operating Frequency (MCU 2)	AI	34	U16_XXX[033]	4	3	X01	33	nvoOpFrqMCU2_XXX	SNVT_count_f
Terminal 15 (VPS)	BI	35	U16_XXX[034]	4	3	X01	34	nvoTerm15_XXX	SNVT_switch
Burner Cycle Count	AI	36	U16_XXX[035]	4	3	X01	35	nvoBrnCycCnt_XXX	SNVT_count_f
Cycle Hold Timer	AI	37	U16_XXX[036]	4	3	X01	36	nvoCycHldTmr_XXX	SNVT_count_f
Flame Permissible Timer	AI	38	U16_XXX[037]	4	3	X01	37	nvoFlmPrmTmr_XXX	SNVT_count_f
Flame Sensor	AI	39	U16_XXX[038]	4	3	X01	38	nvoFlmSensor_XXX	SNVT_count_f
Flame Strength	AI	40	U16_XXX[039]	4	3	X01	39	nvoFlmStrng_XXX	SNVT_count_f
Reset Source	AI	41	U16_XXX[040]	4	3	X01	40	nvoResSrc_XXX	SNVT_count_f
Lockout Count	AI	42	U16_XXX[041]	4	3	X01	41	nvoLckotCnt_XXX	SNVT_count_f
Lockout History 1 Reason Code	AI	43	U16_XXX[042]	4	3	X01	42	nvoLH1RsnCd_XXX	SNVT_count_f
Lockout History 1 Burner State	AI	44	U16_XXX[043]	4	3	X01	43	nvoLH1BrnSt_XXX	SNVT_count_f
Lockout History 1 Burner Minutes	AI	45	U16_XXX[044]	4	3	X01	44	nvoLH1BrnMn_XXX	SNVT_count_f
Lockout History 1 Burner Cycles	AI	46	U16_XXX[045]	4	3	X01	45	nvoLH1BrnCy_XXX	SNVT_count_f
Lockout History 2 Reason Code	AI	47	U16_XXX[046]	4	3	X01	46	nvoLH2RsnCd_XXX	SNVT_count_f
Lockout History 2 Burner State	AI	48	U16_XXX[047]	4	3	X01	47	nvoLH2BrnSt_XXX	SNVT_count_f
Lockout History 2 Burner Minutes	AI	49	U16_XXX[048]	4	3	X01	48	nvoLH2BrnMn_XXX	SNVT_count_f
Lockout History 2 Burner Cycles	AI	50	U16_XXX[049]	4	3	X01	49	nvoLH2BrnCy_XXX	SNVT_count_f
Lockout History 3 Reason Code	AI	51	U16_XXX[050]	4	3	X01	50	nvoLH3RsnCd_XXX	SNVT_count_f
Lockout History 3 Burner State	AI	52	U16_XXX[051]	4	3	X01	51	nvoLH3BrnSt_XXX	SNVT_count_f
Lockout History 3 Burner Minutes	AI	53	U16_XXX[052]	4	3	X01	52	nvoLH3BrnMn_XXX	SNVT_count_f
Lockout History 3 Burner Cycles	AI	54	U16_XXX[053]	4	3	X01	53	nvoLH3BrnCy_XXX	SNVT_count_f
Lockout History 4 Reason Code	AI	55	U16_XXX[054]	4	3	X01	54	nvoLH4RsnCd_XXX	SNVT_count_f
Lockout History 4 Burner State	AI	56	U16_XXX[055]	4	3	X01	55	nvoLH4BrnSt_XXX	SNVT_count_f
Lockout History 4 Burner Minutes	AI	57	U16_XXX[056]	4	3	X01	56	nvoLH4BrnMn_XXX	SNVT_count_f
Lockout History 4 Burner Cycles	AI	58	U16_XXX[057]	4	3	X01	57	nvoLH4BrnCy_XXX	SNVT_count_f
Lockout History 5 Reason Code	AI	59	U16_XXX[058]	4	3	X01	58	nvoLH5RsnCd_XXX	SNVT_count_f
Lockout History 5 Burner State	AI	60	U16_XXX[059]	4	3	X01	59	nvoLH5BrnSt_XXX	SNVT_count_f
Lockout History 5 Burner Minutes	AI	61	U16_XXX[060]	4	3	X01	60	nvoLH5BrnMn_XXX	SNVT_count_f
Lockout History 5 Burner Cycles	AI	62	U16_XXX[061]	4	3	X01	61	nvoLH5BrnCy_XXX	SNVT_count_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Lockout History 6 Reason Code	AI	63	U16_XXX[062]	4	3	X01	62	nvoLH6RsnCd_XXX	SNVT_count_f
Lockout History 6 Burner State	AI	64	U16_XXX[063]	4	3	X01	63	nvoLH6BrnSt_XXX	SNVT_count_f
Lockout History 6 Burner Minutes	AI	65	U16_XXX[064]	4	3	X01	64	nvoLH6BrnMn_XXX	SNVT_count_f
Lockout History 6 Burner Cycles	AI	66	U16_XXX[065]	4	3	X01	65	nvoLH6BrnCy_XXX	SNVT_count_f
Lockout History 7 Reason Code	AI	67	U16_XXX[066]	4	3	X01	66	nvoLH7RsnCd_XXX	SNVT_count_f
Lockout History 7 Burner State	AI	68	U16_XXX[067]	4	3	X01	67	nvoLH7BrnSt_XXX	SNVT_count_f
Lockout History 7 Burner Minutes	AI	69	U16_XXX[068]	4	3	X01	68	nvoLH7BrnMn_XXX	SNVT_count_f
Lockout History 7 Burner Cycles	AI	70	U16_XXX[069]	4	3	X01	69	nvoLH7BrnCy_XXX	SNVT_count_f
Lockout History 8 Reason Code	AI	71	U16_XXX[070]	4	3	X01	70	nvoLH8RsnCd_XXX	SNVT_count_f
Lockout History 8 Burner State	AI	72	U16_XXX[071]	4	3	X01	71	nvoLH8BrnSt_XXX	SNVT_count_f
Lockout History 8 Burner Minutes	AI	73	U16_XXX[072]	4	3	X01	72	nvoLH8BrnMn_XXX	SNVT_count_f
Lockout History 8 Burner Cycles	AI	74	U16_XXX[073]	4	3	X01	73	nvoLH8BrnCy_XXX	SNVT_count_f
Lockout History 9 Reason Code	AI	75	U16_XXX[074]	4	3	X01	74	nvoLH9RsnCd_XXX	SNVT_count_f
Lockout History 9 Burner State	AI	76	U16_XXX[075]	4	3	X01	75	nvoLH9BrnSt_XXX	SNVT_count_f
Lockout History 9 Burner Minutes	AI	77	U16_XXX[076]	4	3	X01	76	nvoLH9BrnMn_XXX	SNVT_count_f
Lockout History 9 Burner Cycles	AI	78	U16_XXX[077]	4	3	X01	77	nvoLH9BrnCy_XXX	SNVT_count_f
Lockout History 10 Reason Code	AI	79	U16_XXX[078]	4	3	X01	78	nvoLH10RsnCd_XXX	SNVT_count_f
Lockout History 10 Burner State	AI	80	U16_XXX[079]	4	3	X01	79	nvoLH10BrnSt_XXX	SNVT_count_f
Lockout History 10 Burner Minutes	AI	81	U16_XXX[080]	4	3	X01	80	nvoLH10BrnMn_XXX	SNVT_count_f
Lockout History 10 Burner Cycles	AI	82	U16_XXX[081]	4	3	X01	81	nvoLH10BrnCy_XXX	SNVT_count_f

Appendix D.8 NXCES02 Modbus RTU Mappings to Field Protocols

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Probe Status	AV	1	U16_XXX[000]	4	3	X01	0	nvi/nvoPrbStat_XXX	SNVT_count_inc_f
Probe Status Sensor	AI	2	Byt_XXX[000]	4	3	X02	0	nvoPrbStaSen_XXX	SNVT_count_inc_f
Probe Status CPU	AI	3	Byt_XXX[001]	4	3	X02	1	nvoPrbStaCPU_XXX	SNVT_count_inc_f
Probe Status Ambient	AI	4	Byt_XXX[002]	4	3	X02	2	nvoPrbStaAmb_XXX	SNVT_count_inc_f
Probe Status Stack	AI	5	Byt_XXX[003]	4	3	X02	3	nvoPrbStaStk_XXX	SNVT_count_inc_f
Stack Temperature	AI	6	U16_XXX[001]	4	3	X03	1	nvoStkTmp_XXX	SNVT_temp_p
Ambient Temperature	AI	7	U16_XXX[002]	4	3	X03	2	nvoAmbTmp_XXX	SNVT_temp_p
Extended O2 Reading	AI	8	U16_XXX[003]	4	3	X03	3	nvoExtO2Read_XXX	SNVT_count_inc_f
CO Expansion[0]	AI	9	U16_XXX[004]	4	3	X01	4	nvoCO_Exp0_XXX	SNVT_count_inc_f
CO Expansion[1]	AI	10	U16_XXX[005]	4	3	X01	5	nvoCO_Exp1_XXX	SNVT_count_inc_f
CO Expansion[2]	AI	11	U16_XXX[006]	4	3	X01	6	nvoCO_Exp2_XXX	SNVT_count_inc_f
CO Expansion[3]	AI	12	U16_XXX[007]	4	3	X01	7	nvoCO_Exp3_XXX	SNVT_count_inc_f
CO Expansion[4]	AI	13	U16_XXX[008]	4	3	X01	8	nvoCO_Exp4_XXX	SNVT_count_inc_f
CO Expansion[5]	AI	14	U16_XXX[009]	4	3	X01	9	nvoCO_Exp5_XXX	SNVT_count_inc_f
Probe Firmware Rev	AI	15	U16_XXX[010]	4	3	X01	10	nvoPrbFwRev_XXX	SNVT_count_inc_f
Probe ROM CRC	AI	16	U16_XXX[011]	4	3	X01	11	nvoPrbROMCRC_XXX	SNVT_count_inc_f
Stack Temp Max Limit Config	AV	17	U16_XXX[012]	4	3	X03	12	nvi/nvoStTpMxLCf_XXX	SNVT_temp_p
Ambient Temp Upper Limit Config	AV	18	U16_XXX[013]	4	3	X03	13	nvi/nvoAmbTpUpLm_XXX	SNVT_temp_p
Ambient Temp Lower Limit Config	AV	19	U16_XXX[014]	4	3	X03	14	nvi/nvoAmbTpLoLm_XXX	SNVT_temp_p
Last Fault History Type	AI	20	U16_XXX[015]	4	3	X01	15	nvoLsFlHtTyp_XXX	SNVT_count_inc_f
Last Fault History Data	AI	21	U16_XXX[016]	4	3	X01	16	nvoLsFlHtDat_XXX	SNVT_count_inc_f
2nd to Last Fault History Type	AI	22	U16_XXX[017]	4	3	X01	17	nvo2FlHtTyp_XXX	SNVT_count_inc_f
2nd to Last Fault History Data	AI	23	U16_XXX[018]	4	3	X01	18	nvo2FlHtDat_XXX	SNVT_count_inc_f
3rd to Last Fault History Type	AI	24	U16_XXX[019]	4	3	X01	19	nvo3FlHtTyp_XXX	SNVT_count_inc_f
3rd to Last Fault History Data	AI	25	U16_XXX[020]	4	3	X01	20	nvo3FlHtDat_XXX	SNVT_count_inc_f
4th to Last Fault History Type	AI	26	U16_XXX[021]	4	3	X01	21	nvo4FlHtTyp_XXX	SNVT_count_inc_f
4th to Last Fault History Data	AI	27	U16_XXX[022]	4	3	X01	22	nvo4FlHtDat_XXX	SNVT_count_inc_f
5th to Last Fault History Type	AI	28	U16_XXX[023]	4	3	X01	23	nvo5FlHtTyp_XXX	SNVT_count_inc_f
5th to Last Fault History Data	AI	29	U16_XXX[024]	4	3	X01	24	nvo5FlHtDat_XXX	SNVT_count_inc_f
6th to Last Fault History Type	AI	30	U16_XXX[025]	4	3	X01	25	nvo6FlHtTyp_XXX	SNVT_count_inc_f
6th to Last Fault History Data	AI	31	U16_XXX[026]	4	3	X01	26	nvo6FlHtDat_XXX	SNVT_count_inc_f
7th to Last Fault History Type	AI	32	U16_XXX[027]	4	3	X01	27	nvo7FlHtTyp_XXX	SNVT_count_inc_f
7th to Last Fault History Data	AI	33	U16_XXX[028]	4	3	X01	28	nvo7FlHtDat_XXX	SNVT_count_inc_f
8th to Last Fault History Type	AI	34	U16_XXX[029]	4	3	X01	29	nvo8FlHtTyp_XXX	SNVT_count_inc_f
8th to Last Fault History Data	AI	35	U16_XXX[030]	4	3	X01	30	nvo8FlHtDat_XXX	SNVT_count_inc_f
9th to Last Fault History Type	AI	36	U16_XXX[031]	4	3	X01	31	nvo9FlHtTyp_XXX	SNVT_count_inc_f
9th to Last Fault History Data	AI	37	U16_XXX[032]	4	3	X01	32	nvo9FlHtDat_XXX	SNVT_count_inc_f
10th to Last Fault History Type	AI	38	U16_XXX[033]	4	3	X01	33	nvo10FlHtTyp_XXX	SNVT_count_inc_f
10th to Last Fault History Data	AI	39	U16_XXX[034]	4	3	X01	34	nvo10FlHtDat_XXX	SNVT_count_inc_f
Lambda	AI	40	U16_XXX[035]	4	3	X01	35	nvoLambda_XXX	SNVT_count_inc_f
Standard O2	AI	41	U16_XXX[036]	4	3	X01	36	nvoStandO2_XXX	SNVT_count_inc_f
Battery Voltage	AI	42	U16_XXX[037]	4	3	X01	37	nvoBattVolt_XXX	SNVT_count_inc_f
									SNVT_count_inc_f
									SNVT_temp_p
									SNVT_temp_p
									SNVT_temp_p

Appendix D.9 FX_Series_Servos Modbus RTU Mappings to Field Protocols

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Commanded Position	AI	1	Srv_XXX[000]	4	3	X01	0	nvoCmdPos_XXX	SNVT_count_inc_f
Current Servo Position	AI	2	Srv_XXX[001]	4	3	X01	1	nvoCurSrvPos_XXX	SNVT_count_inc_f
