



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

Support Contact Information:

Fireeye, 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.fireeye.com/Home/ContactUs>.

Website: www.fireeye.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



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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



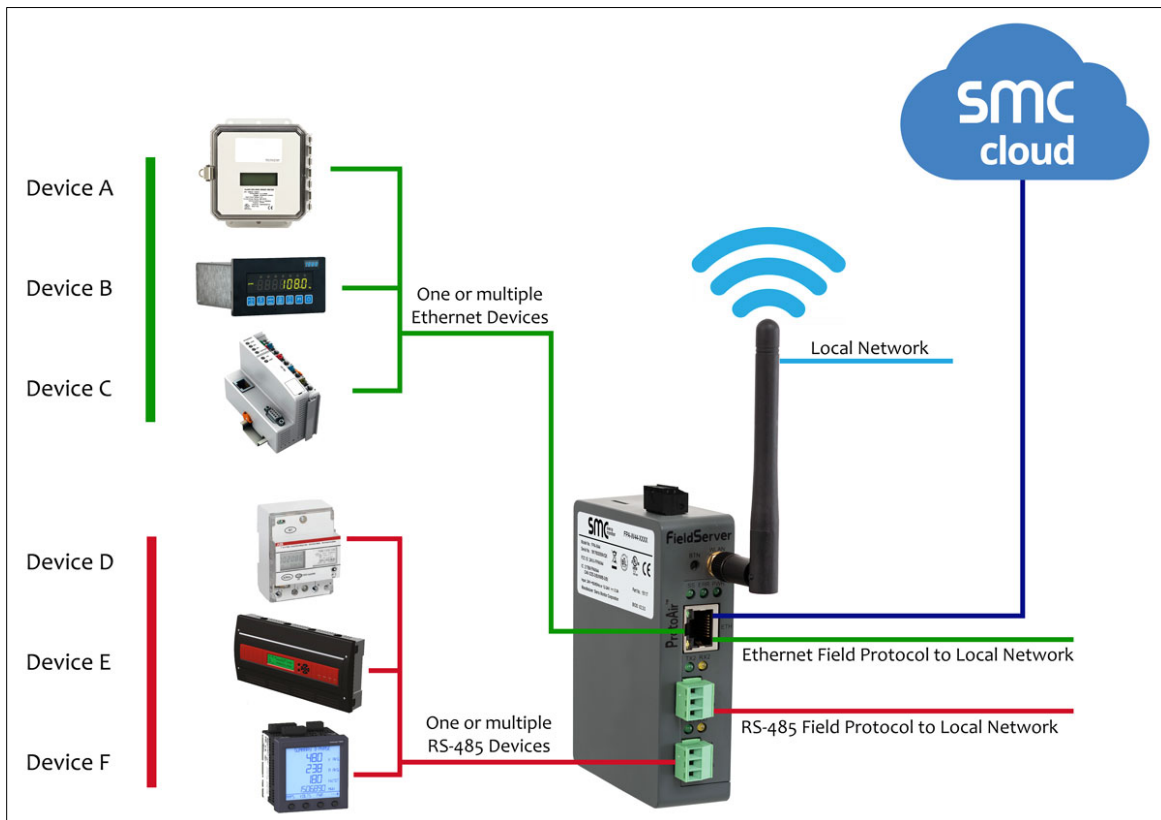
3 INTRODUCTION

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 Fireeye'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**.

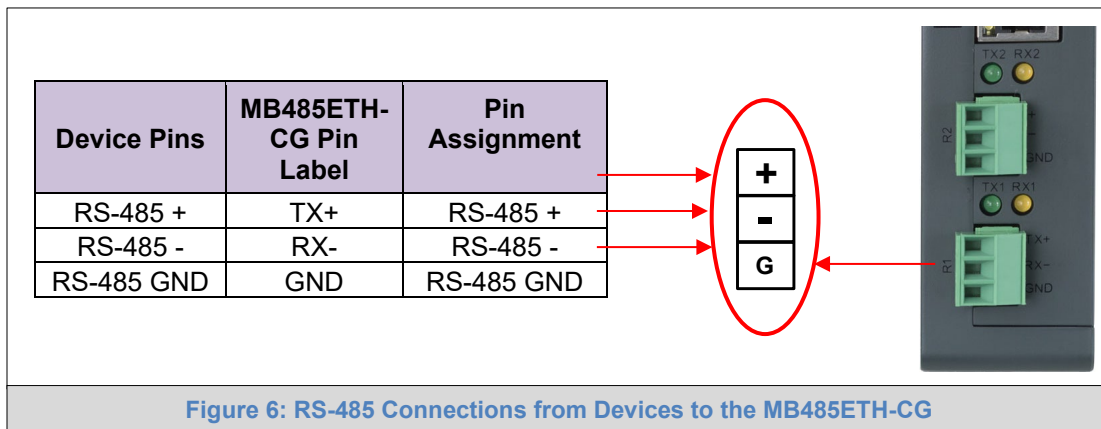
NOTE: Using an external antenna is also an option. An external antenna can be plugged into the SMA connector. The best antenna for the job depends on the range, topography and obstacles between the two radios.

5 INTERFACING MB485ETH-CG TO DEVICES

5.1 Device Connections to MB485ETH-CG

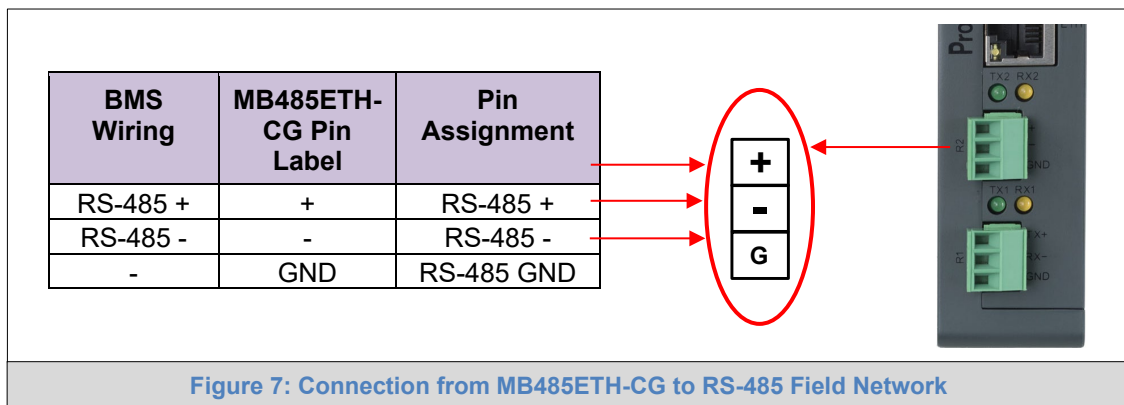
The MB485ETH-CG has a 3-pin Phoenix connector for connecting RS-485 devices on the R1 port. See specific device bulletins for details on how to properly connect Modbus to each.

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

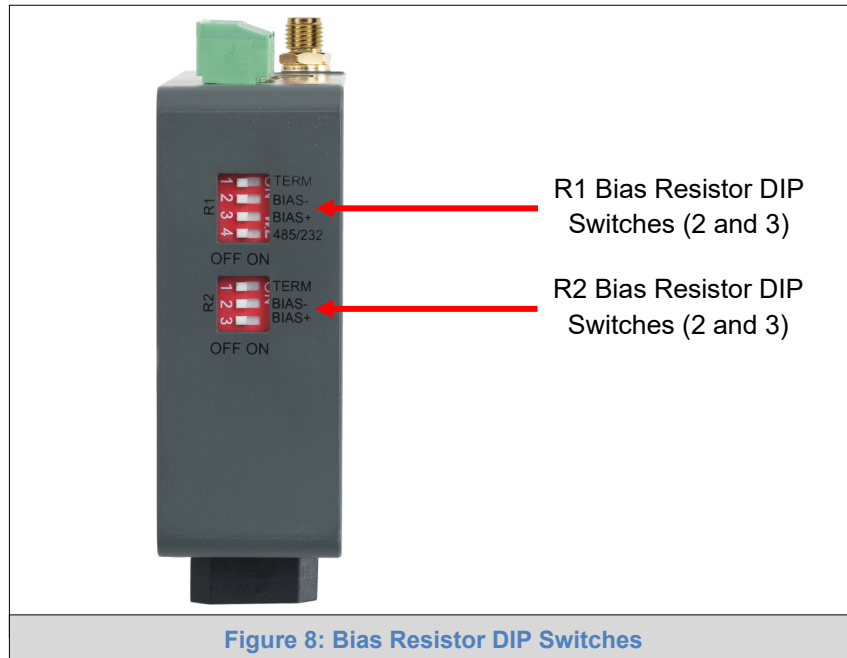


5.2 Wiring Field Port to RS-485 Serial Network

- 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.



5.3 Bias Resistors



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

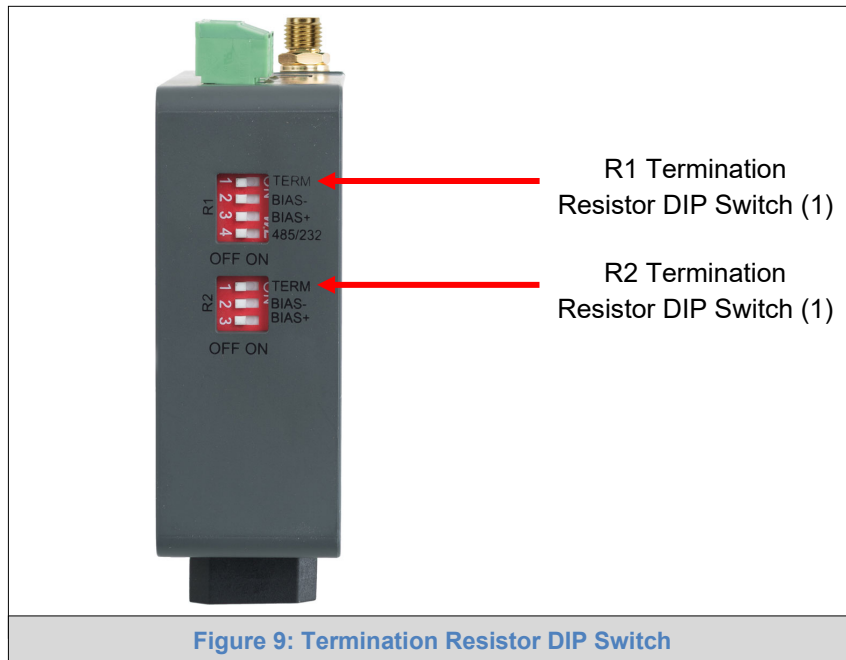


Figure 9: Termination Resistor DIP Switch

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.



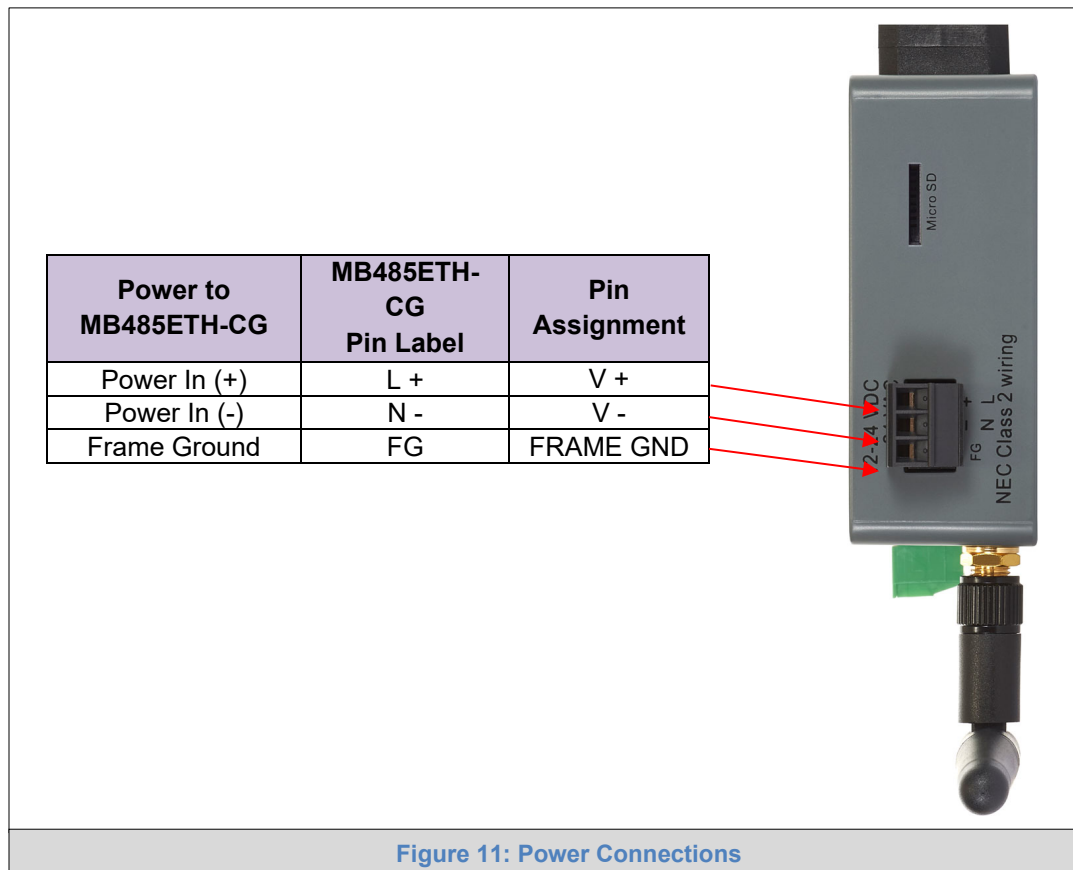
5.5 Power-Up MB485ETH-CG

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.



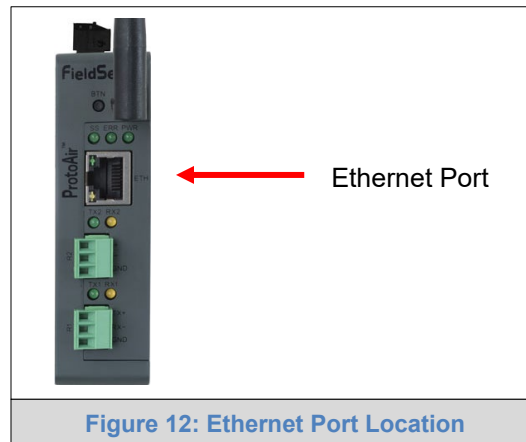
6 CONNECT TO THE MB485ETH-CG

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.