Tweak Mode Error Percent and Rot Dir	AI	3	Srv_XXX[002]	4	3	X01	2	nvoTwkErrPer_XXX	SNVT_count_inc_f
Current Servo Speed and Rot Direction	AI	4	Srv_XXX[003]	4	3	X01	3	nvoSrSpdRtDi_XXX	SNVT_count_inc_f
Error Code	MI	5	Srv_XXX[004]	4	3	X01	4	nvoErrCode_XXX	SNVT_count
CW/CCW Button Pressed	BI	6	Srv_XXX[005]	4	3	X01	5	nvoCW_CCWBtn_XXX	SNVT_switch
Tweak Mode Active	BI	7	Srv_XXX[006]	4	3	X01	6	nvoTwkMdeAct_XXX	SNVT_switch
Servo Torque Rating	AI	8	Srv_XXX[007]	4	3	X01	7	nvoSrvTrqRtg_XXX	SNVT_count_inc_f
Linearity Error Since Last Command	AI	9	Srv_XXX[008]	4	3	X01	8	nvoLinearErr_XXX	SNVT_count_inc_f
Firmware Revision	AI	10	Srv_XXX[009]	4	3	X01	9	nvoFwRev_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 01	AV	1	Wrt_XXX[000]	4	3	X02	0	nviSrvCdPs01_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 02	AV	2	Wrt_XXX[001]	4	3	X02	1	nviSrvCdPs02_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 03	AV	3	Wrt_XXX[002]	4	3	X02	2	nviSrvCdPs03_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 04	AV	4	Wrt_XXX[003]	4	3	X02	3	nviSrvCdPs04_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 05	AV	5	Wrt_XXX[004]	4	3	X02	4	nviSrvCdPs05_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 06	AV	6	Wrt_XXX[005]	4	3	X02	5	nviSrvCdPs06_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 07	AV	7	Wrt_XXX[006]	4	3	X02	6	nviSrvCdPs07_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 08	AV	8	Wrt_XXX[007]	4	3	X02	7	nviSrvCdPs08_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 09	AV	9	Wrt_XXX[008]	4	3	X02	8	nviSrvCdPs09_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 10	AV	10	Wrt_XXX[009]	4	3	X02	9	nviSrvCdPs10_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 11	AV	11	Wrt_XXX[010]	4	3	X02	10	nviSrvCdPs11_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 12	AV	12	Wrt_XXX[011]	4	3	X02	11	nviSrvCdPs12_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 13	AV	13	Wrt_XXX[012]	4	3	X02	12	nviSrvCdPs13_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 14	AV	14	Wrt_XXX[013]	4	3	X02	13	nviSrvCdPs14_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 15	AV	15	Wrt_XXX[014]	4	3	X02	14	nviSrvCdPs15_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 16	AV	16	Wrt_XXX[015]	4	3	X02	15	nviSrvCdPs16_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 17	AV	17	Wrt_XXX[016]	4	3	X02	16	nviSrvCdPs17_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 18	AV	18	Wrt_XXX[017]	4	3	X02	17	nviSrvCdPs18_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 19	AV	19	Wrt_XXX[018]	4	3	X02	18	nviSrvCdPs19_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 20	AV	20	Wrt_XXX[019]	4	3	X02	19	nviSrvCdPs20_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 21	AV	21	Wrt_XXX[020]	4	3	X02	20	nviSrvCdPs21_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 22	AV	22	Wrt_XXX[021]	4	3	X02	21	nviSrvCdPs22_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 23	AV	23	Wrt_XXX[022]	4	3	X02	22	nviSrvCdPs23_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 24	AV	24	Wrt_XXX[023]	4	3	X02	23	nviSrvCdPs24_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 25	AV	25	Wrt_XXX[024]	4	3	X02	24	nviSrvCdPs25_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 26	AV	26	Wrt_XXX[025]	4	3	X02	25	nviSrvCdPs26_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 27	AV	27	Wrt_XXX[026]	4	3	X02	26	nviSrvCdPs27_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 28	AV	28	Wrt_XXX[027]	4	3	X02	27	nviSrvCdPs28_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 29	AV	29	Wrt_XXX[028]	4	3	X02	28	nviSrvCdPs29_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 30	AV	30	Wrt_XXX[029]	4	3	X02	29	nviSrvCdPs30_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 31	AV	31	Wrt_XXX[030]	4	3	X02	30	nviSrvCdPs31_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 32	AV	32	Wrt_XXX[031]	4	3	X02	31	nviSrvCdPs32_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 33	AV	33	Wrt_XXX[032]	4	3	X02	32	nviSrvCdPs33_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 34	AV	34	Wrt_XXX[033]	4	3	X02	33	nviSrvCdPs34_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 35	AV	35	Wrt_XXX[034]	4	3	X02	34	nviSrvCdPs35_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 36	AV	36	Wrt_XXX[035]	4	3	X02	35	nviSrvCdPs36_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 37	AV	37	Wrt_XXX[036]	4	3	X02	36	nviSrvCdPs37_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 38	AV	38	Wrt_XXX[037]	4	3	X02	37	nviSrvCdPs38_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 39	AV	39	Wrt_XXX[038]	4	3	X02	38	nviSrvCdPs39_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 40	AV	40	Wrt_XXX[039]	4	3	X02	39	nviSrvCdPs40_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 41	AV	41	Wrt_XXX[040]	4	3	X02	40	nviSrvCdPs41_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 42	AV	42	Wrt_XXX[041]	4	3	X02	41	nviSrvCdPs42_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 43	AV	43	Wrt_XXX[042]	4	3	X02	42	nviSrvCdPs43_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 44	AV	44	Wrt_XXX[043]	4	3	X02	43	nviSrvCdPs44_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 45	AV	45	Wrt_XXX[044]	4	3	X02	44	nviSrvCdPs45_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 46	AV	46	Wrt_XXX[045]	4	3	X02	45	nviSrvCdPs46_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 47	AV	47	Wrt_XXX[046]	4	3	X02	46	nviSrvCdPs47_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 48	AV	48	Wrt_XXX[047]	4	3	X02	47	nviSrvCdPs48_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 49	AV	49	Wrt_XXX[048]	4	3	X02	48	nviSrvCdPs49_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 50	AV	50	Wrt_XXX[049]	4	3	X02	49	nviSrvCdPs50_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Servo Cmd Position at Speed 51	AV	51	Wrt_XXX[050]	4	3	X02	50	nviSrvCdPs51_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 52	AV	52	Wrt_XXX[051]	4	3	X02	51	nviSrvCdPs52_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 53	AV	53	Wrt_XXX[052]	4	3	X02	52	nviSrvCdPs53_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 54	AV	54	Wrt_XXX[053]	4	3	X02	53	nviSrvCdPs54_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 55	AV	55	Wrt_XXX[054]	4	3	X02	54	nviSrvCdPs55_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 56	AV	56	Wrt_XXX[055]	4	3	X02	55	nviSrvCdPs56_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 57	AV	57	Wrt_XXX[056]	4	3	X02	56	nviSrvCdPs57_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 58	AV	58	Wrt_XXX[057]	4	3	X02	57	nviSrvCdPs58_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 59	AV	59	Wrt_XXX[058]	4	3	X02	58	nviSrvCdPs59_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 60	AV	60	Wrt_XXX[059]	4	3	X02	59	nviSrvCdPs60_XXX	SNVT_count_inc_f
Servo Cmd Position at Speed 61	AV	61	Wrt_XXX[060]	4	3	X02	60	nviSrvCdPs61_XXX	SNVT_count_inc_f

Appendix D.10 ACS550 Modbus RTU Mappings to Field Protocols

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
OFF1	BV	1	DO_XXX[000]	4	3	X04	0	nvi/nvoOff1_XXX	SNVT_swtich
OFF2	BV	2	DO_XXX[001]	4	3	X04	1	nvi/nvoOff2_XXX	SNVT_swtich
OFF3	BV	3	DO_XXX[002]	4	3	X04	2	nvi/nvoOff3_XXX	SNVT_swtich
START	BV	4	DO_XXX[003]	4	3	X04	3	nvi/nvoStart_XXX	SNVT_swtich
RAMP_HOLD	BV	5	DO_XXX[005]	4	3	X04	5	nvi/nvoRampHold_XXX	SNVT_swtich
RAMP_IN_ZERO	BV	6	DO_XXX[006]	4	3	X04	6	nvi/nvoRmpInZero_XXX	SNVT_swtich
RESET	BV	7	DO_XXX[007]	4	3	X04	7	nvi/nvoReset_XXX	SNVT_swtich
EXT2 DO	BV	8	DO_XXX[011]	4	3	X04	11	nvi/nvoExt2DO_XXX	SNVT_swtich
Relay Output 1	BV	9	DO_XXX[032]	4	3	X04	32	nvi/nvoRelOut1_XXX	SNVT_swtich
Relay Output 2	BV	10	DO_XXX[033]	4	3	X04	33	nvi/nvoRelOut2_XXX	SNVT_swtich
Relay Output 3	BV	11	DO_XXX[034]	4	3	X04	34	nvi/nvoRelOut3_XXX	SNVT_swtich
Relay Output 4	BV	12	DO_XXX[035]	4	3	X04	35	nvi/nvoRelOut4_XXX	SNVT_swtich
Relay Output 5	BV	13	DO_XXX[036]	4	3	X04	36	nvi/nvoRelOut5_XXX	SNVT_swtich
Relay Output 6	BV	14	DO_XXX[037]	4	3	X04	37	nvi/nvoRelOut6_XXX	SNVT_swtich
RDY_ON	BI	15	DI_XXX[000]	4	3	X03	0	nvoRdy_On_XXX	SNVT_swtich
RDY_RUN	BI	16	DI_XXX[001]	4	3	X03	1	nvoRdy_Run_XXX	SNVT_swtich
RDY_REF	BI	17	DI_XXX[002]	4	3	X03	2	nvoRdy_Ref_XXX	SNVT_swtich
TRIPPED	BI	18	DI_XXX[003]	4	3	X03	3	nvoTripped_XXX	SNVT_swtich
OFF_2_STA	BI	19	DI_XXX[004]	4	3	X03	4	nvoOff_2_Sta_XXX	SNVT_swtich
OFF_3_STA	BI	20	DI_XXX[005]	4	3	X03	5	nvoOff_3_Sta_XXX	SNVT_swtich
SWC_ON_INHIB	BI	21	DI_XXX[006]	4	3	X03	6	nvoSwcOnInh_XXX	SNVT_swtich
ALARM	BI	22	DI_XXX[007]	4	3	X03	7	nvoAlarm_XXX	SNVT_swtich
AT_SETPOINT	BI	23	DI_XXX[008]	4	3	X03	8	nvoAT_Setpnt_XXX	SNVT_swtich
REMOTE	BI	24	DI_XXX[009]	4	3	X03	9	nvoRemote_XXX	SNVT_swtich