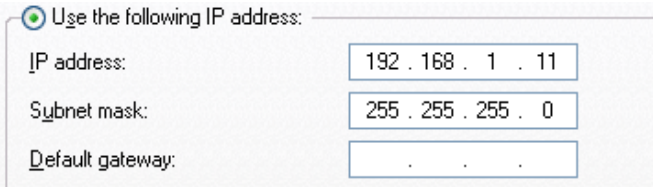


6.1.1.1 Changing the Subnet of the Connected PC

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:



Use the following IP address:


IP address:	192 . 168 . 1 . 11
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	. . .

- 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

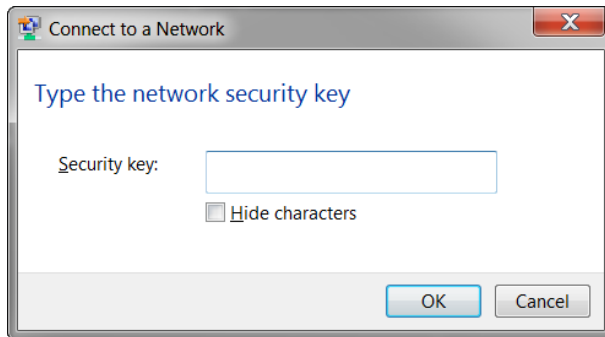
When the MB485ETH-CG is first powered up, the Wi-Fi Access Point will be enabled allowing direct connection to the MB485ETH-CG with Wi-Fi.

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

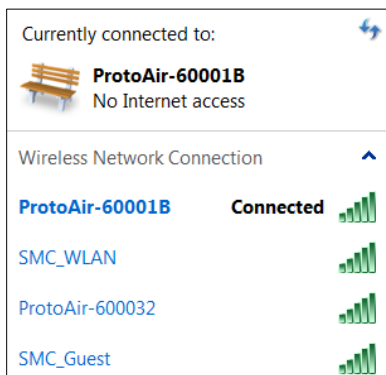
- Click the  icon (found in the bottom-right corner of the computer screen) to open the available Wireless Network Connections.
- Select the desired MB485ETH-CG and click Connect.



- 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

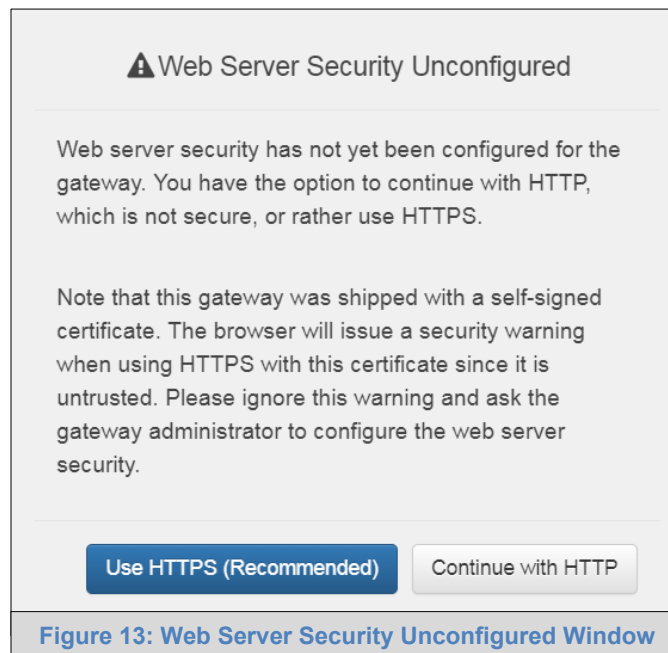
Navigate to the IP Address of the MB485ETH-CG on the local PC by opening a web browser and entering the IP Address of the MB485ETH-CG; the default Ethernet address is 192.168.1.24, the default Wi-Fi Access Point address is 192.168.50.1.

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.

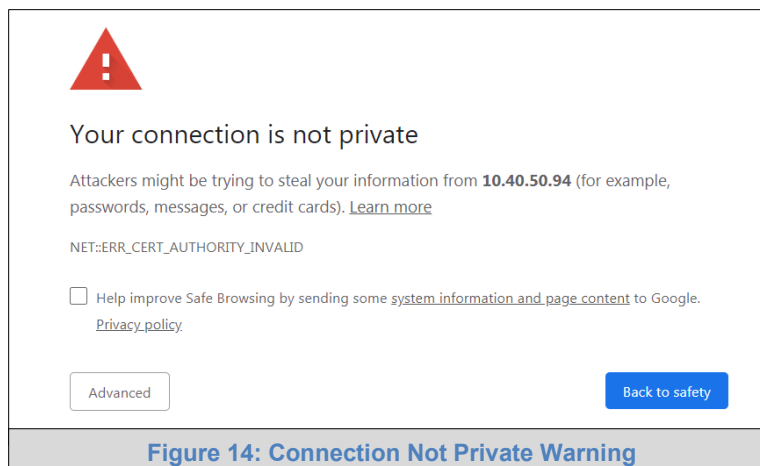
7.1 Login to the MB485ETH-CG

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.



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





- 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 \(unsafe\)](#)”.

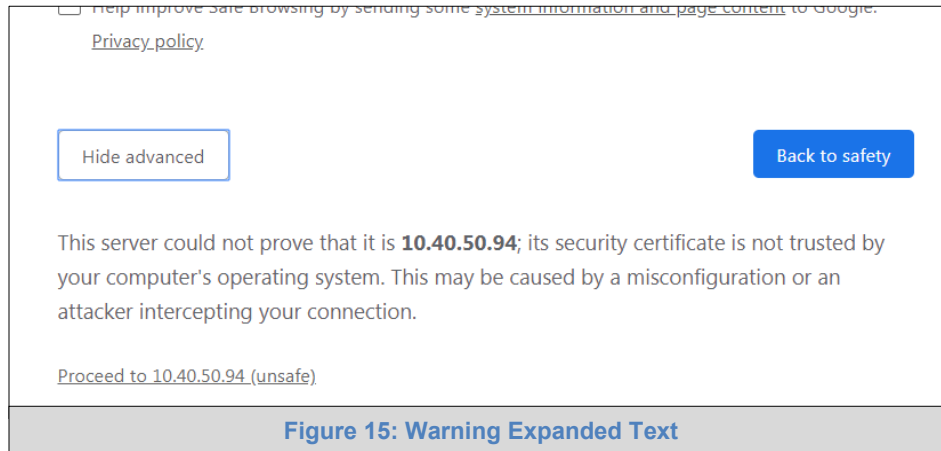


Figure 15: Warning Expanded Text

- 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.

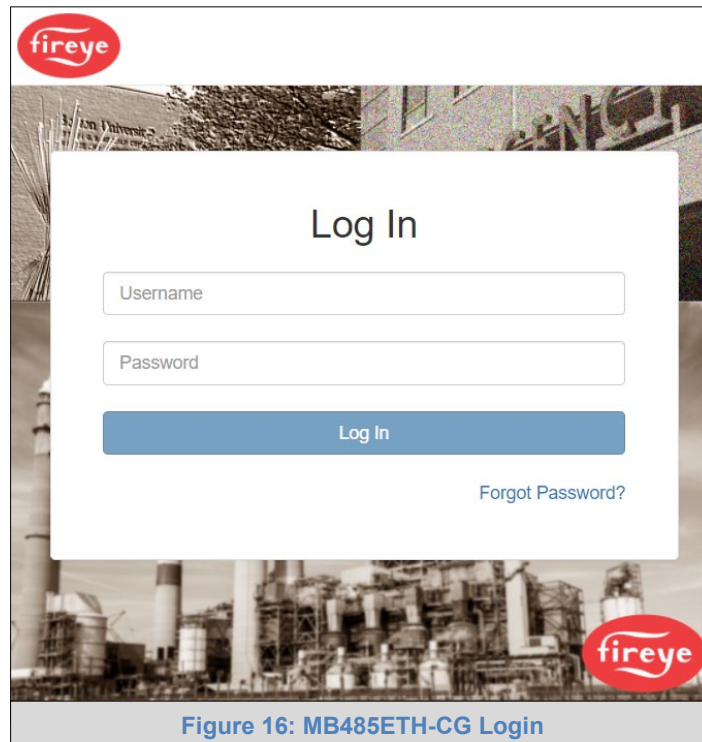


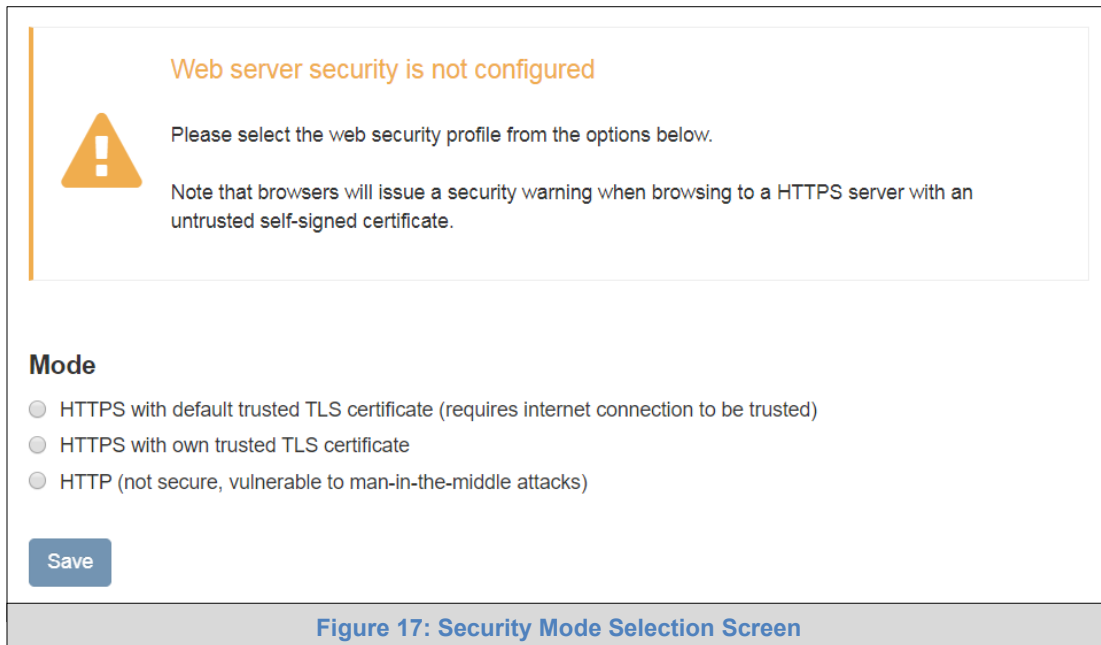
Figure 16: MB485ETH-CG Login

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.



The screenshot shows a web interface for selecting a security mode. At the top, there is a warning message: "Web server security is not configured" in orange text, accompanied by a yellow warning triangle icon with an exclamation mark. Below this, the text reads: "Please select the web security profile from the options below." and "Note that browsers will issue a security warning when browsing to a HTTPS server with an untrusted self-signed certificate." Underneath, there is a section titled "Mode" with three radio button options: "HTTPS with default trusted TLS certificate (requires internet connection to be trusted)", "HTTPS with own trusted TLS certificate", and "HTTP (not secure, vulnerable to man-in-the-middle attacks)". A blue "Save" button is located at the bottom left of the form area.

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.

The screenshot shows a web configuration interface with three main sections:

- Certificate:** A text area containing a long alphanumeric string representing a certificate, ending with "-----END CERTIFICATE-----".
- Private Key:** A text area containing a long alphanumeric string representing a private key, ending with "-----END RSA PRIVATE KEY-----".
- Private Key Passphrase:** A text input field with the placeholder text "Specify if encrypted".

At the bottom of the form is a blue "Save" button.

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.