ABOVE_LIMIT	BI	25	DI_XXX[010]	4	3	X03	10	nvoAbvLimit_XXX	SNVT_swtich
EXT2 DI	BI	26	DI_XXX[011]	4	3	X03	11	nvoExt2DI_XXX	SNVT_swtich
RUN_ENABLE	BI	27	DI_XXX[012]	4	3	X03	12	nvoRunEnbl_XXX	SNVT_swtich
DI1	BI	28	DI_XXX[032]	4	3	X03	32	nvoDI1_XXX	SNVT_swtich
DI2	BI	29	DI_XXX[033]	4	3	X03	33	nvoDI2_XXX	SNVT_swtich
DI3	BI	30	DI_XXX[034]	4	3	X03	34	nvoDI3_XXX	SNVT_swtich
DI4	BI	31	DI_XXX[035]	4	3	X03	35	nvoDI4_XXX	SNVT_swtich
DI5	BI	32	DI_XXX[036]	4	3	X03	36	nvoDI5_XXX	SNVT_swtich
DI6	BI	33	DI_XXX[037]	4	3	X03	37	nvoDI6_XXX	SNVT_swtich
AI1	AI	34	AI_XXX[000]	4	3	X01	0	nvoAI1_XXX	SNVT_count_inc_f
AI2	AI	35	AI_XXX[001]	4	3	X01	1	nvoAI2_XXX	SNVT_count_inc_f
CONTROL WORD	AV	36	AO_XXX[000]	4	3	X02	0	nvi/nvoCtrlWord_XXX	SNVT_count_inc_f
Reference 1	AV	37	AO_XXX[001]	4	3	X02	1	nvi/nvoRef1_XXX	SNVT_count_inc_f
Reference 2	AV	38	AO_XXX[002]	4	3	X02	2	nvi/nvoRef2_XXX	SNVT_count_inc_f
STATUS WORD	AI	39	AO_XXX[003]	4	3	X02	3	nvoStatusWrd_XXX	SNVT_count_inc_f
Actual 1	AI	40	AO_XXX[004]	4	3	X02	4	nvoActual1_XXX	SNVT_count_inc_f
Actual 2	AI	41	AO_XXX[005]	4	3	X02	5	nvoActual2_XXX	SNVT_count_inc_f
Actual 3	AI	42	AO_XXX[006]	4	3	X02	6	nvoActual3_XXX	SNVT_count_inc_f
Actual 4	AI	43	AO_XXX[007]	4	3	X02	7	nvoActual4_XXX	SNVT_count_inc_f
Actual 5	AI	44	AO_XXX[008]	4	3	X02	8	nvoActual5_XXX	SNVT_count_inc_f
Actual 6	AI	45	AO_XXX[009]	4	3	X02	9	nvoActual6_XXX	SNVT_count_inc_f
Actual 7	AI	46	AO_XXX[010]	4	3	X02	10	nvoActual7_XXX	SNVT_count_inc_f
Actual 8	AI	47	AO_XXX[011]	4	3	X02	11	nvoActual8_XXX	SNVT_count_inc_f
ACS550 CONTROL WORD	AV	48	U32_XXX[000]	4	3	X05	0	nvi/nvoACSCtrWrd_XXX	SNVT_count_inc_f
ACS550 STATUS WORD	AI	49	U32_XXX[001]	4	3	X05	1	nvoACSStWord_XXX	SNVT_count_inc_f
REFERENCE 1 DCU	AV	50	U32_XXX[002]	4	3	X05	2	nvi/nvoRef1DCU_XXX	SNVT_count_inc_f
REFERENCE 2 DCU	AV	51	U32_XXX[003]	4	3	X05	3	nvi/nvoRef2DCU_XXX	SNVT_count_inc_f

Appendix D.11 Insight_Insight_II_Scanner Modbus RTU Mappings to Field Protocols

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
UV DATA POINT 1	AI	1	S16_XXX[000]	4	3	X01	0	nvoUV_Pnt_1_XXX	SNVT_count_inc_f
UV DATA POINT 2	AI	2	S16_XXX[001]	4	3	X01	1	nvoUV_Pnt_2_XXX	SNVT_count_inc_f
UV DATA POINT 3	AI	3	S16_XXX[002]	4	3	X01	2	nvoUV_Pnt_3_XXX	SNVT_count_inc_f
UV DATA POINT 4	AI	4	S16_XXX[003]	4	3	X01	3	nvoUV_Pnt_4_XXX	SNVT_count_inc_f
UV DATA POINT 5	AI	5	S16_XXX[004]	4	3	X01	4	nvoUV_Pnt_5_XXX	SNVT_count_inc_f
UV DATA POINT 6	AI	6	S16_XXX[005]	4	3	X01	5	nvoUV_Pnt_6_XXX	SNVT_count_inc_f
UV DATA POINT 7	AI	7	S16_XXX[006]	4	3	X01	6	nvoUV_Pnt_7_XXX	SNVT_count_inc_f
UV DATA POINT 8	AI	8	S16_XXX[007]	4	3	X01	7	nvoUV_Pnt_8_XXX	SNVT_count_inc_f
UV DATA POINT 9	AI	9	S16_XXX[008]	4	3	X01	8	nvoUV_Pnt_9_XXX	SNVT_count_inc_f
UV DATA POINT 10	AI	10	S16_XXX[009]	4	3	X01	9	nvoUV_Pnt_10_XXX	SNVT_count_inc_f
UV DATA POINT 11	AI	11	S16_XXX[010]	4	3	X01	10	nvoUV_Pnt_11_XXX	SNVT_count_inc_f
UV DATA POINT 12	AI	12	S16_XXX[011]	4	3	X01	11	nvoUV_Pnt_12_XXX	SNVT_count_inc_f
UV DATA POINT 13	AI	13	S16_XXX[012]	4	3	X01	12	nvoUV_Pnt_13_XXX	SNVT_count_inc_f
UV DATA POINT 14	AI	14	S16_XXX[013]	4	3	X01	13	nvoUV_Pnt_14_XXX	SNVT_count_inc_f
UV DATA POINT 15	AI	15	S16_XXX[014]	4	3	X01	14	nvoUV_Pnt_15_XXX	SNVT_count_inc_f
UV DATA POINT 16	AI	16	S16_XXX[015]	4	3	X01	15	nvoUV_Pnt_16_XXX	SNVT_count_inc_f
UV DATA POINT 17	AI	17	S16_XXX[016]	4	3	X01	16	nvoUV_Pnt_17_XXX	SNVT_count_inc_f
UV DATA POINT 18	AI	18	S16_XXX[017]	4	3	X01	17	nvoUV_Pnt_18_XXX	SNVT_count_inc_f
UV DATA POINT 19	AI	19	S16_XXX[018]	4	3	X01	18	nvoUV_Pnt_19_XXX	SNVT_count_inc_f
UV DATA POINT 20	AI	20	S16_XXX[019]	4	3	X01	19	nvoUV_Pnt_20_XXX	SNVT_count_inc_f
UV DATA POINT 21	AI	21	S16_XXX[020]	4	3	X01	20	nvoUV_Pnt_21_XXX	SNVT_count_inc_f
UV DATA POINT 22	AI	22	S16_XXX[021]	4	3	X01	21	nvoUV_Pnt_22_XXX	SNVT_count_inc_f
UV DATA POINT 23	AI	23	S16_XXX[022]	4	3	X01	22	nvoUV_Pnt_23_XXX	SNVT_count_inc_f
UV DATA POINT 24	AI	24	S16_XXX[023]	4	3	X01	23	nvoUV_Pnt_24_XXX	SNVT_count_inc_f
IR DATA POINT 1	AI	25	S16_XXX[024]	4	3	X01	24	nvoIR_Pnt_1_XXX	SNVT_count_inc_f
IR DATA POINT 2	AI	26	S16_XXX[025]	4	3	X01	25	nvoIR_Pnt_2_XXX	SNVT_count_inc_f
IR DATA POINT 3	AI	27	S16_XXX[026]	4	3	X01	26	nvoIR_Pnt_3_XXX	SNVT_count_inc_f
IR DATA POINT 4	AI	28	S16_XXX[027]	4	3	X01	27	nvoIR_Pnt_4_XXX	SNVT_count_inc_f
IR DATA POINT 5	AI	29	S16_XXX[028]	4	3	X01	28	nvoIR_Pnt_5_XXX	SNVT_count_inc_f
IR DATA POINT 6	AI	30	S16_XXX[029]	4	3	X01	29	nvoIR_Pnt_6_XXX	SNVT_count_inc_f
IR DATA POINT 7	AI	31	S16_XXX[030]	4	3	X01	30	nvoIR_Pnt_7_XXX	SNVT_count_inc_f
IR DATA POINT 8	AI	32	S16_XXX[031]	4	3	X01	31	nvoIR_Pnt_8_XXX	SNVT_count_inc_f
IR DATA POINT 9	AI	33	S16_XXX[032]	4	3	X01	32	nvoIR_Pnt_9_XXX	SNVT_count_inc_f
IR DATA POINT 10	AI	34	S16_XXX[033]	4	3	X01	33	nvoIR_Pnt_10_XXX	SNVT_count_inc_f
IR DATA POINT 11	AI	35	S16_XXX[034]	4	3	X01	34	nvoIR_Pnt_11_XXX	SNVT_count_inc_f
IR DATA POINT 12	AI	36	S16_XXX[035]	4	3	X01	35	nvoIR_Pnt_12_XXX	SNVT_count_inc_f
IR DATA POINT 13	AI	37	S16_XXX[036]	4	3	X01	36	nvoIR_Pnt_13_XXX	SNVT_count_inc_f
IR DATA POINT 14	AI	38	S16_XXX[037]	4	3	X01	37	nvoIR_Pnt_14_XXX	SNVT_count_inc_f
IR DATA POINT 15	AI	39	S16_XXX[038]	4	3	X01	38	nvoIR_Pnt_15_XXX	SNVT_count_inc_f
IR DATA POINT 16	AI	40	S16_XXX[039]	4	3	X01	39	nvoIR_Pnt_16_XXX	SNVT_count_inc_f
IR DATA POINT 17	AI	41	S16_XXX[040]	4	3	X01	40	nvoIR_Pnt_17_XXX	SNVT_count_inc_f
IR DATA POINT 18	AI	42	S16_XXX[041]	4	3	X01	41	nvoIR_Pnt_18_XXX	SNVT_count_inc_f
IR DATA POINT 19	AI	43	S16_XXX[042]	4	3	X01	42	nvoIR_Pnt_19_XXX	SNVT_count_inc_f
IR DATA POINT 20	AI	44	S16_XXX[043]	4	3	X01	43	nvoIR_Pnt_20_XXX	SNVT_count_inc_f
IR DATA POINT 21	AI	45	S16_XXX[044]	4	3	X01	44	nvoIR_Pnt_21_XXX	SNVT_count_inc_f
IR DATA POINT 22	AI	46	S16_XXX[045]	4	3	X01	45	nvoIR_Pnt_22_XXX	SNVT_count_inc_f
IR DATA POINT 23	AI	47	S16_XXX[046]	4	3	X01	46	nvoIR_Pnt_23_XXX	SNVT_count_inc_f
IR DATA POINT 24	AI	48	S16_XXX[047]	4	3	X01	47	nvoIR_Pnt_24_XXX	SNVT_count_inc_f
UV FRONT END GAIN	AI	49	S16_XXX[048]	4	3	X01	48	nvoUVFrEndGn_XXX	SNVT_count_inc_f
IR FRONT END GAIN	AI	50	S16_XXX[049]	4	3	X01	49	nvoIRFrEndGn_XXX	SNVT_count_inc_f
FLAME QUALITY	AI	51	S16_XXX[050]	4	3	X01	50	nvoFlmQual_XXX	SNVT_count_inc_f
FILE IN USE	AI	52	S16_XXX[051]	4	3	X01	51	nvoFileInUse_XXX	SNVT_count_inc_f
IR DC LEVEL	AI	53	S16_XXX[052]	4	3	X01	52	nvoIR_DC_Lvl_XXX	SNVT_count_inc_f
SCANNER INTERNAL TEMPERATURE	AI	54	S16_XXX[053]	4	3	X01	53	nvoScnIntTmp_XXX	SNVT_count_inc_f
UV GAIN	AI	55	S16_XXX[054]	4	3	X01	54	nvoUV_Gain_XXX	SNVT_count_inc_f
IR GAIN	AI	56	S16_XXX[055]	4	3	X01	55	nvoIR_Gain_XXX	SNVT_count_inc_f
UV BANDPASS	AI	57	S16_XXX[056]	4	3	X01	56	nvoUV_Bndpas_XXX	SNVT_count_inc_f
IR BANDPASS	AI	58	S16_XXX[057]	4	3	X01	57	nvoIR_Bndpas_XXX	SNVT_count_inc_f
FLAME STATUS	AI	59	S16_XXX[058]	4	3	X01	58	nvoFlmStatus_XXX	SNVT_count_inc_f
FLAME QUALITY 2	AI	60	S16_XXX[059]	4	3	X01	59	nvoFlmQual2_XXX	SNVT_count_inc_f
SCANNER TYPE	AI	61	S16_XXX[060]	4	3	X01	60	nvoScnType_XXX	SNVT_count_inc_f
SCANNER OPTIONS 1	AI	62	S16_XXX[061]	4	3	X01	61	nvoScnOpt1_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
SCANNER OPTIONS 2	AI	63	S16_XXX[062]	4	3	X01	62	nvoScnOpt2_XXX	SNVT_count_inc_f
SCANNER TEMPERATURE	AI	64	S16_XXX[063]	4	3	X01	63	nvoScnTem_XXX	SNVT_count_inc_f
SCANNER FILE IN USE	AI	65	S16_XXX[064]	4	3	X01	64	nvoScnFlInUs_XXX	SNVT_count_inc_f
SCANNER LIFETIME ERROR COUNT	AI	66	U32_XXX[000]	4	3	X02	0	nvoScnLfErCt_XXX	SNVT_count_inc_f
SCANNER LAST ERROR CODE	AI	67	U32_XXX[001]	4	3	X02	1	nvoScnLtErCd_XXX	SNVT_count_inc_f
EEPROM: FILE SELECT	AI	68	S16_XXX[069]	4	3	X01	69	nvoEEP_FilSl_XXX	SNVT_count_inc_f
EEPROM: LANGUAGE SELECT	AI	69	S16_XXX[070]	4	3	X01	70	nvoEEP_LanSl_XXX	SNVT_count_inc_f
EEPROM:TEMP. SCALE	AI	70	S16_XXX[071]	4	3	X01	71	nvoEEP_TmpSc_XXX	SNVT_count_inc_f
EEPROM: DISPLAY WHILE RUNNING	AI	71	S16_XXX[072]	4	3	X01	72	nvoEEP_Displ_XXX	SNVT_count_inc_f
EEPROM: REMOTE FILE SELECT	AI	72	S16_XXX[073]	4	3	X01	73	nvoEEP_RmFlS_XXX	SNVT_count_inc_f
EEPROM: COMM ADDRESS	AI	73	S16_XXX[074]	4	3	X01	74	nvoEEP_CmAdd_XXX	SNVT_count_inc_f
EEPROM : CRC	AI	74	S16_XXX[075]	4	3	X01	75	nvoEEP_CRC_XXX	SNVT_count_inc_f
MAX AMBIENT TEMPERATURE 1	AI	75	S16_XXX[076]	4	3	X01	76	nvoMaxAmbTp1_XXX	SNVT_count_inc_f
MAX AMBIENT TEMPERATURE 2	AI	76	S16_XXX[077]	4	3	X01	77	nvoMaxAmbTp2_XXX	SNVT_count_inc_f
MAX AMBIENT TEMPERATURE 3	AI	77	S16_XXX[078]	4	3	X01	78	nvoMaxAmbTp3_XXX	SNVT_count_inc_f
FILE A: IR SENSOR ENABLED	AI	78	S16_XXX[079]	4	3	X01	79	nvoA_IRSenEn_XXX	SNVT_count_inc_f
FILE A: UV SENSOR ENABLED	AI	79	S16_XXX[080]	4	3	X01	80	nvoA_UVSenEn_XXX	SNVT_count_inc_f
FILE A: IR GAIN SWITCH	AI	80	S16_XXX[081]	4	3	X01	81	nvoA_IRGnSw_XXX	SNVT_count_inc_f