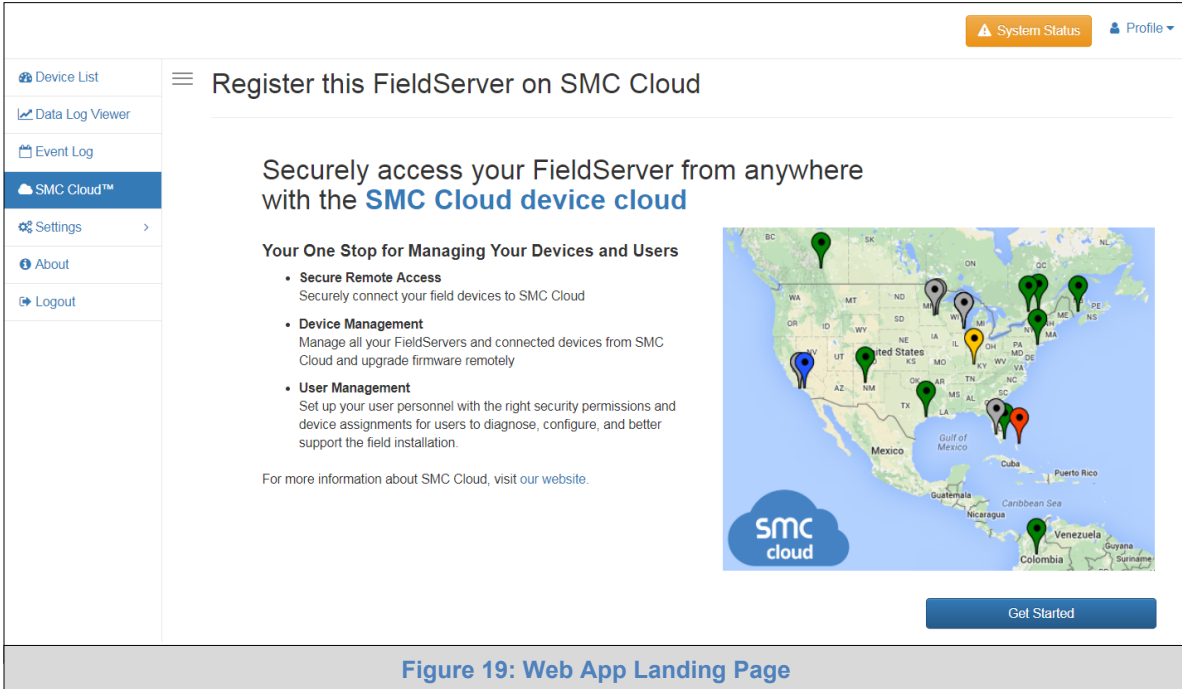


Figure 19: Web App Landing Page

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

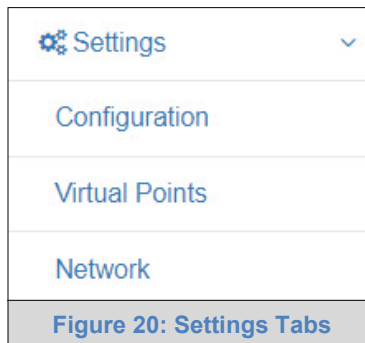


Figure 20: Settings Tabs

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

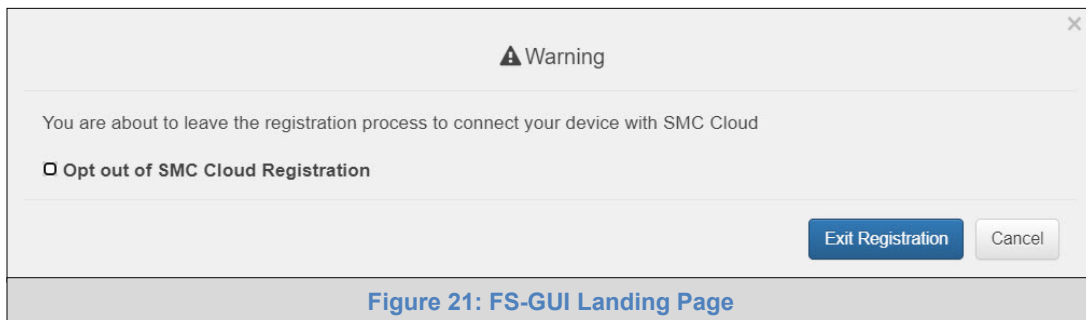


Figure 21: FS-GUI Landing Page



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, configure 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.

The screenshot shows a web interface titled "Common Settings". Below the title is a label "Primary Connection" followed by a dropdown menu currently displaying "Ethernet". To the right of the dropdown are two buttons: "Save" (in blue) and "Refresh" (in grey). The entire interface is enclosed in a light grey border.

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.

IP Settings

N1 DHCP Client State

N1 IP Address 192.168.3.64

N1 Netmask 255.255.255.0

Default Gateway 192.168.3.1

Domain Name Server 1 64.6.64.6

Domain Name Server 2 8.8.4.4

Save Refresh

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.

WiFi Client Settings

Enabled

WiFi SSID

WiFi Password

WiFi DHCP Client State

WiFi IP Address

WiFi Netmask

WiFi Default Gateway

WiFi Domain Name Server1

WiFi Domain Name Server2

Save Refresh

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.

WiFi Access Point Settings

Enabled

Access Point SSID

Access Point Password

SSID Broadcast

Channel

Access Point Hotspot

Access Point IP Address

Access Point Netmask

Access Point IP Pool Address Start

Access Point IP Pool Address End

Save Refresh

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.

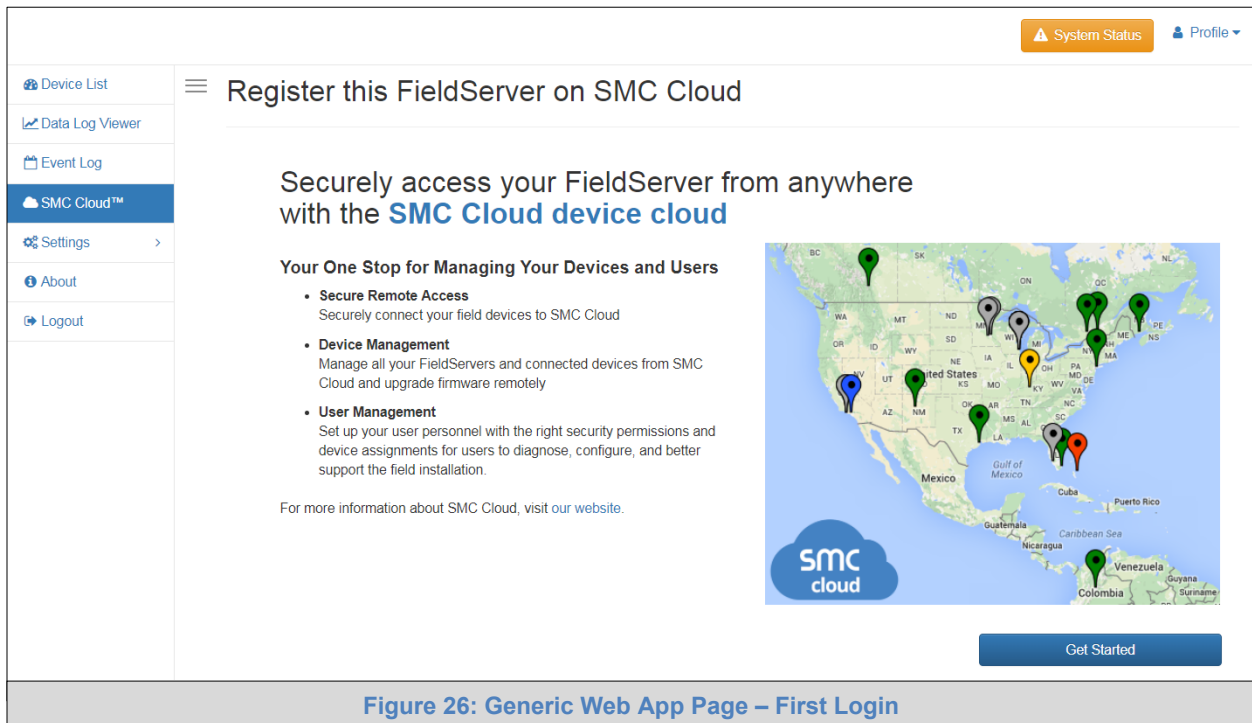

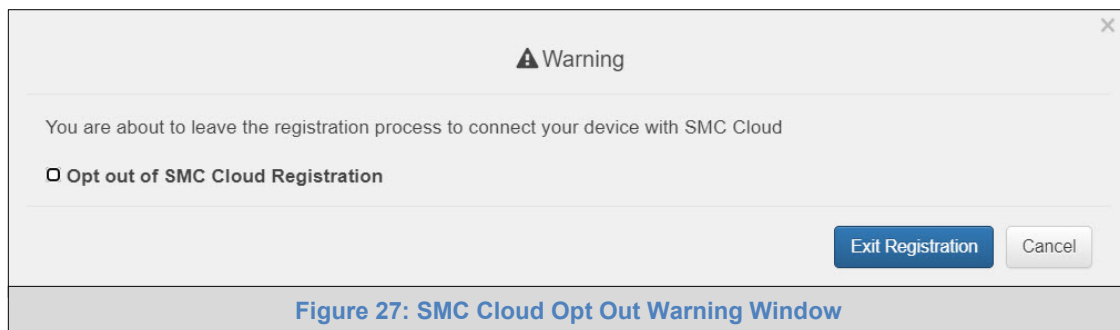


Figure 26: Generic Web App Page – First Login



- 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)



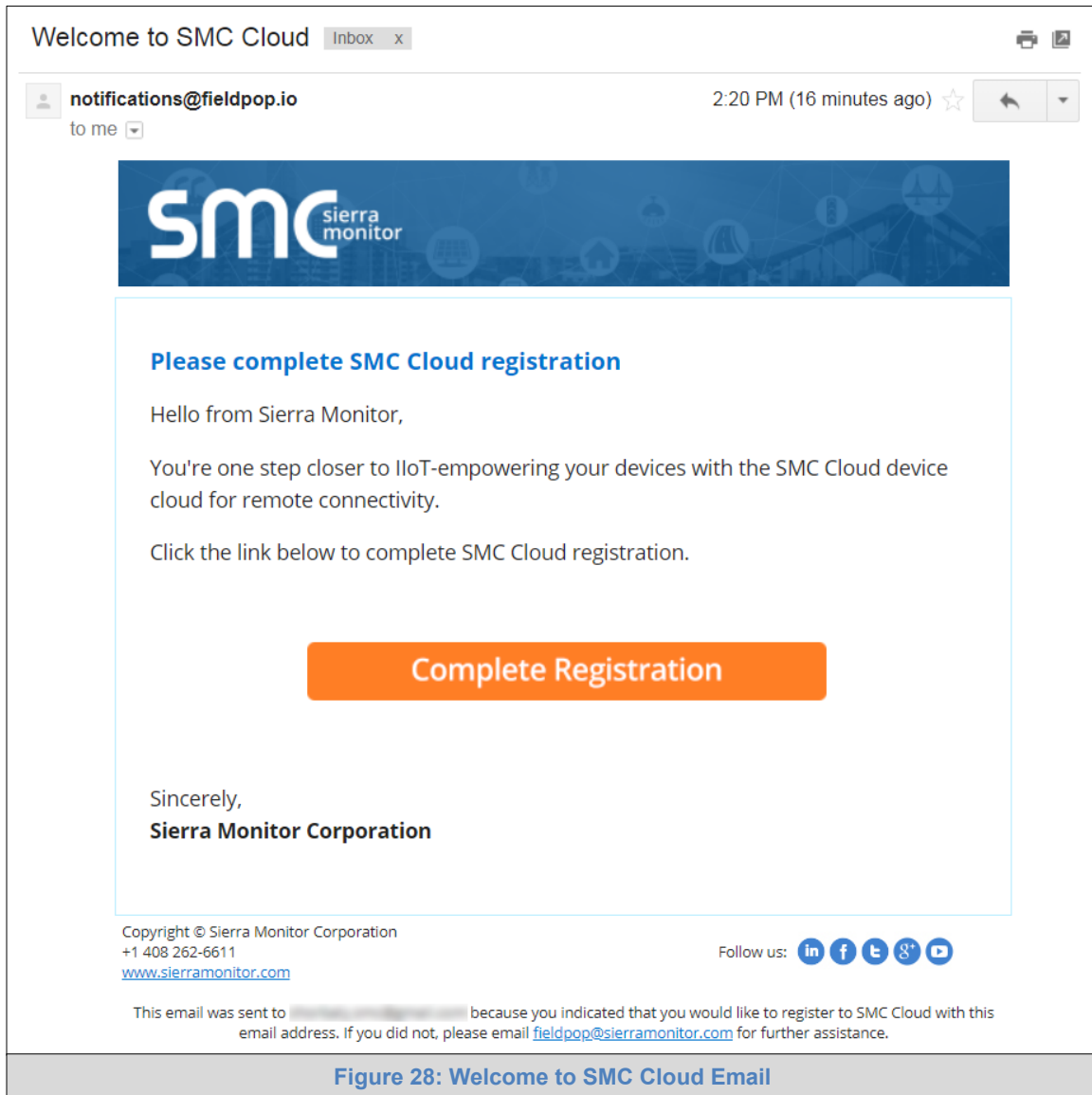
NOTE: If SMC Cloud integration with the MB485ETH-CG is not desired, skip to Section 10 to continue gateway setup. If user setup is already complete go to Section 9.3.



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.



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.

Complete Your Registration

Email Address
user@gmail.com

First Name *

Last Name *

Phone Number *

(201) 555-5555

New Password *

Confirm Password *

By registering my account with SMC, I understand that I am agreeing to the SMC Cloud [Terms of Service and Privacy Policy](#) *

* Mandatory Fields

Save Cancel

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.

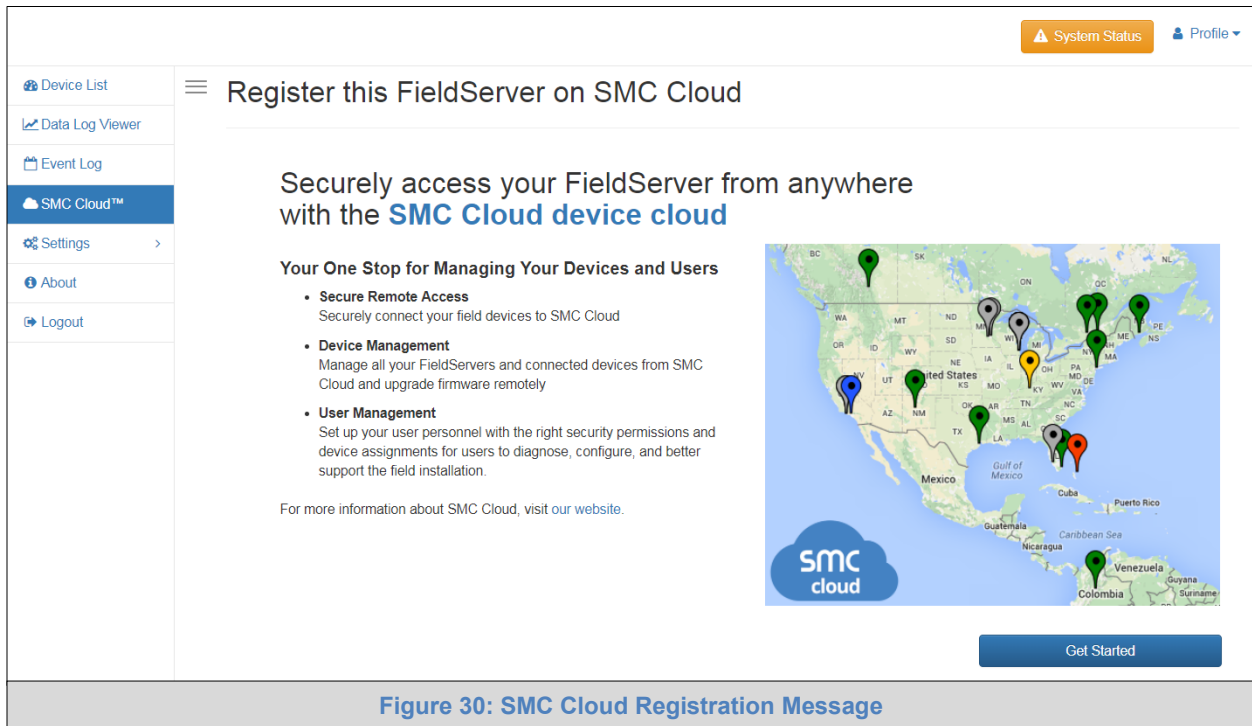
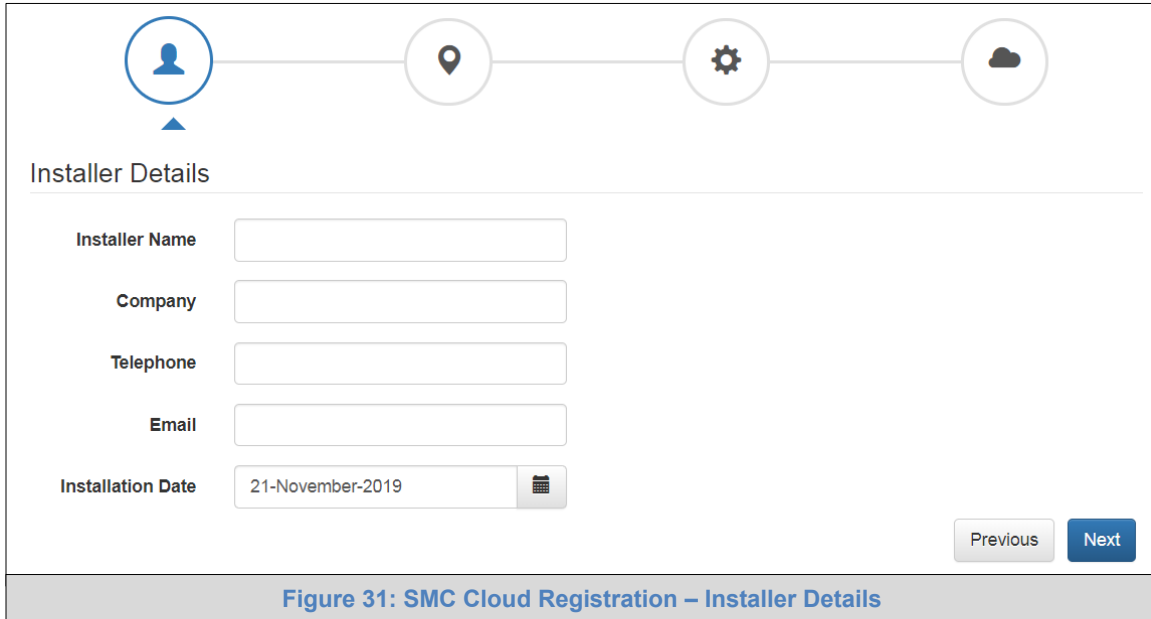


Figure 30: SMC Cloud Registration Message

- 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

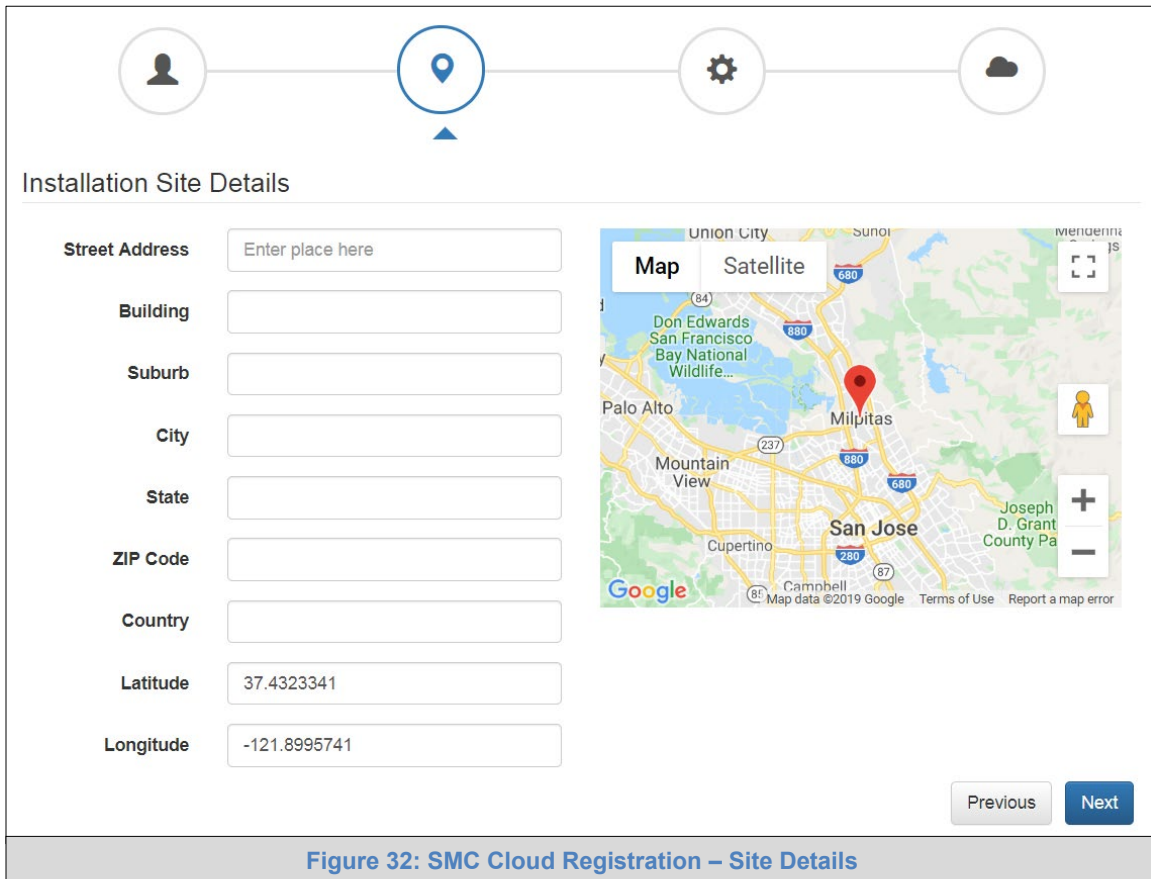


The screenshot shows the 'Installer Details' step in the registration process. At the top, there is a progress bar with four icons: a person (selected), a location pin, a gear, and a cloud. Below the progress bar, the form is titled 'Installer Details'. It contains the following fields:

- Installer Name:** A text input field.
- Company:** A text input field.
- Telephone:** A text input field.
- Email:** A text input field.
- Installation Date:** A date picker showing '21-November-2019'.

At the bottom right of the form, there are two buttons: 'Previous' (disabled) and 'Next' (active). Below the form is a caption: **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



The screenshot shows the 'Installation Site Details' step in the registration process. At the top, there is a progress bar with four icons: a person, a location pin (selected), a gear, and a cloud. Below the progress bar, the form is titled 'Installation Site Details'. It contains the following fields:

- Street Address:** A text input field with the placeholder 'Enter place here'.
- Building:** A text input field.
- Suburb:** A text input field.
- City:** A text input field.
- State:** A text input field.
- ZIP Code:** A text input field.
- Country:** A text input field.
- Latitude:** A text input field with the value '37.4323341'.
- Longitude:** A text input field with the value '-121.8995741'.

On the right side of the form, there is a Google Map showing the San Jose area with a red location pin. Below the map, there are two buttons: 'Previous' (disabled) and 'Next' (active). Below the form is a caption: **Figure 32: SMC Cloud Registration – Site Details**



- Enter Name and Description (required) then click Next

Gateway Details

Name

Description

Info Optionally specify any other information relating to the device i.e., calibration, commissioning or other notes

Device Information

Product Name: System View
Product Version: 2.2.5-beta
Platform Name: Gateway
Product BIOS: 4.1.0
Serial Number: 19102TB001PCR

Previous Next

Figure 33: SMC Cloud Registration – Gateway Details

- Enter user credentials and click Register Device

New Users

If you do not have SMC Cloud credentials, you can create a new SMC Cloud account now [Create an SMC Cloud account](#)

Existing Users - Enter device registration details

User Credentials

Username

Password

Previous 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.

Device Registered

Gateway Details Name: FieldServer Description: Gateway Device Info: MAC Address: 00:50:4E:60:06:3C Tunnel Server URL: tunnel.fieldpop.io Device ID: daffodilsentry_ylb4Xr5bQ Product Name: CN1853-System View Product Version: 2.2.5-beta	Installer Details Installer Name: User Company: Sierra Monitor Corp Telephone: Email: Installation Date: Nov 21, 2019	Site Installation Details Street Address: 1991 Tarob Court Building Info: SMC Build #1 City: Milpitas Suburb: Milpitas State: CA Country: United States ZIP Code: 95035
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[Update Device Details](#)

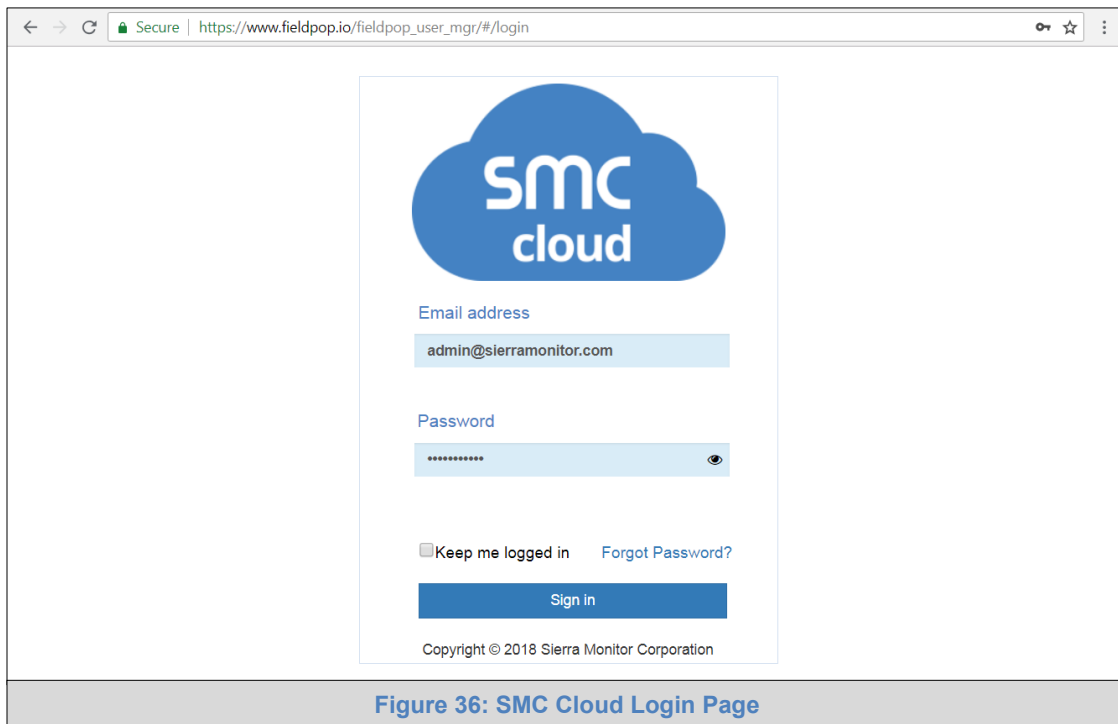
Figure 35: Device Registered for SMC Cloud

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



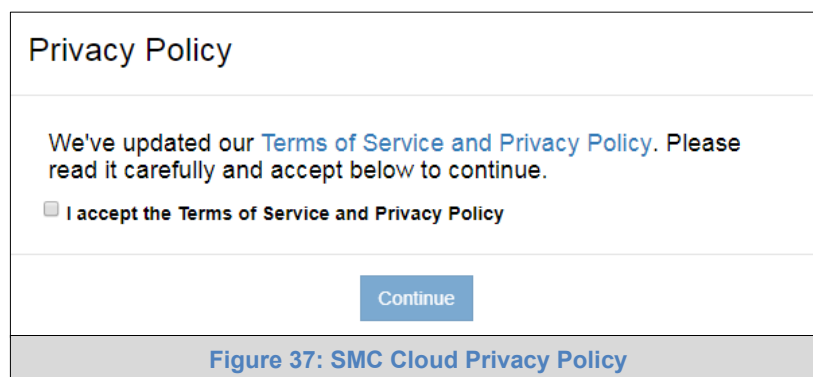
9.4 Login to SMC Cloud

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



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.





NOTE: For additional SMC Cloud instructions see the [SMC Cloud Start-up Guide](#).

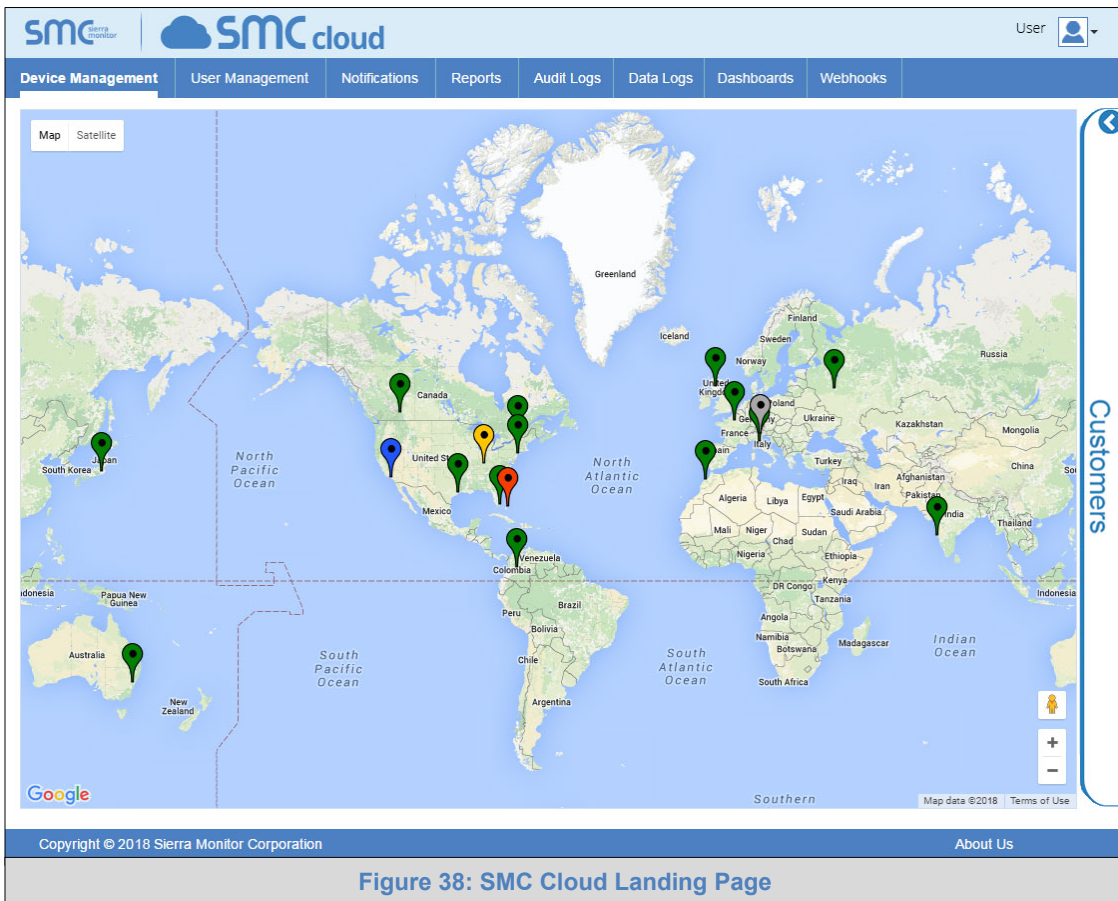


Figure 38: SMC Cloud Landing Page



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.