FILE A: UV GAIN SWITCH	AI	81	S16_XXX[082]	4	3	X01	82	nvoA_UVGnSw_XXX	SNVT_count_inc_f
FILE A: IR BANDPASS	AI	82	S16_XXX[083]	4	3	X01	83	nvoA_IRBndPs_XXX	SNVT_count_inc_f
FILE A: UV BANDPASS	AI	83	S16_XXX[084]	4	3	X01	84	nvoA_UVBndPs_XXX	SNVT_count_inc_f
FILE A: IR FRONT END GAIN	AI	84	S16_XXX[085]	4	3	X01	85	nvoA_IRFntGn_XXX	SNVT_count_inc_f
FILE A: UV FRONT END GAIN	AI	85	S16_XXX[086]	4	3	X01	86	nvoA_UVFntGn_XXX	SNVT_count_inc_f
FILE A: IR USER GAIN	AI	86	S16_XXX[087]	4	3	X01	87	nvoA_IRUsrGn_XXX	SNVT_count_inc_f
FILE A: UV USER GAIN	AI	87	S16_XXX[088]	4	3	X01	88	nvoA_UVUsrGn_XXX	SNVT_count_inc_f
FILE A: FLAME FAILURE RESP. TIME	AI	88	S16_XXX[089]	4	3	X01	89	nvoA_FlFlTim_XXX	SNVT_count_inc_f
FILE A: ON TIME DELAY	AI	89	S16_XXX[090]	4	3	X01	90	nvoA_OnTmDel_XXX	SNVT_count_inc_f
FILE A: ON THRESHOLD	AI	90	S16_XXX[091]	4	3	X01	91	nvoA_OnThrsh_XXX	SNVT_count_inc_f
FILE A: OFF THRESHOLD	AI	91	S16_XXX[092]	4	3	X01	92	nvoA_OffThrs_XXX	SNVT_count_inc_f
FILE A: FILE A CRC	AI	92	S16_XXX[093]	4	3	X01	93	nvoA_FileCRC_XXX	SNVT_count_inc_f
FILE B: IR SENSOR ENABLED	AI	93	S16_XXX[094]	4	3	X01	94	nvoB_IRSenEn_XXX	SNVT_count_inc_f
FILE B: UV SENSOR ENABLED	AI	94	S16_XXX[095]	4	3	X01	95	nvoB_UVSenEn_XXX	SNVT_count_inc_f
FILE B: IR GAIN SWITCH	AI	95	S16_XXX[096]	4	3	X01	96	nvoB_IRGnSw_XXX	SNVT_count_inc_f
FILE B: UV GAIN SWITCH	AI	96	S16_XXX[097]	4	3	X01	97	nvoB_UVGnSw_XXX	SNVT_count_inc_f
FILE B: IR BANDPASS	AI	97	S16_XXX[098]	4	3	X01	98	nvoB_IRBndPs_XXX	SNVT_count_inc_f
FILE B: UV BANDPASS	AI	98	S16_XXX[099]	4	3	X01	99	nvoB_UVBndPs_XXX	SNVT_count_inc_f
FILE B: IR FRONT END GAIN	AI	99	S16_XXX[100]	4	3	X01	100	nvoB_IRFntGn_XXX	SNVT_count_inc_f
FILE B: UV FRONT END GAIN	AI	100	S16_XXX[101]	4	3	X01	101	nvoB_UVFntGn_XXX	SNVT_count_inc_f
FILE B: IR USER GAIN	AI	101	S16_XXX[102]	4	3	X01	102	nvoB_IRUsrGn_XXX	SNVT_count_inc_f
FILE B: UV USER GAIN	AI	102	S16_XXX[103]	4	3	X01	103	nvoB_UVUsrGn_XXX	SNVT_count_inc_f
FILE B: FLAME FAILURE RESP. TIME	AI	103	S16_XXX[104]	4	3	X01	104	nvoB_FlFlTim_XXX	SNVT_count_inc_f
FILE B: ON TIME DELAY	AI	104	S16_XXX[105]	4	3	X01	105	nvoB_OnTmDel_XXX	SNVT_count_inc_f
FILE B: ON THRESHOLD	AI	105	S16_XXX[106]	4	3	X01	106	nvoB_OnThrsh_XXX	SNVT_count_inc_f
FILE B: OFF THRESHOLD	AI	106	S16_XXX[107]	4	3	X01	107	nvoB_OffThrs_XXX	SNVT_count_inc_f
FILE B: FILE CRC	AI	107	S16_XXX[108]	4	3	X01	108	nvoB_FileCRC_XXX	SNVT_count_inc_f
FILE C: IR SENSOR ENABLED	AI	108	S16_XXX[109]	4	3	X01	109	nvoC_IRSenEn_XXX	SNVT_count_inc_f
FILE C: UV SENSOR ENABLED	AI	109	S16_XXX[110]	4	3	X01	110	nvoC_UVSenEn_XXX	SNVT_count_inc_f
FILE C: IR GAIN SWITCH	AI	110	S16_XXX[111]	4	3	X01	111	nvoC_IRGnSw_XXX	SNVT_count_inc_f
FILE C: UV GAIN SWITCH	AI	111	S16_XXX[112]	4	3	X01	112	nvoC_UVGnSw_XXX	SNVT_count_inc_f
FILE C: IR BANDPASS	AI	112	S16_XXX[113]	4	3	X01	113	nvoC_IRBndPs_XXX	SNVT_count_inc_f
FILE C: UV BANDPASS	AI	113	S16_XXX[114]	4	3	X01	114	nvoC_UVBndPs_XXX	SNVT_count_inc_f
FILE C: IR FRONT END GAIN	AI	114	S16_XXX[115]	4	3	X01	115	nvoC_IRFntGn_XXX	SNVT_count_inc_f
FILE C: UV FRONT END GAIN	AI	115	S16_XXX[116]	4	3	X01	116	nvoC_UVFntGn_XXX	SNVT_count_inc_f
FILE C: IR USER GAIN	AI	116	S16_XXX[117]	4	3	X01	117	nvoC_IRUsrGn_XXX	SNVT_count_inc_f
FILE C: UV USER GAIN	AI	117	S16_XXX[118]	4	3	X01	118	nvoC_UVUsrGn_XXX	SNVT_count_inc_f
FILE C: FLAME FAILURE RESP. TIME	AI	118	S16_XXX[119]	4	3	X01	119	nvoC_FlFlTim_XXX	SNVT_count_inc_f
FILE C: ON TIME DELAY	AI	119	S16_XXX[120]	4	3	X01	120	nvoC_OnTmDel_XXX	SNVT_count_inc_f
FILE C: ON THRESHOLD	AI	120	S16_XXX[121]	4	3	X01	121	nvoC_OnThrsh_XXX	SNVT_count_inc_f
FILE C: OFF THRESHOLD	AI	121	S16_XXX[122]	4	3	X01	122	nvoC_OffThrs_XXX	SNVT_count_inc_f
FILE C: FILE CRC	AI	122	S16_XXX[123]	4	3	X01	123	nvoC_FileCRC_XXX	SNVT_count_inc_f
FILE D: IR SENSOR ENABLED	AI	123	S16_XXX[124]	4	3	X01	124	nvoD_IRSenEn_XXX	SNVT_count_inc_f
FILE D: UV SENSOR ENABLED	AI	124	S16_XXX[125]	4	3	X01	125	nvoD_UVSenEn_XXX	SNVT_count_inc_f
FILE D: IR GAIN SWITCH	AI	125	S16_XXX[126]	4	3	X01	126	nvoD_IRGnSw_XXX	SNVT_count_inc_f
FILE D: UV GAIN SWITCH	AI	126	S16_XXX[127]	4	3	X01	127	nvoD_UVGnSw_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
FILE D: IR BANDPASS	AI	127	S16_XXX[128]	4	3	X01	128	nvoD_IRBndPs_XXX	SNVT_count_inc_f
FILE D: UV BANDPASS	AI	128	S16_XXX[129]	4	3	X01	129	nvoD_UVBndPs_XXX	SNVT_count_inc_f
FILE D: IR FRONT END GAIN	AI	129	S16_XXX[130]	4	3	X01	130	nvoD_IRFntGn_XXX	SNVT_count_inc_f
FILE D: UV FRONT END GAIN	AI	130	S16_XXX[131]	4	3	X01	131	nvoD_UVFntGn_XXX	SNVT_count_inc_f
FILE D: IR USER GAIN	AI	131	S16_XXX[132]	4	3	X01	132	nvoD_IRUsrGn_XXX	SNVT_count_inc_f
FILE D: UV USER GAIN	AI	132	S16_XXX[133]	4	3	X01	133	nvoD_UVUsrGn_XXX	SNVT_count_inc_f
FILE D: FLAME FAILURE RESP. TIME	AI	133	S16_XXX[134]	4	3	X01	134	nvoD_FlFlTim_XXX	SNVT_count_inc_f
FILE D: ON TIME DELAY	AI	134	S16_XXX[135]	4	3	X01	135	nvoD_OnTmDel_XXX	SNVT_count_inc_f
FILE D: ON THRESHOLD	AI	135	S16_XXX[136]	4	3	X01	136	nvoD_OnThrsh_XXX	SNVT_count_inc_f
FILE D: OFF THRESHOLD	AI	136	S16_XXX[137]	4	3	X01	137	nvoD_OffThrs_XXX	SNVT_count_inc_f
FILE D: FILE CRC	AI	137	S16_XXX[138]	4	3	X01	138	nvoD_FileCRC_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 1	AI	138	S16_XXX[139]	4	3	X01	139	nvoLnOnIR1_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 2	AI	139	S16_XXX[140]	4	3	X01	140	nvoLnOnIR2_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 3	AI	140	S16_XXX[141]	4	3	X01	141	nvoLnOnIR3_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 4	AI	141	S16_XXX[142]	4	3	X01	142	nvoLnOnIR4_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 5	AI	142	S16_XXX[143]	4	3	X01	143	nvoLnOnIR5_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 6	AI	143	S16_XXX[144]	4	3	X01	144	nvoLnOnIR6_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 7	AI	144	S16_XXX[145]	4	3	X01	145	nvoLnOnIR7_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 8	AI	145	S16_XXX[146]	4	3	X01	146	nvoLnOnIR8_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 9	AI	146	S16_XXX[147]	4	3	X01	147	nvoLnOnIR9_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 10	AI	147	S16_XXX[148]	4	3	X01	148	nvoLnOnIR10_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 11	AI	148	S16_XXX[149]	4	3	X01	149	nvoLnOnIR11_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 12	AI	149	S16_XXX[150]	4	3	X01	150	nvoLnOnIR12_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 13	AI	150	S16_XXX[151]	4	3	X01	151	nvoLnOnIR13_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 14	AI	151	S16_XXX[152]	4	3	X01	152	nvoLnOnIR14_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 15	AI	152	S16_XXX[153]	4	3	X01	153	nvoLnOnIR15_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 16	AI	153	S16_XXX[154]	4	3	X01	154	nvoLnOnIR16_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 17	AI	154	S16_XXX[155]	4	3	X01	155	nvoLnOnIR17_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 18	AI	155	S16_XXX[156]	4	3	X01	156	nvoLnOnIR18_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 19	AI	156	S16_XXX[157]	4	3	X01	157	nvoLnOnIR19_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 20	AI	157	S16_XXX[158]	4	3	X01	158	nvoLnOnIR20_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 21	AI	158	S16_XXX[159]	4	3	X01	159	nvoLnOnIR21_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 22	AI	159	S16_XXX[160]	4	3	X01	160	nvoLnOnIR22_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 23	AI	160	S16_XXX[161]	4	3	X01	161	nvoLnOnIR23_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR IR POINT 24	AI	161	S16_XXX[162]	4	3	X01	162	nvoLnOnIR24_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 1	AI	162	S16_XXX[163]	4	3	X01	163	nvoLnOnUV1_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 2	AI	163	S16_XXX[164]	4	3	X01	164	nvoLnOnUV2_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 3	AI	164	S16_XXX[165]	4	3	X01	165	nvoLnOnUV3_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 4	AI	165	S16_XXX[166]	4	3	X01	166	nvoLnOnUV4_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 5	AI	166	S16_XXX[167]	4	3	X01	167	nvoLnOnUV5_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 6	AI	167	S16_XXX[168]	4	3	X01	168	nvoLnOnUV6_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 7	AI	168	S16_XXX[169]	4	3	X01	169	nvoLnOnUV7_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 8	AI	169	S16_XXX[170]	4	3	X01	170	nvoLnOnUV8_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 9	AI	170	S16_XXX[171]	4	3	X01	171	nvoLnOnUV9_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 10	AI	171	S16_XXX[172]	4	3	X01	172	nvoLnOnUV10_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 11	AI	172	S16_XXX[173]	4	3	X01	173	nvoLnOnUV11_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 12	AI	173	S16_XXX[174]	4	3	X01	174	nvoLnOnUV12_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 13	AI	174	S16_XXX[175]	4	3	X01	175	nvoLnOnUV13_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 14	AI	175	S16_XXX[176]	4	3	X01	176	nvoLnOnUV14_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 15	AI	176	S16_XXX[177]	4	3	X01	177	nvoLnOnUV15_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 16	AI	177	S16_XXX[178]	4	3	X01	178	nvoLnOnUV16_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 17	AI	178	S16_XXX[179]	4	3	X01	179	nvoLnOnUV17_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 18	AI	179	S16_XXX[180]	4	3	X01	180	nvoLnOnUV18_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 19	AI	180	S16_XXX[181]	4	3	X01	181	nvoLnOnUV19_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 20	AI	181	S16_XXX[182]	4	3	X01	182	nvoLnOnUV20_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 21	AI	182	S16_XXX[183]	4	3	X01	183	nvoLnOnUV21_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 22	AI	183	S16_XXX[184]	4	3	X01	184	nvoLnOnUV22_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 23	AI	184	S16_XXX[185]	4	3	X01	185	nvoLnOnUV23_XXX	SNVT_count_inc_f