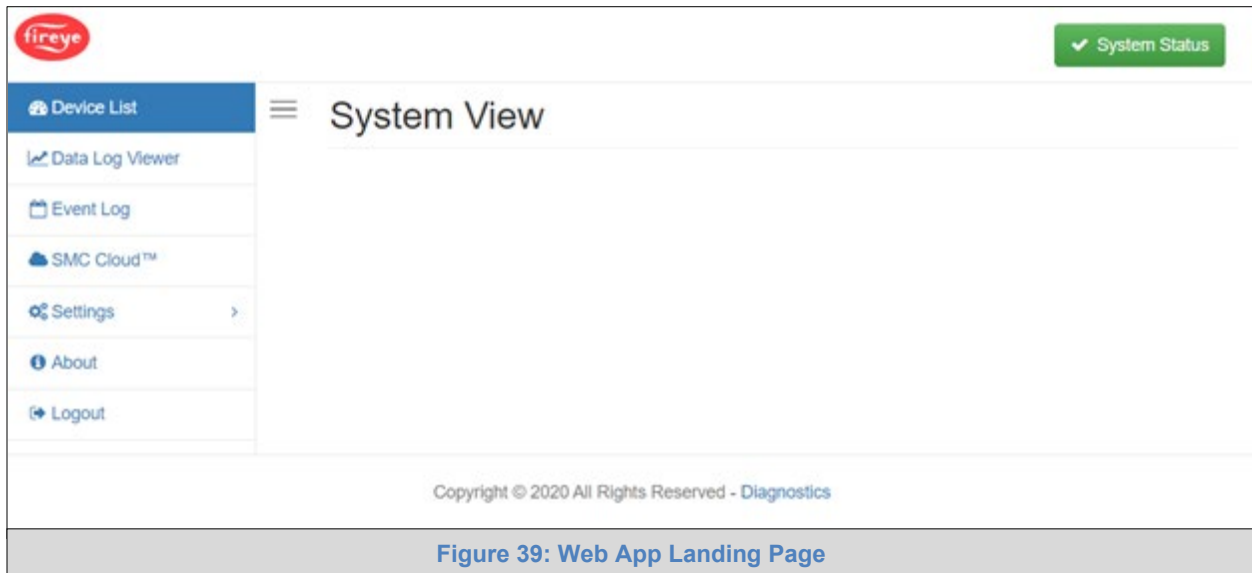


Figure 39: Web App Landing Page

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.

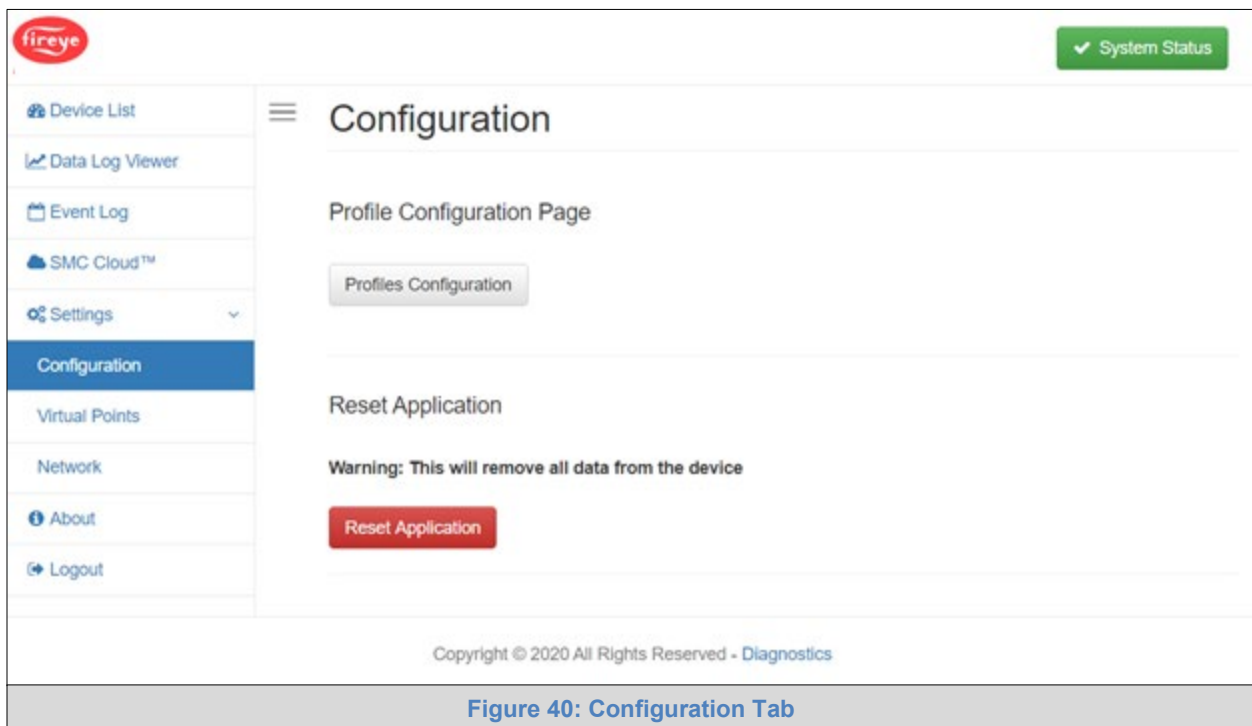


Figure 40: Configuration Tab

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.

The screenshot shows the 'Configuration Parameters' section of the Fireeye Web Configurator. It features a table with three columns: 'Parameter Name', 'Parameter Description', and 'Value'. The parameters are:

Parameter Name	Parameter Description	Value
protocol_select	Protocol Selector Set to 1 for BACnet IP/Modbus TCP Set to 2 for BACnet MSTP Set to 3 for Ethernet IP	2 <input type="button" value="Submit"/>
mod_baud_rate	Modbus RTU Baud Rate This sets the Modbus RTU baud rate. (9600/19200/38400/57600/115200)	9600 <input type="button" value="Submit"/>
mod_parity	Modbus RTU Parity This sets the Modbus RTU parity. (None/Even/Odd)	None <input type="button" value="Submit"/>
mod_data_bits	Modbus RTU Data Bits This sets the Modbus RTU data bits.	8 <input type="button" value="Submit"/>

At the bottom of the page, there is a navigation bar with buttons for 'HELP (?)', 'Network Settings', 'Clear Profiles and Restart', 'System Restart', and 'Diagnostics & Debugging'. The page is powered by FieldServer.

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)

The screenshot displays the FireEye Web Configurator interface. At the top left is the FireEye logo. Below it is the title "Configuration Parameters". The main area contains a table of configuration parameters, each with a name, description, and a value field with a "Submit" button. The parameters are:

Parameter Name	Parameter Description	Value
protocol_select	Protocol Selector Set to 1 for BACnet IP/Modbus TCP Set to 2 for BACnet MSTP Set to 3 for Ethernet IP	2
mod_baud_rate	Modbus RTU Baud Rate This sets the Modbus RTU baud rate. (9600/19200/38400/57600/115200)	9600
mod_parity	Modbus RTU Parity This sets the Modbus RTU parity. (None/Even/Odd)	None
mod_data_bits	Modbus RTU Data Bits This sets the Modbus RTU data bits. (7 or 8)	8
mod_stop_bits	Modbus RTU Stop Bits This sets the Modbus RTU stop bits. (1 or 2)	1
network_nr	BACnet Network Number This sets the BACnet network number of the Gateway. (1 - 65535)	50
node_offset	BACnet Node Offset This is used to set the BACnet device instance. The device instance will be sum of the Modbus device address and the node offset. (0 - 4194303)	50000
bac_mac_addr	BACnet MSTP Mac Address This sets the BACnet MSTP MAC address. (1 - 127)	127
bac_baud_rate	BACnet MSTP Baud Rate This sets the BACnet MSTP baud rate. (9600/19200/38400/76800)	38400
bac_max_master	BACnet MSTP Max Master This sets the BACnet MSTP max master. (1 - 127)	127
bac_cov_option	BACnet COV This enables or disables COVs for the BACnet connection. Use COV_Enable to enable. Use COV_Disable to disable. (COV_Enable/COV_Disable)	COV_Disable
bac_virt_nodes	BACnet Virtual Server Nodes Set to NO if the unit is only converting 1 device to BACnet. Set to YES if the unit is converting multiple devices. (No/Yes)	No

Below the configuration parameters is the "Active profiles" section, which is currently empty. It has columns for "Nr", "Node ID", "Current profile", and "Parameters", and an "Add" button.

At the bottom of the interface is a navigation bar with buttons for "HELP (?)", "Network Settings", "Clear Profiles and Restart", "System Restart", and "Diagnostics & Debugging". On the right side of this bar is the "Powered by FieldServer" logo.

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**)

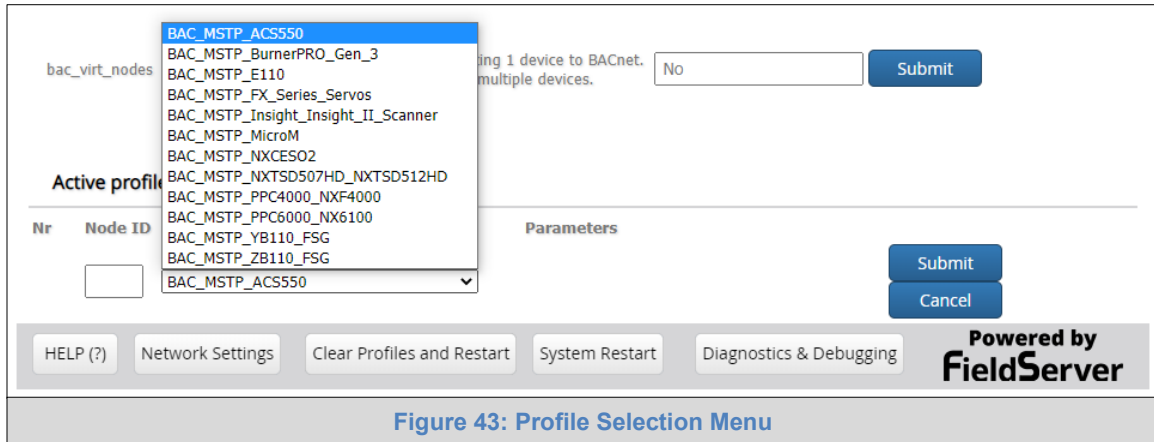


Figure 43: Profile Selection Menu

- 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**.

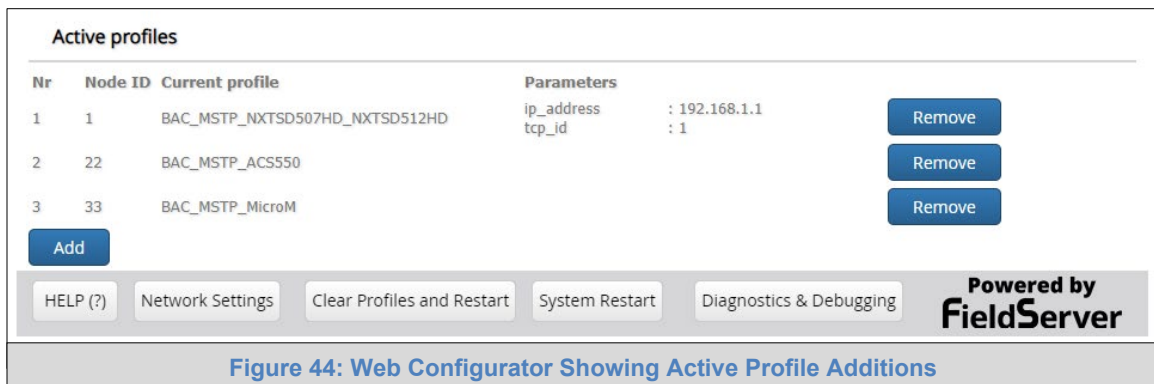


Figure 44: Web Configurator Showing Active Profile Additions

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:

$$\text{Device Instance (desired)} = \text{Node_Offset} + \text{Node_ID}$$

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:

$$50,001 = \text{Node_Offset} + 1$$

➤ **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.

BACnet Node Offset
This is used to set the BACnet device instance.
The device instance will be sum of the Modbus device address and the node offset.
(0 - 4194303)

node_offset

Figure 45: Web Configurator Node Offset Field

Active profiles

Nr	Node ID	Current profile	Parameters	
1	1	BAC_MSTP_NXTSD507HD_NXTSD512HD	ip_address : 192.168.1.1 tcp_id : 1	<input type="button" value="Remove"/>
2	22	BAC_MSTP_ACS550		<input type="button" value="Remove"/>
3	33	BAC_MSTP_MicroM		<input type="button" value="Remove"/>

Powered by **FieldServer**

Figure 46: Active Profiles



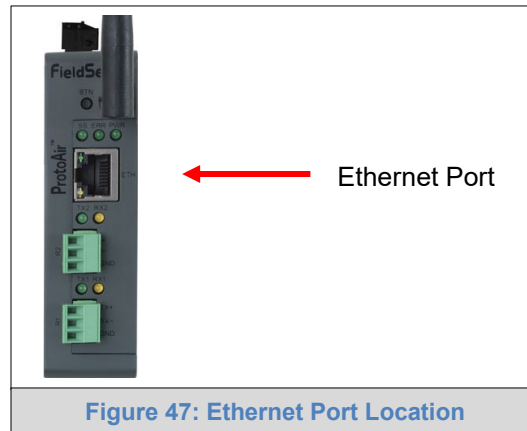
10.6 How to Start the Installation Over: Clearing Profiles

- 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.

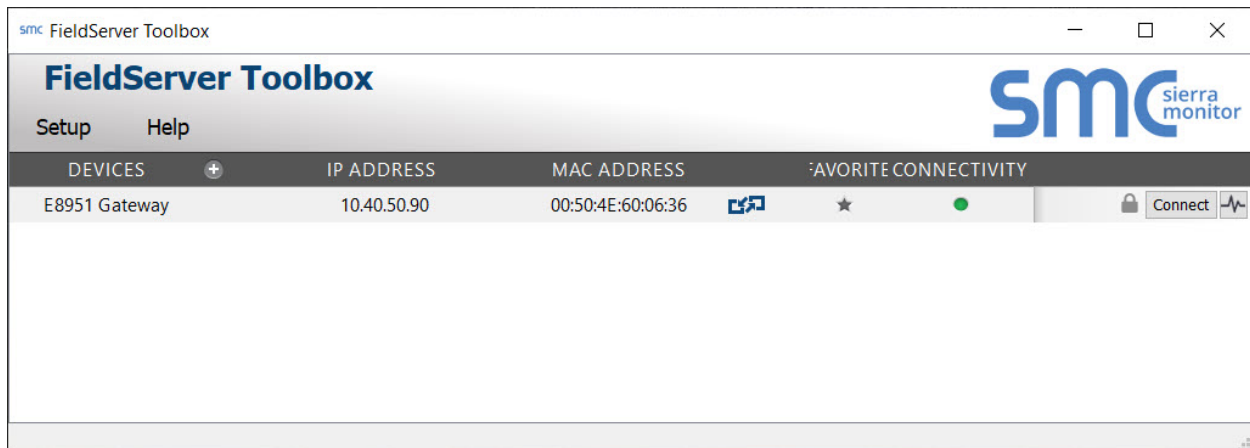
Appendix A Troubleshooting


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.



- 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.

The screenshot shows the Fireeye web interface for the MB485ETH-CG. The main content area displays the 'Connections' page with an 'Overview' tab. A table lists the connections and their statistics:

Index	Name	Tx Msg	Rx Msg	Tx Char	Rx Char	Errors
0	R1 - MODBUS_RTU	51	0	408	0	50
1	N1 - Modbus/TCP	0	0	0	0	16

The interface also includes a navigation menu on the left with options like 'About', 'Setup', 'View', 'Connections', 'Data Arrays', 'Nodes', 'Map Descriptors', 'User Messages', and 'Diagnostics'. The footer contains links for 'Home', 'HELP (F1)', 'Contact Us', 'Reset Statistics', and 'Logout', along with the 'Powered by FieldServer' logo.

Figure 48: Error Messages Screen



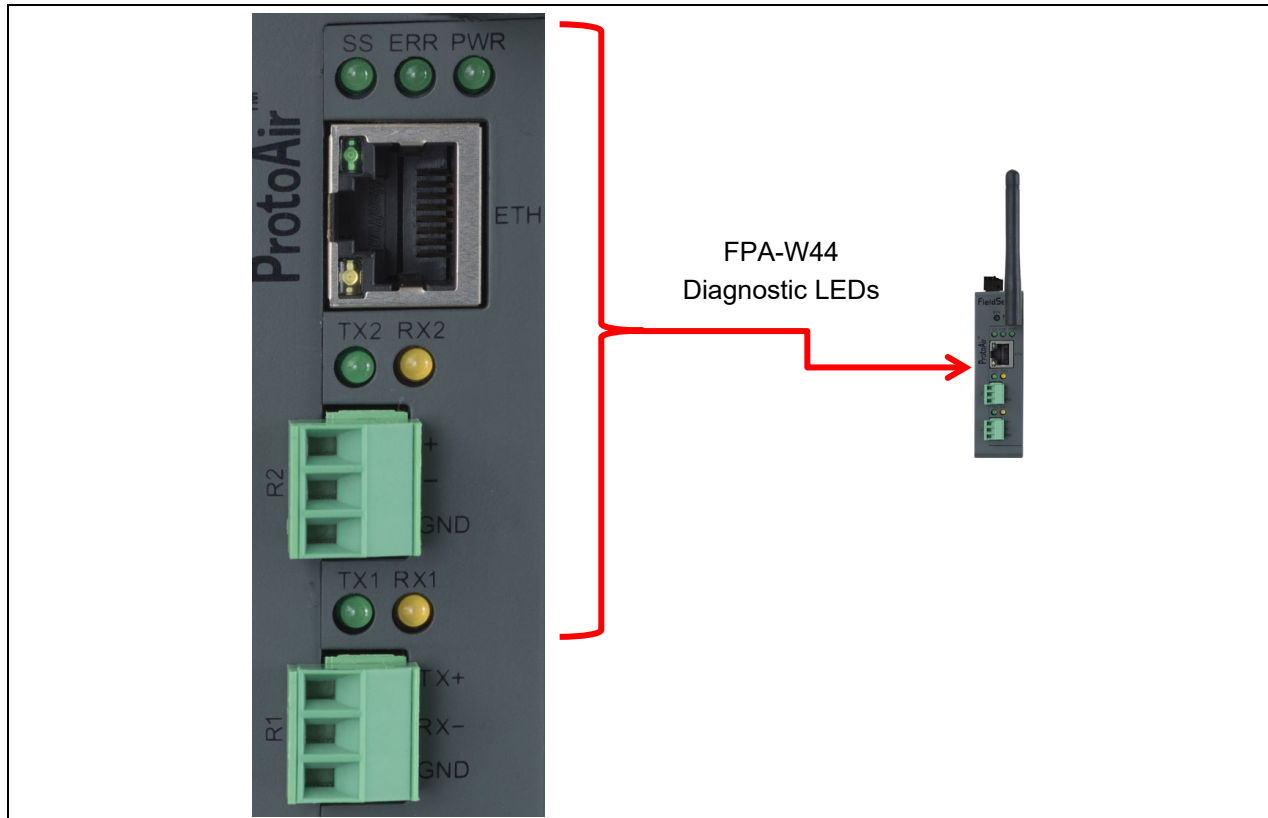
Appendix A.3 Checking Wiring and Settings

- 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

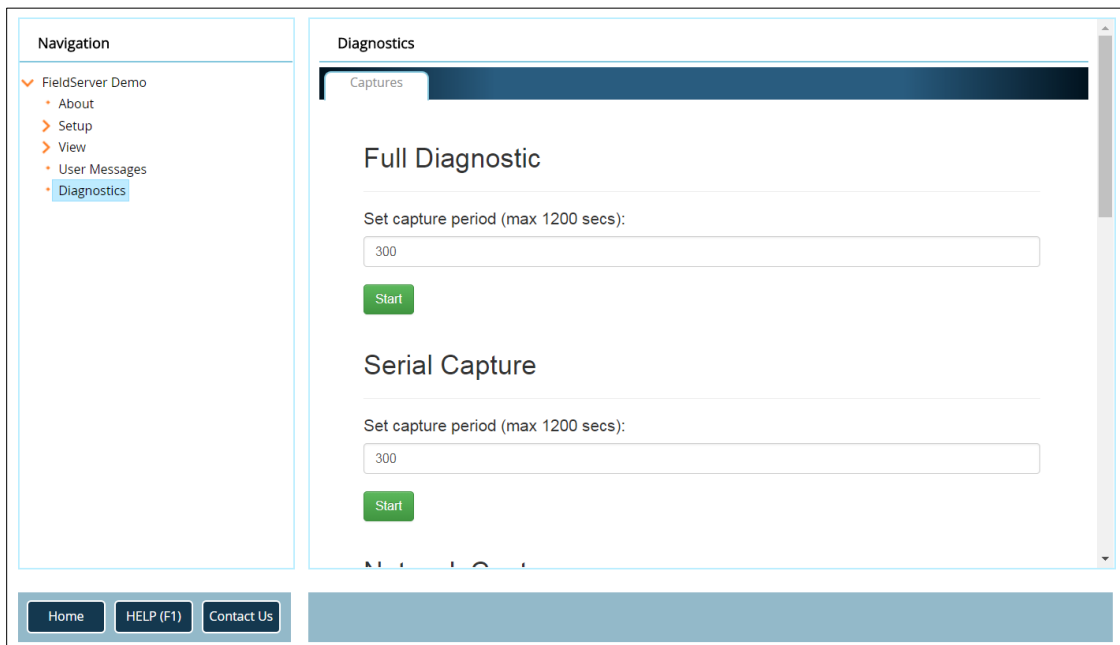


Appendix A.5 Taking a MB485ETH-CG Diagnostic Capture

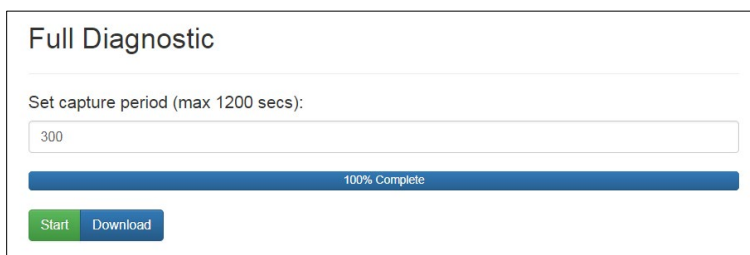
When there is a problem on-site that cannot easily be resolved, perform a Diagnostic Capture before contacting support. Once the Diagnostic Capture is complete, email it to technical support. The Diagnostic Capture will accelerate diagnosis of the problem.

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.

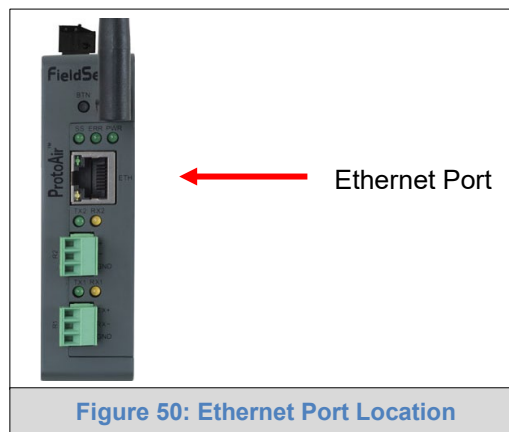



Appendix A.5.1 Taking a Capture with Older Firmware

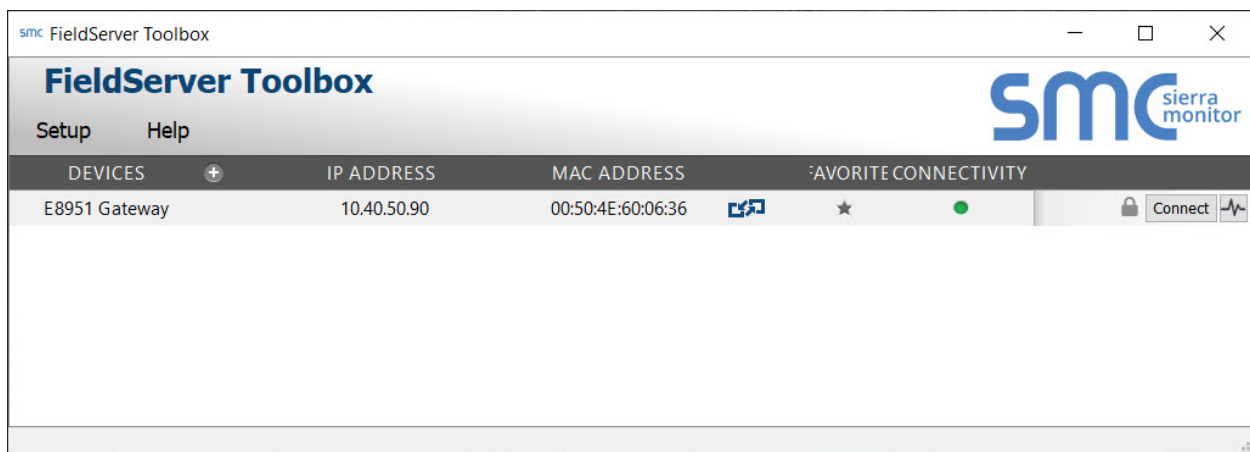
If the MB485ETH-CG firmware is from before November 2017, the Diagnostic Capture can be done by downloading the MB485ETH-CG Toolbox software but network connections (such as Ethernet and Wi-Fi) cannot be captured (if a network diagnostic is needed take a Wire Shark capture).

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.



- 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

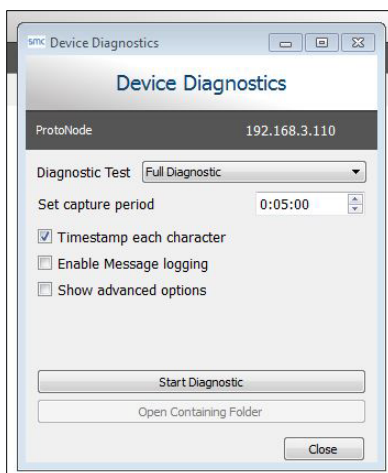


- Select "Full Diagnostic" from the drop down menu

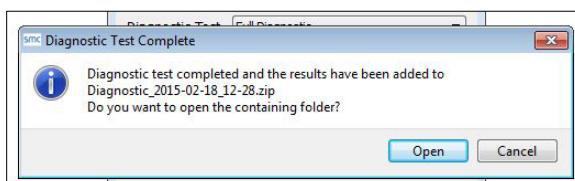


NOTE: If desired, the default capture period can be changed.