LEARNT AVG ON FFT FOR UV POINT 24	AI	185	S16_XXX[186]	4	3	X01	186	nvoLnOnUV24_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 1	AI	186	S16_XXX[187]	4	3	X01	187	nvoLnOffIR1_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 2	AI	187	S16_XXX[188]	4	3	X01	188	nvoLnOffIR2_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 3	AI	188	S16_XXX[189]	4	3	X01	189	nvoLnOffIR3_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 4	AI	189	S16_XXX[190]	4	3	X01	190	nvoLnOffIR4_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 5	AI	190	S16_XXX[191]	4	3	X01	191	nvoLnOffIR5_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
LEARNT AVG OFF FFT FOR IR POINT 6	AI	191	S16_XXX[192]	4	3	X01	192	nvoLnOffIR6_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 7	AI	192	S16_XXX[193]	4	3	X01	193	nvoLnOffIR7_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 8	AI	193	S16_XXX[194]	4	3	X01	194	nvoLnOffIR8_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 9	AI	194	S16_XXX[195]	4	3	X01	195	nvoLnOffIR9_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 10	AI	195	S16_XXX[196]	4	3	X01	196	nvoLnOffIR10_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 11	AI	196	S16_XXX[197]	4	3	X01	197	nvoLnOffIR11_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 12	AI	197	S16_XXX[198]	4	3	X01	198	nvoLnOffIR12_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 13	AI	198	S16_XXX[199]	4	3	X01	199	nvoLnOffIR13_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 14	AI	199	S16_XXX[200]	4	3	X01	200	nvoLnOffIR14_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 15	AI	200	S16_XXX[201]	4	3	X01	201	nvoLnOffIR15_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 16	AI	201	S16_XXX[202]	4	3	X01	202	nvoLnOffIR16_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 17	AI	202	S16_XXX[203]	4	3	X01	203	nvoLnOffIR17_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 18	AI	203	S16_XXX[204]	4	3	X01	204	nvoLnOffIR18_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 19	AI	204	S16_XXX[205]	4	3	X01	205	nvoLnOffIR19_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 20	AI	205	S16_XXX[206]	4	3	X01	206	nvoLnOffIR20_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 21	AI	206	S16_XXX[207]	4	3	X01	207	nvoLnOffIR21_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 22	AI	207	S16_XXX[208]	4	3	X01	208	nvoLnOffIR22_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 23	AI	208	S16_XXX[209]	4	3	X01	209	nvoLnOffIR23_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR IR POINT 24	AI	209	S16_XXX[210]	4	3	X01	210	nvoLnOffIR24_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 1	AI	210	S16_XXX[211]	4	3	X01	211	nvoLnOffUV1_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 2	AI	211	S16_XXX[212]	4	3	X01	212	nvoLnOffUV2_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 3	AI	212	S16_XXX[213]	4	3	X01	213	nvoLnOffUV3_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 4	AI	213	S16_XXX[214]	4	3	X01	214	nvoLnOffUV4_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 5	AI	214	S16_XXX[215]	4	3	X01	215	nvoLnOffUV5_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 6	AI	215	S16_XXX[216]	4	3	X01	216	nvoLnOffUV6_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 7	AI	216	S16_XXX[217]	4	3	X01	217	nvoLnOffUV7_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 8	AI	217	S16_XXX[218]	4	3	X01	218	nvoLnOffUV8_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 9	AI	218	S16_XXX[219]	4	3	X01	219	nvoLnOffUV9_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 10	AI	219	S16_XXX[220]	4	3	X01	220	nvoLnOffUV10_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 11	AI	220	S16_XXX[221]	4	3	X01	221	nvoLnOffUV11_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 12	AI	221	S16_XXX[222]	4	3	X01	222	nvoLnOffUV12_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 13	AI	222	S16_XXX[223]	4	3	X01	223	nvoLnOffUV13_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 14	AI	223	S16_XXX[224]	4	3	X01	224	nvoLnOffUV14_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 15	AI	224	S16_XXX[225]	4	3	X01	225	nvoLnOffUV15_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 16	AI	225	S16_XXX[226]	4	3	X01	226	nvoLnOffUV16_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 17	AI	226	S16_XXX[227]	4	3	X01	227	nvoLnOffUV17_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 18	AI	227	S16_XXX[228]	4	3	X01	228	nvoLnOffUV18_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 19	AI	228	S16_XXX[229]	4	3	X01	229	nvoLnOffUV19_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 20	AI	229	S16_XXX[230]	4	3	X01	230	nvoLnOffUV20_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 21	AI	230	S16_XXX[231]	4	3	X01	231	nvoLnOffUV21_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 22	AI	231	S16_XXX[232]	4	3	X01	232	nvoLnOffUV22_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 23	AI	232	S16_XXX[233]	4	3	X01	233	nvoLnOffUV23_XXX	SNVT_count_inc_f
LEARNT AVG OFF FFT FOR UV POINT 24	AI	233	S16_XXX[234]	4	3	X01	234	nvoLnOffUV24_XXX	SNVT_count_inc_f
LEARN ON CRC	AI	234	S16_XXX[235]	4	3	X01	235	nvoLrnOnCrc_XXX	SNVT_count_inc_f
LEARN IR HIGHEST RATIO	AI	235	S16_XXX[236]	4	3	X01	236	nvoLrnIRHiRt_XXX	SNVT_count_inc_f
LEARN UV HIGHEST RATIO	AI	236	S16_XXX[237]	4	3	X01	237	nvoLrnUVHiRt_XXX	SNVT_count_inc_f
LEARN OFF IR FEG	AI	237	S16_XXX[238]	4	3	X01	238	nvoLnOfIRFeg_XXX	SNVT_count_inc_f
LEARN OFF UV FEG	AI	238	S16_XXX[239]	4	3	X01	239	nvoLnOfUVFeg_XXX	SNVT_count_inc_f
IR FQ GOAL	AI	239	S16_XXX[240]	4	3	X01	240	nvoIRFqGoal_XXX	SNVT_count_inc_f
UV FQ GOAL	AI	240	S16_XXX[241]	4	3	X01	241	nvoUVFqGoal_XXX	SNVT_count_inc_f
LEARNED ON	AI	241	S16_XXX[242]	4	3	X01	242	nvoLrnOn_XXX	SNVT_count_inc_f
LEARN ON UV FEG	AI	242	S16_XXX[243]	4	3	X01	243	nvoLnOnUVFeg_XXX	SNVT_count_inc_f
LEARN ON IR FEG	AI	243	S16_XXX[244]	4	3	X01	244	nvoLnOnIRFeg_XXX	SNVT_count_inc_f

Appendix D.12 NXTSD507HD_NXTSD512HD Modbus TCP/IP Mappings to Field Protocols

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Current Operational State	AI	1	Srv_XXX[000]	4	3	X01	0	nvoCurOpStat_XXX	SNVT_count_inc_f
Flame Signal Value	AI	2	Srv_XXX[001]	4	3	X01	1	nvoFlmSigVal_XXX	SNVT_count_inc_f
Operational Hour Counter	AI	3	Srv_XXX[002]	4	3	X01	2	nvoOpHrCnt_XXX	SNVT_count_inc_f
Burner Running Hours Counter	AI	4	Srv_XXX[003]	4	3	X01	3	nvoBrnRnHrCt_XXX	SNVT_count_inc_f
Burner Cycle Counter	AI	5	Srv_XXX[004]	4	3	X01	4	nvoBrnCycCnt_XXX	SNVT_count_inc_f
Current Modulation Rate	AI	6	Srv_XXX[005]	4	3	X01	5	nvoCurModRte_XXX	SNVT_count_inc_f
Current Modulation Reason Mode	AI	7	Srv_XXX[006]	4	3	X01	6	nvoCurMdRsMd_XXX	SNVT_count_inc_f
Current Internal Temp	AI	8	Srv_XXX[007]	4	3	X01	7	nvoCurIntTmp_XXX	SNVT_temp_p
Current Profile Commission Point	AI	9	Srv_XXX[008]	4	3	X01	8	nvoCurPrCmPt_XXX	SNVT_count_inc_f
Current Calculated CO2 Value	AI	10	Srv_XXX[009]	4	3	X01	9	nvoCrClCO2Vl_XXX	SNVT_count_inc_f
Controller Type	BI	11	Srv_XXX[010]	4	3	X01	10	nvoCtrlType_XXX	SNVT_switch
Current Profile	AI	12	Srv_XXX[011]	4	3	X01	11	nvoCurrProf_XXX	SNVT_count_inc_f
Burner Control Low Fire	BI	13	Srv_XXX[012]	4	3	X01	12	nvoBrCtLoFr_XXX	SNVT_switch
Burner Control High Fire	BI	14	Srv_XXX[013]	4	3	X01	13	nvoBrCtHiFr_XXX	SNVT_switch
Burner Control Auto	BI	15	Srv_XXX[014]	4	3	X01	14	nvoBrCtAuto_XXX	SNVT_switch