- 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.
 - o Default IP Address is 192.168.1.24
 - o 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.

network_nr	BACnet Network Number This sets the BACnet network number of the Gateway. (1 - 65535)	<input type="text" value="50"/>	<input type="submit" value="Submit"/>
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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.



Appendix B.4 Physical Dimension Drawing

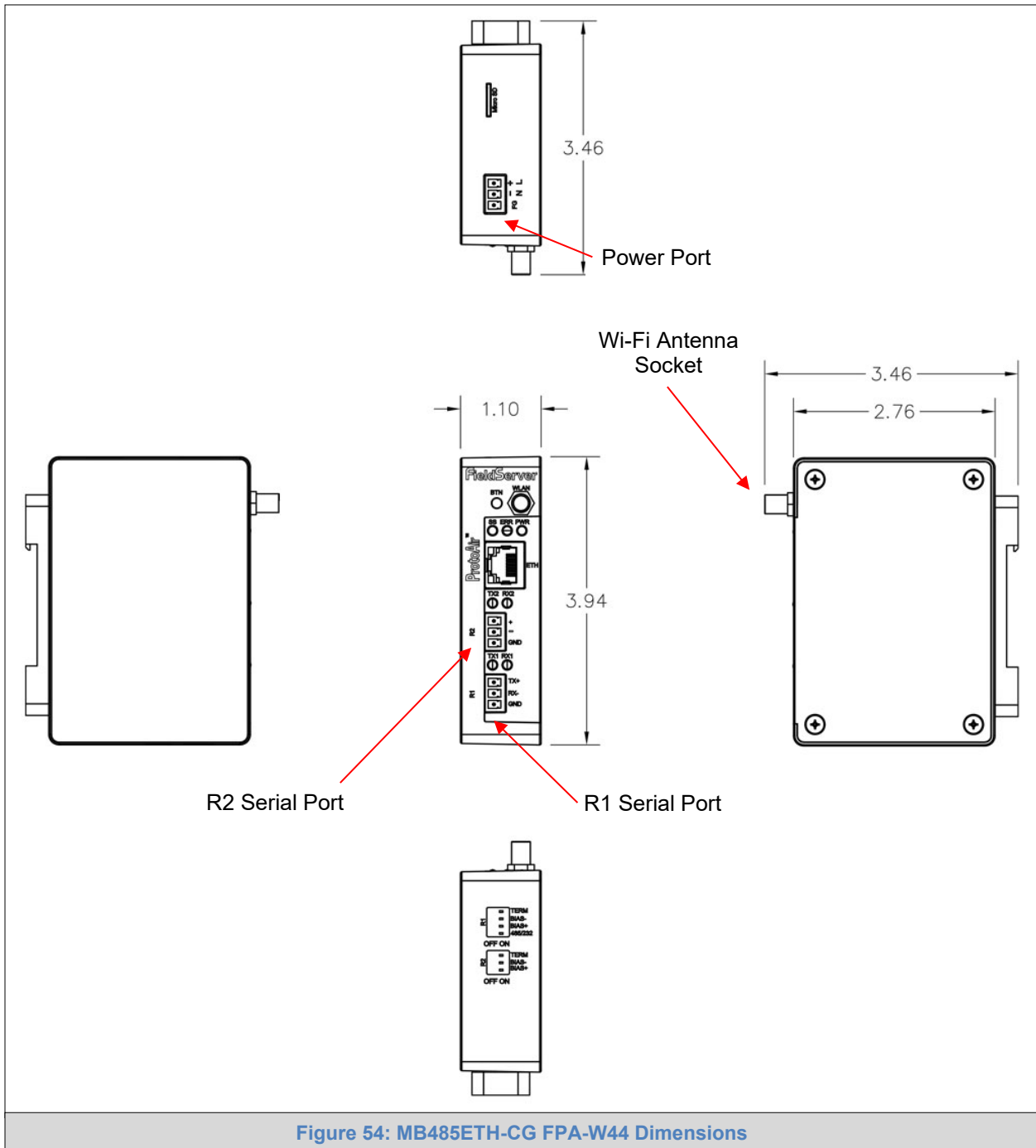


Figure 54: MB485ETH-CG FPA-W44 Dimensions



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.

The screenshot displays the FS-GUI interface. On the left is a navigation panel with a tree view under 'Test Bridge 1' containing 'About', 'Setup', 'View', 'User Messages', and 'Diagnostics'. The main content area is titled 'Test Bridge 1' and has three tabs: 'Status', 'Settings', and 'Info Stats'. The 'Status' tab is active, showing a table of system parameters. At the bottom of the interface is a row of buttons: 'Home', 'HELP (F1)', 'Contact Us', 'System Restart', 'System Reboot', 'System Time Synch', 'Reset Cycle Times', and 'Logout'.

Name	Value
Driver_Configuration	DCC000
DCC_Version	V6.05p (A)
Kernel_Version	V6.51c (B)
Release_Status	Normal
Build_Revision	4.43.6-45-gcd82a452bb
Build_Date	2019-11-28 14:05:21 +0200
Platform_Name	ProtoAir_2RS485_ARMv7
BIOS_Version	4.1.2
FieldServer_Model	FS-QS-2010-F
Serial_Number	1902300071VZL
Carrier_Type	-
Data_Points_Used	0
Data_Points_Max	250
Application Memory:	
Protocol_Engine_Memory_Used	0.31%
Memory_Used	440 kB
Memory_Available	141,433 kB
Memory_Free_Bytes	141,433 kB
Memory_Min_Free_Bytes	140,526 kB

Figure 55: FS-GUI Landing Screen



Appendix B.5.1 Change Security Mode

- Click Security in the Navigation panel.

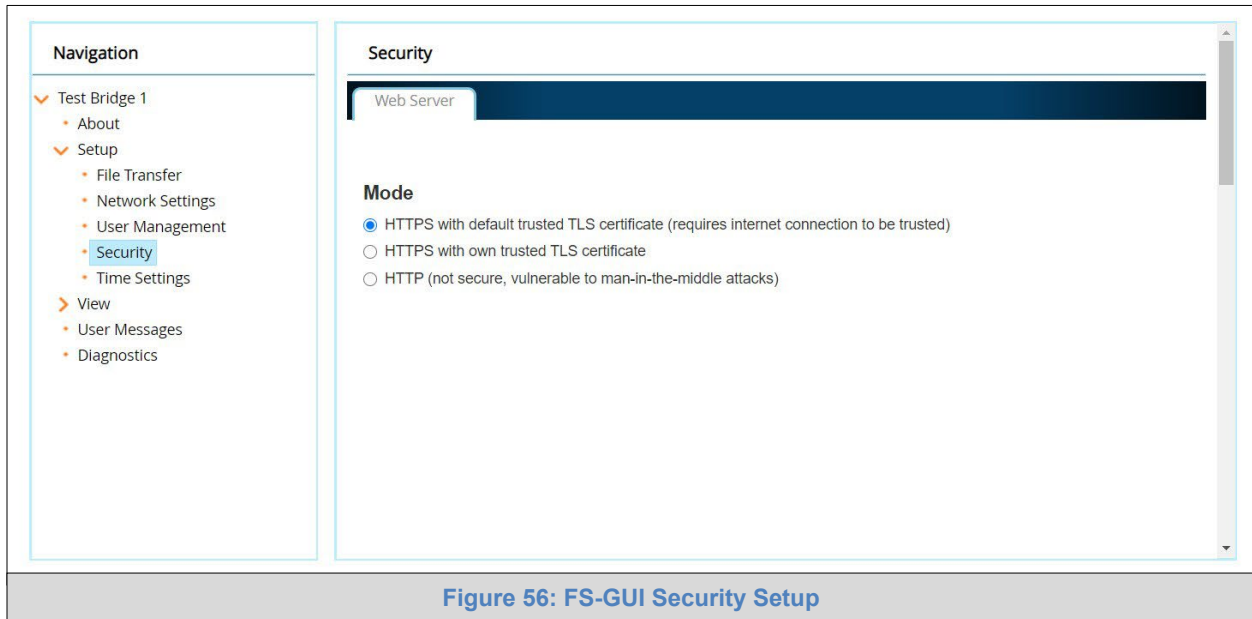


Figure 56: FS-GUI Security Setup

- 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.

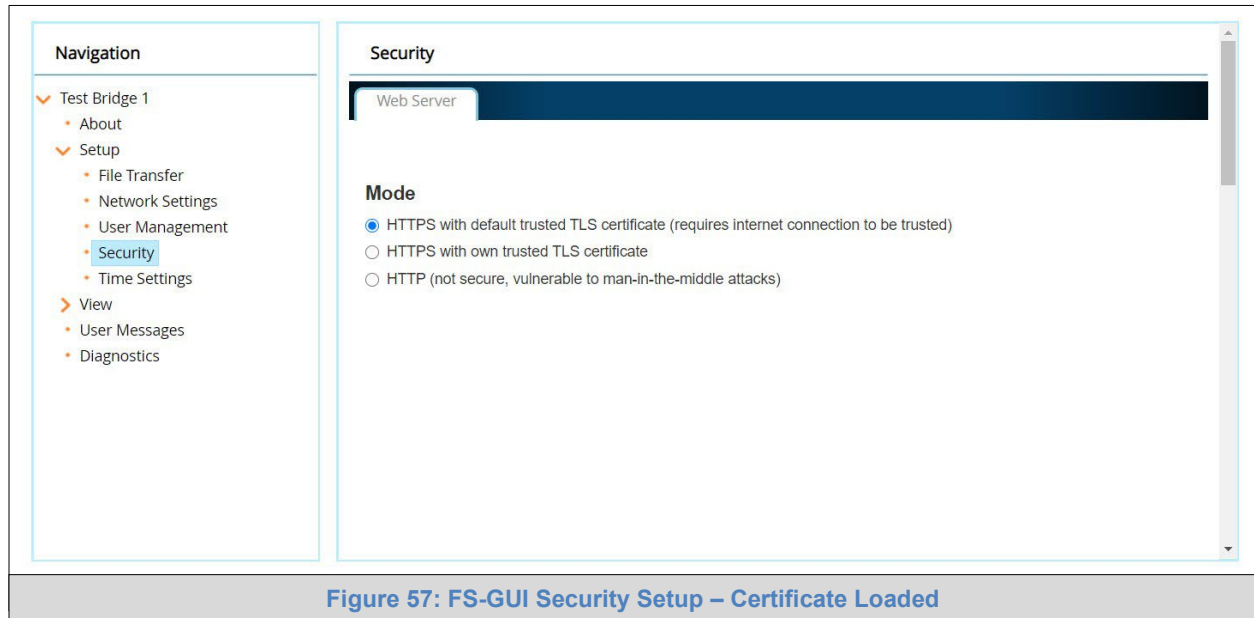


Figure 57: FS-GUI Security Setup – Certificate Loaded

- 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.

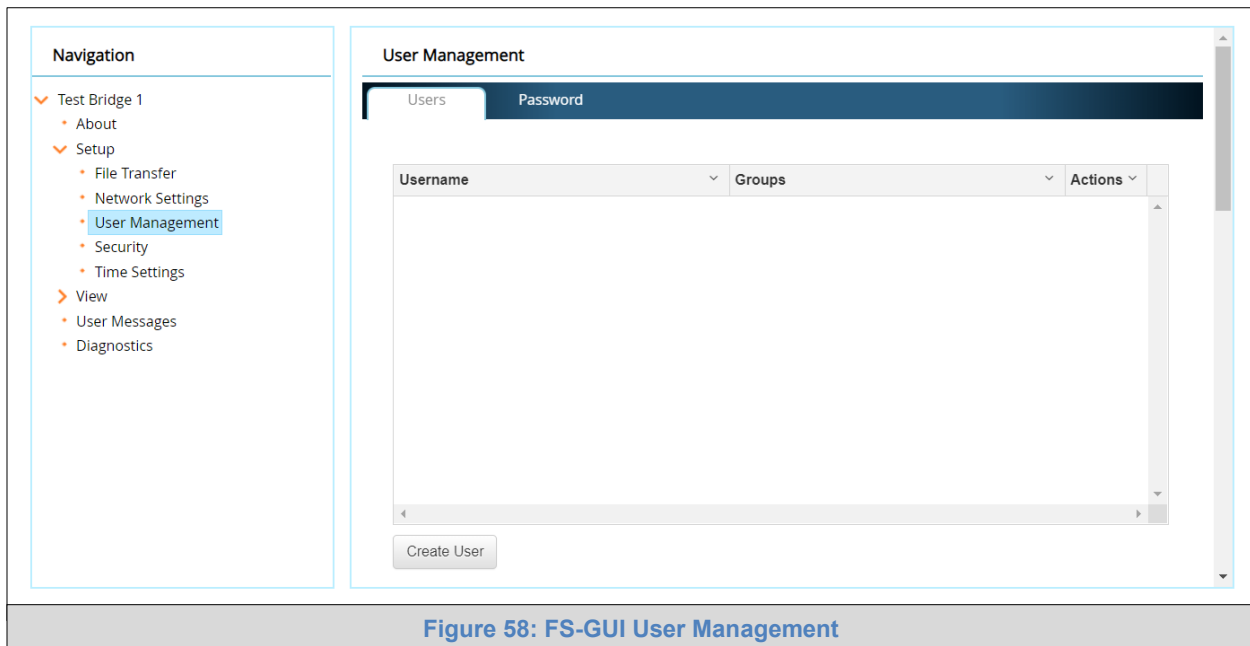


Figure 58: FS-GUI User Management

User Types:

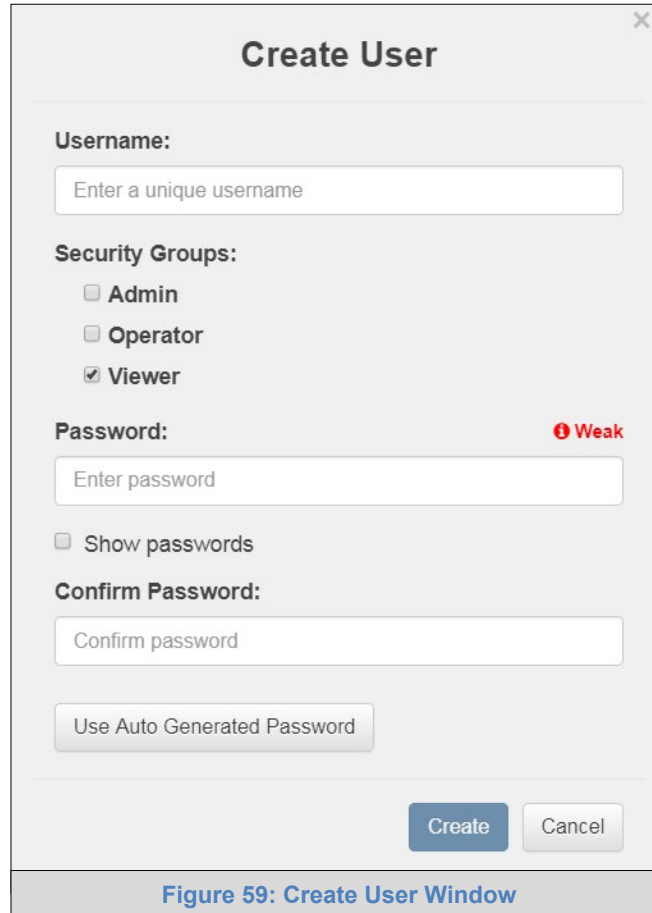
Admin – Can modify and view any settings on the MB485ETH-CG.