Total Number Of Com Pts In Curr Prof	AI	16	Srv_XXX[015]	4	3	X01	15	nvoToNuCmPt_XXX	SNVT_count_inc_f
Current Profile Com Pts Range	AI	17	Srv_XXX[016]	4	3	X01	16	nvoCrPrCmPt_XXX	SNVT_count_inc_f
Current Digital Input 1	BI	18	Srv_XXX[017]	4	3	X01	17	nvoCurDI1_XXX	SNVT_switch
Current Digital Input 2	BI	19	Srv_XXX[018]	4	3	X01	18	nvoCurDI2_XXX	SNVT_switch
Current Digital Input 3	BI	20	Srv_XXX[019]	4	3	X01	19	nvoCurDI3_XXX	SNVT_switch
Current Digital Input 4	BI	21	Srv_XXX[020]	4	3	X01	20	nvoCurDI4_XXX	SNVT_switch
Current Digital Input 5	BI	22	Srv_XXX[021]	4	3	X01	21	nvoCurDI5_XXX	SNVT_switch
Current Digital Input 6	BI	23	Srv_XXX[022]	4	3	X01	22	nvoCurDI6_XXX	SNVT_switch
Current Digital Input 7	BI	24	Srv_XXX[023]	4	3	X01	23	nvoCurDI7_XXX	SNVT_switch
Current Digital Input 8	BI	25	Srv_XXX[024]	4	3	X01	24	nvoCurDI8_XXX	SNVT_switch
Current Digital Input 9	BI	26	Srv_XXX[025]	4	3	X01	25	nvoCurDI9_XXX	SNVT_switch
Current Digital Input 10	BI	27	Srv_XXX[026]	4	3	X01	26	nvoCurDI10_XXX	SNVT_switch
Current Digital Input 11	BI	28	Srv_XXX[027]	4	3	X01	27	nvoCurDI11_XXX	SNVT_switch
Current Digital Input 12	BI	29	Srv_XXX[028]	4	3	X01	28	nvoCurDI12_XXX	SNVT_switch
Current Digital Input 13	BI	30	Srv_XXX[029]	4	3	X01	29	nvoCurDI13_XXX	SNVT_switch
Current Digital Input 14	BI	31	Srv_XXX[030]	4	3	X01	30	nvoCurDI14_XXX	SNVT_switch
Current Digital Input 15	BI	32	Srv_XXX[031]	4	3	X01	31	nvoCurDI15_XXX	SNVT_switch
Current Digital Input P15.4 Op Ctrl	BI	33	Srv_XXX[032]	4	3	X01	32	nvoCurDIP154_XXX	SNVT_switch
Current VFD 1 Position	AI	34	Srv_XXX[033]	4	3	X01	33	nvoCurVFD1Ps_XXX	SNVT_count_inc_f
Commanded VFD 1 Position	AI	35	Srv_XXX[034]	4	3	X01	34	nvoCmdVFD1Ps_XXX	SNVT_count_inc_f
Current VFD 2 Position	AI	36	Srv_XXX[035]	4	3	X01	35	nvoCurVFD2Ps_XXX	SNVT_count_inc_f
Commanded VFD 2 Position	AI	37	Srv_XXX[036]	4	3	X01	36	nvoCmdVFD2Ps_XXX	SNVT_count_inc_f
Current Running Efficiency	AI	38	Srv_XXX[037]	4	3	X01	37	nvoCurRunEff_XXX	SNVT_count_inc_f
O2 Trim Process Control Variable Val	AI	39	Srv_XXX[038]	4	3	X01	38	nvoO2TrmPrVr_XXX	SNVT_count_inc_f
Current Running Combustion Efficiency	AI	40	Srv_XXX[039]	4	3	X01	39	nvoCrRnCmEff_XXX	SNVT_count_inc_f
O2 Probe Status	AI	41	Srv_XXX[040]	4	3	X01	40	nvoO2PrbSta_XXX	SNVT_count_inc_f
O2 Probe Stack Temp	AI	42	Srv_XXX[041]	4	3	X01	41	nvoO2PrStkTp_XXX	SNVT_count_inc_f
O2 Probe Ambient Temp	AI	43	Srv_XXX[042]	4	3	X01	42	nvoO2PrAmbTp_XXX	SNVT_count_inc_f
O2 Probe O2 Level	AI	44	Srv_XXX[043]	4	3	X01	43	nvoO2PrO2Lvl_XXX	SNVT_count_inc_f
Adc Calib Constant For PCV/Aux1/Aux2	AI	45	Srv_XXX[044]	4	3	X01	44	nvoADCCalCns_XXX	SNVT_count_inc_f
Z Processor Firmware Major Revision	AI	46	Srv_XXX[045]	4	3	X01	45	nvoZPrFwMjRv_XXX	SNVT_count_inc_f
Z Processor Firmware Minor Revision	AI	47	Srv_XXX[046]	4	3	X01	46	nvoZPrFwMnRv_XXX	SNVT_count_inc_f
Hold Off Reason	AI	48	Srv_XXX[047]	4	3	X01	47	nvoHldOffRsn_XXX	SNVT_count_inc_f
Raw A2D Meas Of The Primary Sensor	AI	49	Srv_XXX[048]	4	3	X01	48	nvoA2DPriSen_XXX	SNVT_count_inc_f
Raw A2D Meas Of The Aux 1 Sensor	AI	50	Srv_XXX[049]	4	3	X01	49	nvoA2DAux1Sn_XXX	SNVT_count_inc_f
Raw A2D Meas Of The Aux 2 Sensor	AI	51	Srv_XXX[050]	4	3	X01	50	nvoA2DAux2Sn_XXX	SNVT_count_inc_f
Raw A2D Meas Of Sensor 4	AI	52	Srv_XXX[051]	4	3	X01	51	nvoA2DSen4_XXX	SNVT_count_inc_f
Raw A2D Meas Of Sensor 5	AI	53	Srv_XXX[052]	4	3	X01	52	nvoA2DSen5_XXX	SNVT_count_inc_f
Servo 1 Command	AI	54	Srv_XXX[053]	4	3	X01	53	nvoSv1Cmd_XXX	SNVT_count_inc_f
Servo 1 Data Length	AI	55	Srv_XXX[054]	4	3	X01	54	nvoSv1DatLen_XXX	SNVT_count_inc_f
Servo 1 Speed	AI	56	Srv_XXX[055]	4	3	X01	55	nvoSv1Speed_XXX	SNVT_count_inc_f
Servo 1 Position	AI	57	Srv_XXX[056]	4	3	X01	56	nvoSv1Pos_XXX	SNVT_count_inc_f
Servo 1 Current Position	AI	58	Srv_XXX[057]	4	3	X01	57	nvoSv1CurPos_XXX	SNVT_count_inc_f
Servo 2 Command	AI	59	Srv_XXX[058]	4	3	X01	58	nvoSv2Cmd_XXX	SNVT_count_inc_f
Servo 2 Data Length	AI	60	Srv_XXX[059]	4	3	X01	59	nvoSv2DatLen_XXX	SNVT_count_inc_f
Servo 2 Speed	AI	61	Srv_XXX[060]	4	3	X01	60	nvoSv2Speed_XXX	SNVT_count_inc_f
Servo 2 Position	AI	62	Srv_XXX[061]	4	3	X01	61	nvoSv2Pos_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Servo 2 Commanded Position	AI	63	Srv_XXX[062]	4	3	X01	62	nvoSv2CmdPos_XXX	SNVT_count_inc_f
Servo 2 Current Position	AI	64	Srv_XXX[063]	4	3	X01	63	nvoSv2CurPos_XXX	SNVT_count_inc_f
Servo 3 Command	AI	65	Srv_XXX[064]	4	3	X01	64	nvoSv3Cmd_XXX	SNVT_count_inc_f
Servo 3 Data Length	AI	66	Srv_XXX[065]	4	3	X01	65	nvoSv3DatLen_XXX	SNVT_count_inc_f
Servo 3 Speed	AI	67	Srv_XXX[066]	4	3	X01	66	nvoSv3Speed_XXX	SNVT_count_inc_f
Servo 3 Position	AI	68	Srv_XXX[067]	4	3	X01	67	nvoSv3Pos_XXX	SNVT_count_inc_f
Servo 3 Commanded Position	AI	69	Srv_XXX[068]	4	3	X01	68	nvoSv3CmdPos_XXX	SNVT_count_inc_f
Servo 3 Current Position	AI	70	Srv_XXX[069]	4	3	X01	69	nvoSv3CurPos_XXX	SNVT_count_inc_f
Servo 4 Command	AI	71	Srv_XXX[070]	4	3	X01	70	nvoSv4Cmd_XXX	SNVT_count_inc_f
Servo 4 Data Length	AI	72	Srv_XXX[071]	4	3	X01	71	nvoSv4DatLen_XXX	SNVT_count_inc_f
Servo 4 Speed	AI	73	Srv_XXX[072]	4	3	X01	72	nvoSv4Speed_XXX	SNVT_count_inc_f
Servo 4 Position	AI	74	Srv_XXX[073]	4	3	X01	73	nvoSv4Pos_XXX	SNVT_count_inc_f
Servo 4 Commanded Position	AI	75	Srv_XXX[074]	4	3	X01	74	nvoSv4CmdPos_XXX	SNVT_count_inc_f
Servo 4 Current Position	AI	76	Srv_XXX[075]	4	3	X01	75	nvoSv4CurPos_XXX	SNVT_count_inc_f
Servo 5 Command	AI	77	Srv_XXX[076]	4	3	X01	76	nvoSv5Cmd_XXX	SNVT_count_inc_f
Servo 5 Data Length	AI	78	Srv_XXX[077]	4	3	X01	77	nvoSv5DatLen_XXX	SNVT_count_inc_f
Servo 5 Speed	AI	79	Srv_XXX[078]	4	3	X01	78	nvoSv5Speed_XXX	SNVT_count_inc_f
Servo 5 Position	AI	80	Srv_XXX[079]	4	3	X01	79	nvoSv5Pos_XXX	SNVT_count_inc_f
Servo 5 Commanded Position	AI	81	Srv_XXX[080]	4	3	X01	80	nvoSv5CmdPos_XXX	SNVT_count_inc_f
Servo 5 Current Position	AI	82	Srv_XXX[081]	4	3	X01	81	nvoSv5CurPos_XXX	SNVT_count_inc_f
Servo 6 Command	AI	83	Srv_XXX[082]	4	3	X01	82	nvoSv6Cmd_XXX	SNVT_count_inc_f
Servo 6 Data Length	AI	84	Srv_XXX[083]	4	3	X01	83	nvoSv6DatLen_XXX	SNVT_count_inc_f
Servo 6 Speed	AI	85	Srv_XXX[084]	4	3	X01	84	nvoSv6Speed_XXX	SNVT_count_inc_f
Servo 6 Position	AI	86	Srv_XXX[085]	4	3	X01	85	nvoSv6Pos_XXX	SNVT_count_inc_f
Servo 6 Commanded Position	AI	87	Srv_XXX[086]	4	3	X01	86	nvoSv6CmdPos_XXX	SNVT_count_inc_f
Servo 6 Current Position	AI	88	Srv_XXX[087]	4	3	X01	87	nvoSv6CurPos_XXX	SNVT_count_inc_f
Servo 7 Command	AI	89	Srv_XXX[088]	4	3	X01	88	nvoSv7Cmd_XXX	SNVT_count_inc_f
Servo 7 Data Length	AI	90	Srv_XXX[089]	4	3	X01	89	nvoSv7DatLen_XXX	SNVT_count_inc_f
Servo 7 Speed	AI	91	Srv_XXX[090]	4	3	X01	90	nvoSv7Speed_XXX	SNVT_count_inc_f
Servo 7 Position	AI	92	Srv_XXX[091]	4	3	X01	91	nvoSv7Pos_XXX	SNVT_count_inc_f
Servo 7 Commanded Position	AI	93	Srv_XXX[092]	4	3	X01	92	nvoSv7CmdPos_XXX	SNVT_count_inc_f
Servo 7 Current Position	AI	94	Srv_XXX[093]	4	3	X01	93	nvoSv7CurPos_XXX	SNVT_count_inc_f
Servo 8 Command	AI	95	Srv_XXX[094]	4	3	X01	94	nvoSv8Cmd_XXX	SNVT_count_inc_f
Servo 8 Data Length	AI	96	Srv_XXX[095]	4	3	X01	95	nvoSv8DatLen_XXX	SNVT_count_inc_f
Servo 8 Speed	AI	97	Srv_XXX[096]	4	3	X01	96	nvoSv8Speed_XXX	SNVT_count_inc_f
Servo 8 Position	AI	98	Srv_XXX[097]	4	3	X01	97	nvoSv8Pos_XXX	SNVT_count_inc_f
Servo 8 Commanded Position	AI	99	Srv_XXX[098]	4	3	X01	98	nvoSv8CmdPos_XXX	SNVT_count_inc_f
Servo 8 Current Position	AI	100	Srv_XXX[099]	4	3	X01	99	nvoSv8CurPos_XXX	SNVT_count_inc_f
Servo 9 Command	AI	101	Srv_XXX[100]	4	3	X01	100	nvoSv9Cmd_XXX	SNVT_count_inc_f
Servo 9 Data Length	AI	102	Srv_XXX[101]	4	3	X01	101	nvoSv9DatLen_XXX	SNVT_count_inc_f
Servo 9 Speed	AI	103	Srv_XXX[102]	4	3	X01	102	nvoSv9Speed_XXX	SNVT_count_inc_f
Servo 9 Position	AI	104	Srv_XXX[103]	4	3	X01	103	nvoSv9Pos_XXX	SNVT_count_inc_f
Servo 9 Commanded Position	AI	105	Srv_XXX[104]	4	3	X01	104	nvoSv9CmdPos_XXX	SNVT_count_inc_f
Servo 9 Current Position	AI	106	Srv_XXX[105]	4	3	X01	105	nvoSv9CurPos_XXX	SNVT_count_inc_f
Servo 10 Command	AI	107	Srv_XXX[106]	4	3	X01	106	nvoSv10Cmd_XXX	SNVT_count_inc_f
Servo 10 Data Length	AI	108	Srv_XXX[107]	4	3	X01	107	nvoSv10DatLn_XXX	SNVT_count_inc_f
Servo 10 Speed	AI	109	Srv_XXX[108]	4	3	X01	108	nvoSv10Speed_XXX	SNVT_count_inc_f
Servo 10 Position	AI	110	Srv_XXX[109]	4	3	X01	109	nvoSv10Pos_XXX	SNVT_count_inc_f
Servo 10 Commanded Position	AI	111	Srv_XXX[110]	4	3	X01	110	nvoSv10CmdPs_XXX	SNVT_count_inc_f
Servo 10 Current Position	AI	112	Srv_XXX[111]	4	3	X01	111	nvoSv10CurPs_XXX	SNVT_count_inc_f
Fsg Board Type	AI	113	Srv_XXX[112]	4	3	X01	112	nvoFSGBrdTyp_XXX	SNVT_count_inc_f
Profile 1 Minimum Modulation	AI	114	Srv_XXX[113]	4	3	X01	113	nvoPr1MinMod_XXX	SNVT_count_inc_f
Profile 2 Minimum Modulation	AI	115	Srv_XXX[114]	4	3	X01	114	nvoPr2MinMod_XXX	SNVT_count_inc_f
Profile 3 Minimum Modulation	AI	116	Srv_XXX[115]	4	3	X01	115	nvoPr3MinMod_XXX	SNVT_count_inc_f
Profile 4 Minimum Modulation	AI	117	Srv_XXX[116]	4	3	X01	116	nvoPr4MinMod_XXX	SNVT_count_inc_f
Controller Revision String	AI	118	Srv_XXX[117]	4	3	X01	117	nvoCtrRegStr_XXX	SNVT_count_inc_f
Helper Cpu Major Revision Number	AI	119	Srv_XXX[118]	4	3	X01	118	nvoHlCPUMjRv_XXX	SNVT_count_inc_f
Helper Cpu Minor Revision Number	AI	120	Srv_XXX[119]	4	3	X01	119	nvoHlCPUMnRv_XXX	SNVT_count_inc_f
VFD Cpu Minor Revision Number	AI	121	Srv_XXX[120]	4	3	X01	120	nvoVFDCPUMnR_XXX	SNVT_count_inc_f
VFD Cpu Major Revision Number	AI	122	Srv_XXX[121]	4	3	X01	121	nvoVFDCPUMjR_XXX	SNVT_count_inc_f
Fsg Cpu Minor Revision Number	AI	123	Srv_XXX[122]	4	3	X01	122	nvoFsgCPUMnR_XXX	SNVT_count_inc_f
Fsg Cpu Major Revision Number	AI	124	Srv_XXX[123]	4	3	X01	123	nvoFsgCPUMjR_XXX	SNVT_count_inc_f
Next Index	AI	125	Srv_XXX[124]	4	3	X01	124	nvoNextIndex_XXX	SNVT_count_inc_f
Lockout History	AI	126	Srv_XXX[125]	4	3	X01	125	nvoLckotHist_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Current Active Error Number	AI	127	Srv_XXX[126]	4	3	X01	126	nvoCurActErr_XXX	SNVT_count_inc_f
Total Number Of Errors Detected	AI	128	Srv_XXX[127]	4	3	X01	127	nvoNumErrDet_XXX	SNVT_count_inc_f
Lockout History 1 Operation State	AI	129	Srv_XXX[128]	4	3	X01	128	nvoLH1_OpSt_XXX	SNVT_count_inc_f
Lockout History 1 Profile Position	AI	130	Srv_XXX[129]	4	3	X01	129	nvoLH1_PrPos_XXX	SNVT_count_inc_f
Lockout History 1 Error Code	AI	131	Srv_XXX[130]	4	3	X01	130	nvoLH1_ErrCd_XXX	SNVT_count_inc_f
Lockout History 1 Sec	AI	132	Srv_XXX[131]	4	3	X01	131	nvoLH1_Sec_XXX	SNVT_count_inc_f
Lockout History 1 Min	AI	133	Srv_XXX[132]	4	3	X01	132	nvoLH1_Min_XXX	SNVT_count_inc_f
Lockout History 1 Hour	AI	134	Srv_XXX[133]	4	3	X01	133	nvoLH1_Hr_XXX	SNVT_count_inc_f
Lockout History 1 Date	AI	135	Srv_XXX[134]	4	3	X01	134	nvoLH1_Date_XXX	SNVT_count_inc_f
Lockout History 1 Month	AI	136	Srv_XXX[135]	4	3	X01	135	nvoLH1_Month_XXX	SNVT_count_inc_f
Lockout History 1 Day	AI	137	Srv_XXX[136]	4	3	X01	136	nvoLH1_Day_XXX	SNVT_count_inc_f
Lockout History 1 Year	AI	138	Srv_XXX[137]	4	3	X01	137	nvoLH1_Year_XXX	SNVT_count_inc_f
Lockout History 2 Operation State	AI	139	Srv_XXX[138]	4	3	X01	138	nvoLH2_OpSt_XXX	SNVT_count_inc_f
Lockout History 2 Profile Position	AI	140	Srv_XXX[139]	4	3	X01	139	nvoLH2_PrPos_XXX	SNVT_count_inc_f
Lockout History 2 Error Code	AI	141	Srv_XXX[140]	4	3	X01	140	nvoLH2_ErrCd_XXX	SNVT_count_inc_f
Lockout History 2 Sec	AI	142	Srv_XXX[141]	4	3	X01	141	nvoLH2_Sec_XXX	SNVT_count_inc_f
Lockout History 2 Min	AI	143	Srv_XXX[142]	4	3	X01	142	nvoLH2_Min_XXX	SNVT_count_inc_f
Lockout History 2 Hour	AI	144	Srv_XXX[143]	4	3	X01	143	nvoLH2_Hr_XXX	SNVT_count_inc_f
Lockout History 2 Date	AI	145	Srv_XXX[144]	4	3	X01	144	nvoLH2_Date_XXX	SNVT_count_inc_f
Lockout History 2 Month	AI	146	Srv_XXX[145]	4	3	X01	145	nvoLH2_Month_XXX	SNVT_count_inc_f
Lockout History 2 Day	AI	147	Srv_XXX[146]	4	3	X01	146	nvoLH2_Day_XXX	SNVT_count_inc_f
Lockout History 2 Year	AI	148	Srv_XXX[147]	4	3	X01	147	nvoLH2_Year_XXX	SNVT_count_inc_f
Lockout History 3 Operation State	AI	149	Srv_XXX[148]	4	3	X01	148	nvoLH3_OpSt_XXX	SNVT_count_inc_f
Lockout History 3 Profile Position	AI	150	Srv_XXX[149]	4	3	X01	149	nvoLH3_PrPos_XXX	SNVT_count_inc_f
Lockout History 3 Error Code	AI	151	Srv_XXX[150]	4	3	X01	150	nvoLH3_ErrCd_XXX	SNVT_count_inc_f
Lockout History 3 Sec	AI	152	Srv_XXX[151]	4	3	X01	151	nvoLH3_Sec_XXX	SNVT_count_inc_f
Lockout History 3 Min	AI	153	Srv_XXX[152]	4	3	X01	152	nvoLH3_Min_XXX	SNVT_count_inc_f
Lockout History 3 Hour	AI	154	Srv_XXX[153]	4	3	X01	153	nvoLH3_Hr_XXX	SNVT_count_inc_f
Lockout History 3 Date	AI	155	Srv_XXX[154]	4	3	X01	154	nvoLH3_Date_XXX	SNVT_count_inc_f
Lockout History 3 Month	AI	156	Srv_XXX[155]	4	3	X01	155	nvoLH3_Month_XXX	SNVT_count_inc_f
Lockout History 3 Day	AI	157	Srv_XXX[156]	4	3	X01	156	nvoLH3_Day_XXX	SNVT_count_inc_f
Lockout History 3 Year	AI	158	Srv_XXX[157]	4	3	X01	157	nvoLH3_Year_XXX	SNVT_count_inc_f
Lockout History 4 Operation State	AI	159	Srv_XXX[158]	4	3	X01	158	nvoLH4_OpSt_XXX	SNVT_count_inc_f
Lockout History 4 Profile Position	AI	160	Srv_XXX[159]	4	3	X01	159	nvoLH4_PrPos_XXX	SNVT_count_inc_f
Lockout History 4 Error Code	AI	161	Srv_XXX[160]	4	3	X01	160	nvoLH4_ErrCd_XXX	SNVT_count_inc_f
Lockout History 4 Sec	AI	162	Srv_XXX[161]	4	3	X01	161	nvoLH4_Sec_XXX	SNVT_count_inc_f
Lockout History 4 Min	AI	163	Srv_XXX[162]	4	3	X01	162	nvoLH4_Min_XXX	SNVT_count_inc_f
Lockout History 4 Hour	AI	164	Srv_XXX[163]	4	3	X01	163	nvoLH4_Hr_XXX	SNVT_count_inc_f
Lockout History 4 Date	AI	165	Srv_XXX[164]	4	3	X01	164	nvoLH4_Date_XXX	SNVT_count_inc_f
Lockout History 4 Month	AI	166	Srv_XXX[165]	4	3	X01	165	nvoLH4_Month_XXX	SNVT_count_inc_f
Lockout History 4 Day	AI	167	Srv_XXX[166]	4	3	X01	166	nvoLH4_Day_XXX	SNVT_count_inc_f
Lockout History 4 Year	AI	168	Srv_XXX[167]	4	3	X01	167	nvoLH4_Year_XXX	SNVT_count_inc_f
Lockout History 5 Operation State	AI	169	Srv_XXX[168]	4	3	X01	168	nvoLH5_OpSt_XXX	SNVT_count_inc_f
Lockout History 5 Profile Position	AI	170	Srv_XXX[169]	4	3	X01	169	nvoLH5_PrPos_XXX	SNVT_count_inc_f
Lockout History 5 Error Code	AI	171	Srv_XXX[170]	4	3	X01	170	nvoLH5_ErrCd_XXX	SNVT_count_inc_f
Lockout History 5 Sec	AI	172	Srv_XXX[171]	4	3	X01	171	nvoLH5_Sec_XXX	SNVT_count_inc_f
Lockout History 5 Min	AI	173	Srv_XXX[172]	4	3	X01	172	nvoLH5_Min_XXX	SNVT_count_inc_f
Lockout History 5 Hour	AI	174	Srv_XXX[173]	4	3	X01	173	nvoLH5_Hr_XXX	SNVT_count_inc_f
Lockout History 5 Date	AI	175	Srv_XXX[174]	4	3	X01	174	nvoLH5_Date_XXX	SNVT_count_inc_f
Lockout History 5 Month	AI	176	Srv_XXX[175]	4	3	X01	175	nvoLH5_Month_XXX	SNVT_count_inc_f
Lockout History 5 Day	AI	177	Srv_XXX[176]	4	3	X01	176	nvoLH5_Day_XXX	SNVT_count_inc_f
Lockout History 5 Year	AI	178	Srv_XXX[177]	4	3	X01	177	nvoLH5_Year_XXX	SNVT_count_inc_f
Lockout History 6 Operation State	AI	179	Srv_XXX[178]	4	3	X01	178	nvoLH6_OpSt_XXX	SNVT_count_inc_f
Lockout History 6 Profile Position	AI	180	Srv_XXX[179]	4	3	X01	179	nvoLH6_PrPos_XXX	SNVT_count_inc_f
Lockout History 6 Error Code	AI	181	Srv_XXX[180]	4	3	X01	180	nvoLH6_ErrCd_XXX	SNVT_count_inc_f
Lockout History 6 Sec	AI	182	Srv_XXX[181]	4	3	X01	181	nvoLH6_Sec_XXX	SNVT_count_inc_f
Lockout History 6 Min	AI	183	Srv_XXX[182]	4	3	X01	182	nvoLH6_Min_XXX	SNVT_count_inc_f
Lockout History 6 Hour	AI	184	Srv_XXX[183]	4	3	X01	183	nvoLH6_Hr_XXX	SNVT_count_inc_f
Lockout History 6 Date	AI	185	Srv_XXX[184]	4	3	X01	184	nvoLH6_Date_XXX	SNVT_count_inc_f
Lockout History 6 Month	AI	186	Srv_XXX[185]	4	3	X01	185	nvoLH6_Month_XXX	SNVT_count_inc_f
Lockout History 6 Day	AI	187	Srv_XXX[186]	4	3	X01	186	nvoLH6_Day_XXX	SNVT_count_inc_f
Lockout History 6 Year	AI	188	Srv_XXX[187]	4	3	X01	187	nvoLH6_Year_XXX	SNVT_count_inc_f
Lockout History 7 Operation State	AI	189	Srv_XXX[188]	4	3	X01	188	nvoLH7_OpSt_XXX	SNVT_count_inc_f
Lockout History 7 Profile Position	AI	190	Srv_XXX[189]	4	3	X01	189	nvoLH7_PrPos_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Lockout History 7 Error Code	AI	191	Srv_XXX[190]	4	3	X01	190	nvoLH7_ErrCd_XXX	SNVT_count_inc_f
Lockout History 7 Sec	AI	192	Srv_XXX[191]	4	3	X01	191	nvoLH7_Sec_XXX	SNVT_count_inc_f
Lockout History 7 Min	AI	193	Srv_XXX[192]	4	3	X01	192	nvoLH7_Min_XXX	SNVT_count_inc_f
Lockout History 7 Hour	AI	194	Srv_XXX[193]	4	3	X01	193	nvoLH7_Hr_XXX	SNVT_count_inc_f
Lockout History 7 Date	AI	195	Srv_XXX[194]	4	3	X01	194	nvoLH7_Date_XXX	SNVT_count_inc_f
Lockout History 7 Month	AI	196	Srv_XXX[195]	4	3	X01	195	nvoLH7_Month_XXX	SNVT_count_inc_f
Lockout History 7 Day	AI	197	Srv_XXX[196]	4	3	X01	196	nvoLH7_Day_XXX	SNVT_count_inc_f
Lockout History 7 Year	AI	198	Srv_XXX[197]	4	3	X01	197	nvoLH7_Year_XXX	SNVT_count_inc_f
Lockout History 8 Operation State	AI	199	Srv_XXX[198]	4	3	X01	198	nvoLH8_OpSt_XXX	SNVT_count_inc_f
Lockout History 8 Profile Position	AI	200	Srv_XXX[199]	4	3	X01	199	nvoLH8_PrPos_XXX	SNVT_count_inc_f
Lockout History 8 Error Code	AI	201	Srv_XXX[200]	4	3	X01	200	nvoLH8_ErrCd_XXX	SNVT_count_inc_f
Lockout History 8 Sec	AI	202	Srv_XXX[201]	4	3	X01	201	nvoLH8_Sec_XXX	SNVT_count_inc_f
Lockout History 8 Min	AI	203	Srv_XXX[202]	4	3	X01	202	nvoLH8_Min_XXX	SNVT_count_inc_f
Lockout History 8 Hour	AI	204	Srv_XXX[203]	4	3	X01	203	nvoLH8_Hr_XXX	SNVT_count_inc_f
Lockout History 8 Date	AI	205	Srv_XXX[204]	4	3	X01	204	nvoLH8_Date_XXX	SNVT_count_inc_f
Lockout History 8 Month	AI	206	Srv_XXX[205]	4	3	X01	205	nvoLH8_Month_XXX	SNVT_count_inc_f
Lockout History 8 Day	AI	207	Srv_XXX[206]	4	3	X01	206	nvoLH8_Day_XXX	SNVT_count_inc_f
Lockout History 8 Year	AI	208	Srv_XXX[207]	4	3	X01	207	nvoLH8_Year_XXX	SNVT_count_inc_f
Lockout History 9 Operation State	AI	209	Srv_XXX[208]	4	3	X01	208	nvoLH9_OpSt_XXX	SNVT_count_inc_f
Lockout History 9 Profile Position	AI	210	Srv_XXX[209]	4	3	X01	209	nvoLH9_PrPos_XXX	SNVT_count_inc_f
Lockout History 9 Error Code	AI	211	Srv_XXX[210]	4	3	X01	210	nvoLH9_ErrCd_XXX	SNVT_count_inc_f
Lockout History 9 Sec	AI	212	Srv_XXX[211]	4	3	X01	211	nvoLH9_Sec_XXX	SNVT_count_inc_f
Lockout History 9 Min	AI	213	Srv_XXX[212]	4	3	X01	212	nvoLH9_Min_XXX	SNVT_count_inc_f
Lockout History 9 Hour	AI	214	Srv_XXX[213]	4	3	X01	213	nvoLH9_Hr_XXX	SNVT_count_inc_f
Lockout History 9 Date	AI	215	Srv_XXX[214]	4	3	X01	214	nvoLH9_Date_XXX	SNVT_count_inc_f
Lockout History 9 Month	AI	216	Srv_XXX[215]	4	3	X01	215	nvoLH9_Month_XXX	SNVT_count_inc_f
Lockout History 9 Day	AI	217	Srv_XXX[216]	4	3	X01	216	nvoLH9_Day_XXX	SNVT_count_inc_f
Lockout History 9 Year	AI	218	Srv_XXX[217]	4	3	X01	217	nvoLH9_Year_XXX	SNVT_count_inc_f
Lockout History 10 Operation State	AI	219	Srv_XXX[218]	4	3	X01	218	nvoLH10OpSt_XXX	SNVT_count_inc_f
Lockout History 10 Profile Position	AI	220	Srv_XXX[219]	4	3	X01	219	nvoLH10PrPos_XXX	SNVT_count_inc_f
Lockout History 10 Error Code	AI	221	Srv_XXX[220]	4	3	X01	220	nvoLH10ErrCd_XXX	SNVT_count_inc_f
Lockout History 10 Sec	AI	222	Srv_XXX[221]	4	3	X01	221	nvoLH10Sec_XXX	SNVT_count_inc_f
Lockout History 10 Min	AI	223	Srv_XXX[222]	4	3	X01	222	nvoLH10Min_XXX	SNVT_count_inc_f
Lockout History 10 Hour	AI	224	Srv_XXX[223]	4	3	X01	223	nvoLH10Hr_XXX	SNVT_count_inc_f
Lockout History 10 Date	AI	225	Srv_XXX[224]	4	3	X01	224	nvoLH10Date_XXX	SNVT_count_inc_f
Lockout History 10 Month	AI	226	Srv_XXX[225]	4	3	X01	225	nvoLH10Month_XXX	SNVT_count_inc_f
Lockout History 10 Day	AI	227	Srv_XXX[226]	4	3	X01	226	nvoLH10Day_XXX	SNVT_count_inc_f
Lockout History 10 Year	AI	228	Srv_XXX[227]	4	3	X01	227	nvoLH10Year_XXX	SNVT_count_inc_f
Engineering Units	BI	229	Srv_XXX[228]	4	3	X01	228	nvoEngrUnits_XXX	SNVT_switch
Spare	AI	230	Srv_XXX[229]	4	3	X01	229	nvoSpare_XXX	SNVT_count_inc_f
Sensor 1 Type	AI	231	Srv_XXX[230]	4	3	X01	230	nvoSen1Type_XXX	SNVT_count_inc_f
Sensor 1 Range	AI	232	Srv_XXX[231]	4	3	X01	231	nvoSen1Range_XXX	SNVT_count_inc_f
Sensor 2 Type	AI	233	Srv_XXX[232]	4	3	X01	232	nvoSen2Type_XXX	SNVT_count_inc_f
Sensor 2 Range	AI	234	Srv_XXX[233]	4	3	X01	233	nvoSen2Range_XXX	SNVT_count_inc_f
Sensor 3 Type	AI	235	Srv_XXX[234]	4	3	X01	234	nvoSen3Type_XXX	SNVT_count_inc_f
Sensor 3 Range	AI	236	Srv_XXX[235]	4	3	X01	235	nvoSen3Range_XXX	SNVT_count_inc_f
Sensor 4 Type	AI	237	Srv_XXX[236]	4	3	X01	236	nvoSen4Type_XXX	SNVT_count_inc_f
Sensor 4 Range	AI	238	Srv_XXX[237]	4	3	X01	237	nvoSen4Range_XXX	SNVT_count_inc_f
Sensor 5 Type	AI	239	Srv_XXX[238]	4	3	X01	238	nvoSen5Type_XXX	SNVT_count_inc_f
Sensor 5 Range	AI	240	Srv_XXX[239]	4	3	X01	239	nvoSen5Range_XXX	SNVT_count_inc_f
Setpoint 1 Use	AI	241	Srv_XXX[240]	4	3	X01	240	nvoSP1Use_XXX	SNVT_count_inc_f
Setpoint 1 Limit Type	BI	242	Srv_XXX[241]	4	3	X01	241	nvoSP1LimTyp_XXX	SNVT_switch
Setpoint 1 Integral	AI	243	Srv_XXX[242]	4	3	X01	242	nvoSP1Integ_XXX	SNVT_count_inc_f
Setpoint 1 Derivative	AI	244	Srv_XXX[243]	4	3	X01	243	nvoSP1Deriv_XXX	SNVT_count_inc_f
Setpoint 1 Value	AI	245	Srv_XXX[244]	4	3	X01	244	nvoSP1Val_XXX	SNVT_count_inc_f
Setpoint 1 Cut In	AI	246	Srv_XXX[245]	4	3	X01	245	nvoSP1CutIn_XXX	SNVT_count_inc_f
Setpoint 1 Cut Out	AI	247	Srv_XXX[246]	4	3	X01	246	nvoSP1CutOut_XXX	SNVT_count_inc_f
Setpoint 1 High Margin Limit	AI	248	Srv_XXX[247]	4	3	X01	247	nvoSP1HiMgLm_XXX	SNVT_count_inc_f
Setpoint 1 High Alarm Limit	AI	249	Srv_XXX[248]	4	3	X01	248	nvoSP1HiAlLm_XXX	SNVT_count_inc_f
Setpoint 2 Use	AI	250	Srv_XXX[249]	4	3	X01	249	nvoSP2Use_XXX	SNVT_count_inc_f
Setpoint 2 Limit Type	BI	251	Srv_XXX[250]	4	3	X01	250	nvoSP2LimTyp_XXX	SNVT_switch
Setpoint 2 Integral	AI	252	Srv_XXX[251]	4	3	X01	251	nvoSP2Integ_XXX	SNVT_count_inc_f
Setpoint 2 Derivative	AI	253	Srv_XXX[252]	4	3	X01	252	nvoSP2Deriv_XXX	SNVT_count_inc_f
Setpoint 2 Value	AI	254	Srv_XXX[253]	4	3	X01	253	nvoSP2Val_XXX	SNVT_count_inc_f

Point Name	BACnet Object Type	BACnet Object ID	EIP Tag Name	EIP Class	EIP Attribute	EIP Address	EIP Offset	LonWorks Name	LonWorks SNVT Type
Setpoint 2 Cut In	AI	255	Srv_XXX[254]	4	3	X01	254	nvoSP2CutIn_XXX	SNVT_count_inc_f
Setpoint 2 Cut Out	AI	256	Srv_XXX[255]	4	3	X01	255	nvoSP2CutOut_XXX	SNVT_count_inc_f
Setpoint 2 High Margin Limit	AI	257	Srv_XXX[256]	4	3	X01	256	nvoSP2HiMgLm_XXX	SNVT_count_inc_f
Setpoint 2 High Alarm Limit	AI	258	Srv_XXX[257]	4	3	X01	257	nvoSP2HiAlLm_XXX	SNVT_count_inc_f
Setpoint 3 Use	AI	259	Srv_XXX[258]	4	3	X01	258	nvoSP3Use_XXX	SNVT_count_inc_f
Setpoint 3 Limit Type	BI	260	Srv_XXX[259]	4	3	X01	259	nvoSP3LimTyp_XXX	SNVT_switch
Setpoint 3 Integral	AI	261	Srv_XXX[260]	4	3	X01	260	nvoSP3Integ_XXX	SNVT_count_inc_f
Setpoint 3 Derivative	AI	262	Srv_XXX[261]	4	3	X01	261	nvoSP3Deriv_XXX	SNVT_count_inc_f
Setpoint 3 Value	AI	263	Srv_XXX[262]	4	3	X01	262	nvoSP3Val_XXX	SNVT_count_inc_f
Setpoint 3 Cut In	AI	264	Srv_XXX[263]	4	3	X01	263	nvoSP3CutIn_XXX	SNVT_count_inc_f
Setpoint 3 Cut Out	AI	265	Srv_XXX[264]	4	3	X01	264	nvoSP3CutOut_XXX	SNVT_count_inc_f
Setpoint 3 High Margin Limit	AI	266	Srv_XXX[265]	4	3	X01	265	nvoSP3HiMgLm_XXX	SNVT_count_inc_f
Setpoint 3 High Alarm Limit	AI	267	Srv_XXX[266]	4	3	X01	266	nvoSP3HiAlLm_XXX	SNVT_count_inc_f
Valve Proving Test Time 1	AI	268	Srv_XXX[267]	4	3	X01	267	nvoVlPrTsTm1_XXX	SNVT_count_inc_f
Valve Proving Test Time 2	AI	269	Srv_XXX[268]	4	3	X01	268	nvoVlPrTsTm2_XXX	SNVT_count_inc_f
Valve Proving Test Duration	BI	270	Srv_XXX[269]	4	3	X01	269	nvoVlPrTsDur_XXX	SNVT_switch
Valve Proving Test Method	AI	271	Srv_XXX[270]	4	3	X01	270	nvoVlPrTsMth_XXX	SNVT_count_inc_f
PCV Sensor Value	AI	272	Srv_XXX[271]	4	3	X01	271	nvoPCVSenVal_XXX	SNVT_count_inc_f
Measured Value	AI	273	Srv_XXX[272]	4	3	X01	272	nvoMeasVal_XXX	SNVT_count_inc_f
Profile 1 Name	AI	274	Srv_XXX[273]	4	3	X01	273	nvoPrf1Name_XXX	SNVT_count_inc_f
Profile 1 Max Modulation	AI	275	Srv_XXX[274]	4	3	X01	274	nvoPrf1MxMod_XXX	SNVT_count_inc_f
Profile 2 Name	AI	276	Srv_XXX[275]	4	3	X01	275	nvoPrf2Name_XXX	SNVT_count_inc_f
Profile 2 Max Modulation	AI	277	Srv_XXX[276]	4	3	X01	276	nvoPrf2MxMod_XXX	SNVT_count_inc_f
Profile 3 Name	AI	278	Srv_XXX[277]	4	3	X01	277	nvoPrf3Name_XXX	SNVT_count_inc_f
Profile 3 Max Modulation	AI	279	Srv_XXX[278]	4	3	X01	278	nvoPrf3MxMod_XXX	SNVT_count_inc_f
Profile 4 Name	AI	280	Srv_XXX[279]	4	3	X01	279	nvoPrf4Name_XXX	SNVT_count_inc_f
Profile 4 Max Modulation	AI	281	Srv_XXX[280]	4	3	X01	280	nvoPrf4MxMod_XXX	SNVT_count_inc_f
FSG Prove Air Flow	BI	282	Srv_XXX[281]	4	3	X01	281	nvoFSGPrArFl_XXX	SNVT_switch
Recycle	BI	283	Srv_XXX[282]	4	3	X01	282	nvoRecycle_XXX	SNVT_switch
PTFI Time	AI	284	Srv_XXX[283]	4	3	X01	283	nvoPTFITime_XXX	SNVT_count_inc_f
MTFI Time	AI	285	Srv_XXX[284]	4	3	X01	284	nvoMTFITime_XXX	SNVT_count_inc_f
Intermittent Pilot	BI	286	Srv_XXX[285]	4	3	X01	285	nvoIntrPilot_XXX	SNVT_switch
FFRT Time	AI	287	Srv_XXX[286]	4	3	X01	286	nvoFFRTTime_XXX	SNVT_count_inc_f
Profile Select	AI	288	Srv_XXX[287]	4	3	X01	287	nvoProfSel_XXX	SNVT_count_inc_f
Post Purge Time	AI	289	Srv_XXX[288]	4	3	X01	288	nvoPstPrgTme_XXX	SNVT_count_inc_f
Sensor 1 Value	AI	290	Srv_XXX[289]	4	3	X01	289	nvoSen1Val_XXX	SNVT_count_inc_f
Sensor 2 Value	AI	291	Srv_XXX[290]	4	3	X01	290	nvoSen2Val_XXX	SNVT_count_inc_f
Sensor 3 Value	AI	292	Srv_XXX[291]	4	3	X01	291	nvoSen3Val_XXX	SNVT_count_inc_f
Sensor 4 Value	AI	293	Srv_XXX[292]	4	3	X01	292	nvoSen4Val_XXX	SNVT_count_inc_f
Sensor 5 Value	AI	294	Srv_XXX[293]	4	3	X01	293	nvoSen5Val_XXX	SNVT_count_inc_f
Reset Command	AI	295	Srv_XXX[294]	4	3	X01	294	nvoResetCmd_XXX	SNVT_count_inc_f
Keypad Control Off/On	BV	296	Srv_XXX[295]	4	3	X01	295	nvi/nvoKuCtOffOn_XXX	SNVT_switch
Keypad Control Low Fire	BV	297	Srv_XXX[296]	4	3	X01	296	nvi/nvoKuCtLoFir_XXX	SNVT_switch
Keypad Control Lead/Lag	BV	298	Srv_XXX[297]	4	3	X01	297	nvi/nvoKuCtLdLag_XXX	SNVT_switch
Keypad Control Auto/Manual	BV	299	Srv_XXX[298]	4	3	X01	298	nvi/nvoKuCtAutMn_XXX	SNVT_switch
Keypad Manual Modulation Rate	AV	300	Srv_XXX[299]	4	3	X01	299	nvi/nvoKuMnMdRte_XXX	SNVT_count_inc_f
Force Analog 0 Output	AV	301	Srv_XXX[300]	4	3	X01	300	nvi/nvoFrcAO_XXX	SNVT_count_inc_f
Force VFD 1 Output	AV	302	Srv_XXX[301]	4	3	X01	301	nvi/nvoFrcVFD1Ot_XXX	SNVT_count_inc_f
Force VFD 2 Output	AV	303	Srv_XXX[302]	4	3	X01	302	nvi/nvoFrcVFD2Ot_XXX	SNVT_count_inc_f
Force User Output 1	BV	304	Srv_XXX[303]	4	3	X01	303	nvi/nvoFrcUsrOt1_XXX	SNVT_switch
Force User Output 2	BV	305	Srv_XXX[304]	4	3	X01	304	nvi/nvoFrcUsrOt2_XXX	SNVT_switch
Force User Output 3	BV	306	Srv_XXX[305]	4	3	X01	305	nvi/nvoFrcUsrOt3_XXX	SNVT_switch