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.



Create User

Username:
Enter a unique username

Security Groups:

- Admin
- Operator
- Viewer

Password: Weak
Enter password

Show passwords

Confirm Password:
Confirm password

Use Auto Generated Password

Create Cancel

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.

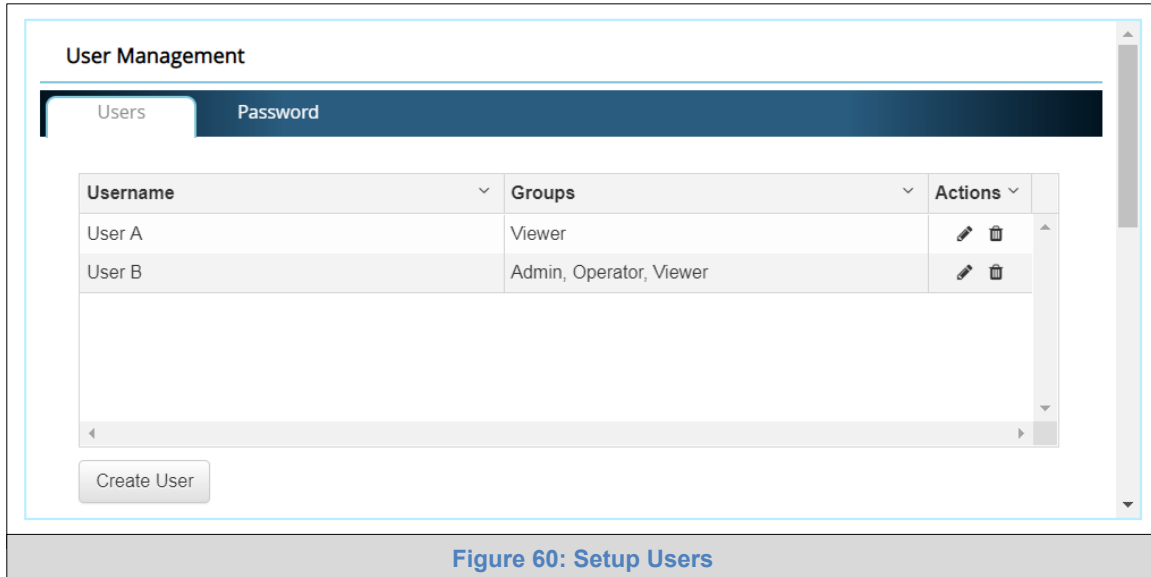
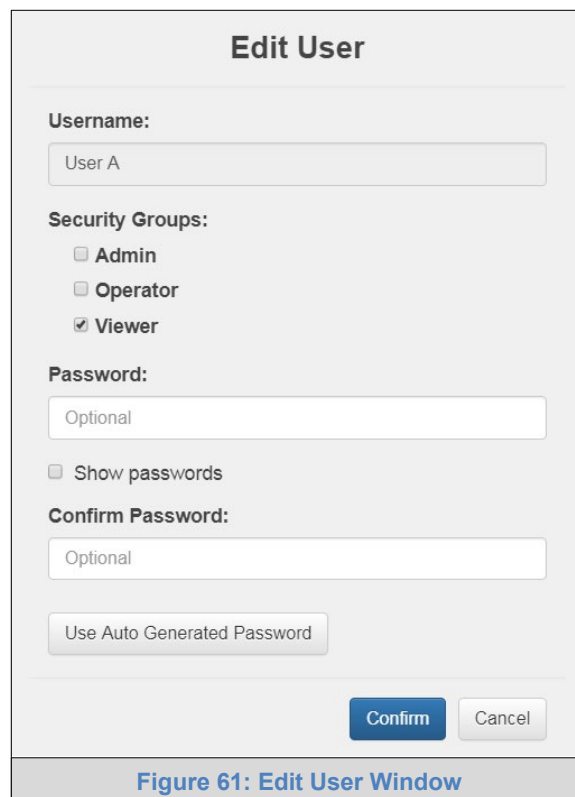


Figure 60: Setup Users

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



The 'Edit User' window contains the following fields and options:

- Username:** Text input field containing 'User A'.
- Security Groups:** A list of checkboxes: Admin, Operator, and Viewer.
- Password:** Text input field containing 'Optional'.
- Show passwords
- Confirm Password:** Text input field containing 'Optional'.
-
-

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.

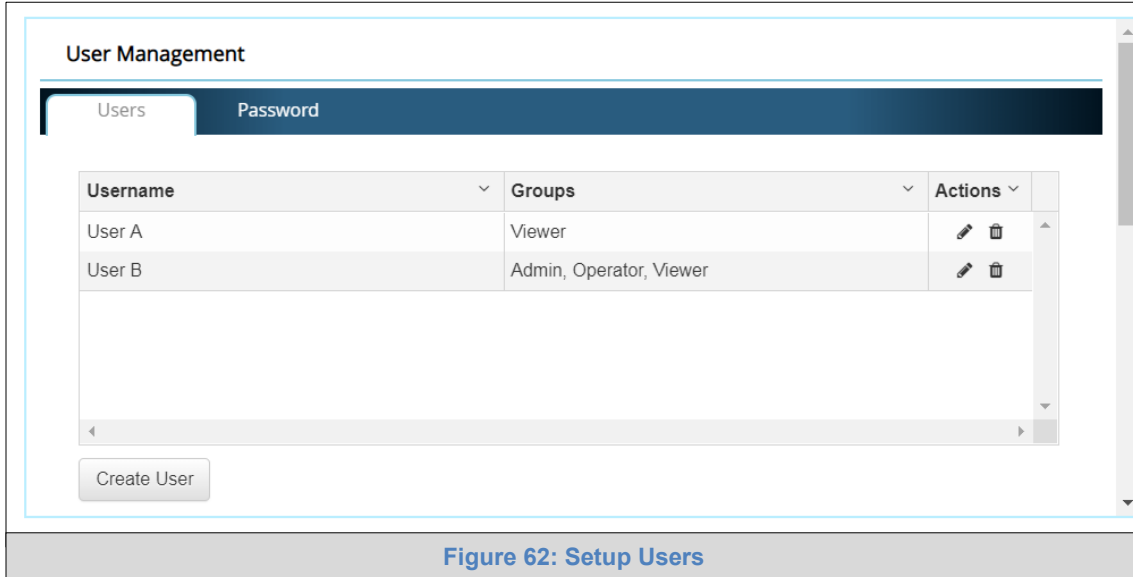


Figure 62: Setup Users

- When the warning message appears, click Confirm.

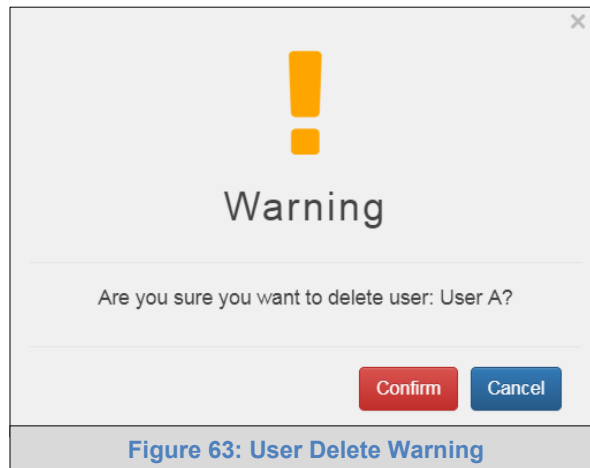


Figure 63: User Delete Warning



Appendix B.6.3 Change MB485ETH-CG Password

- Click the Password tab.

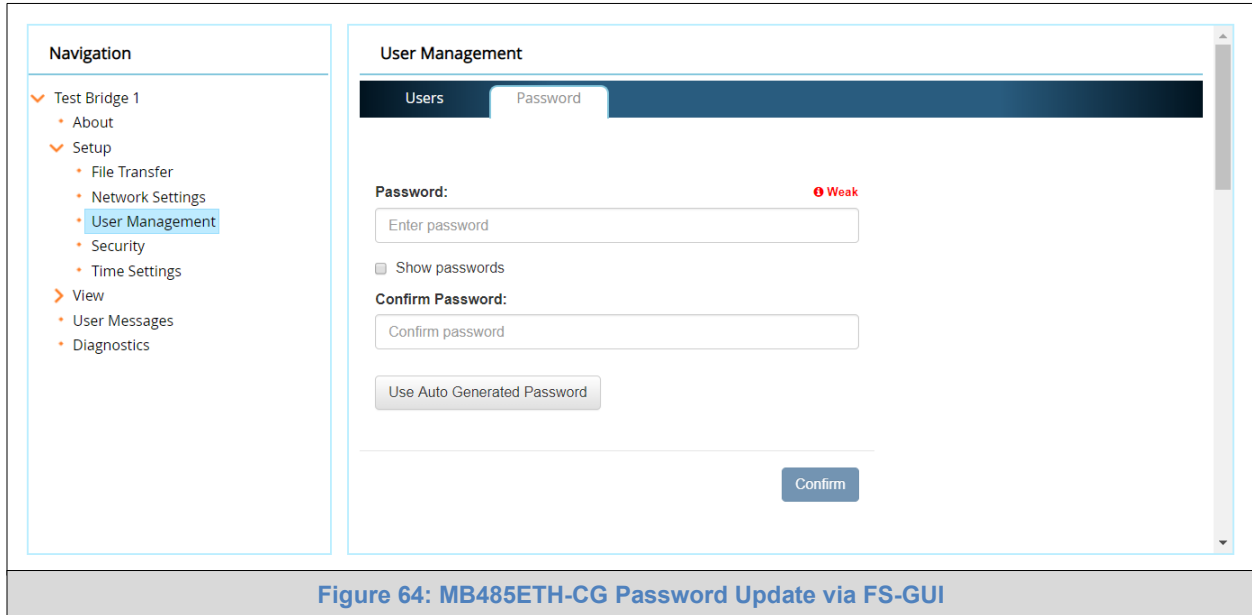


Figure 64: MB485ETH-CG Password Update via FS-GUI

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

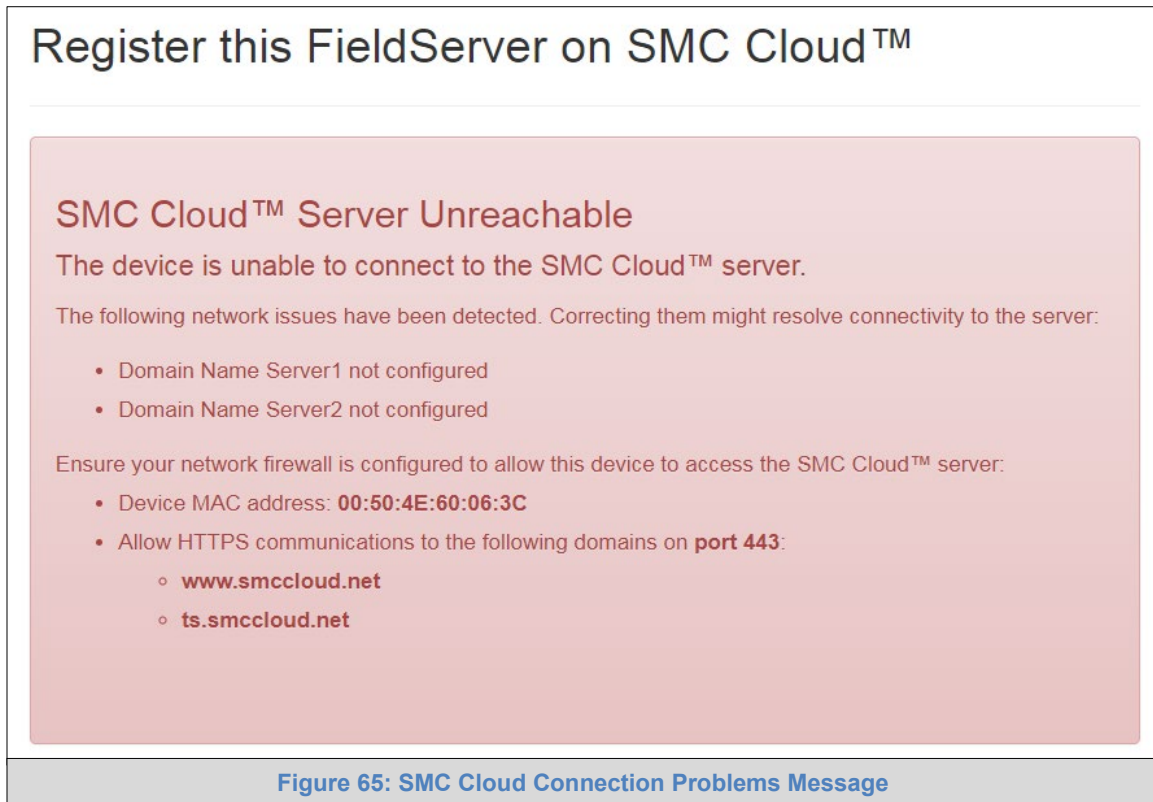
NOTE: The password must meet the minimum complexity requirements. An algorithm automatically checks the password entered and notes the level of strength on the top right of the Password text field.

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



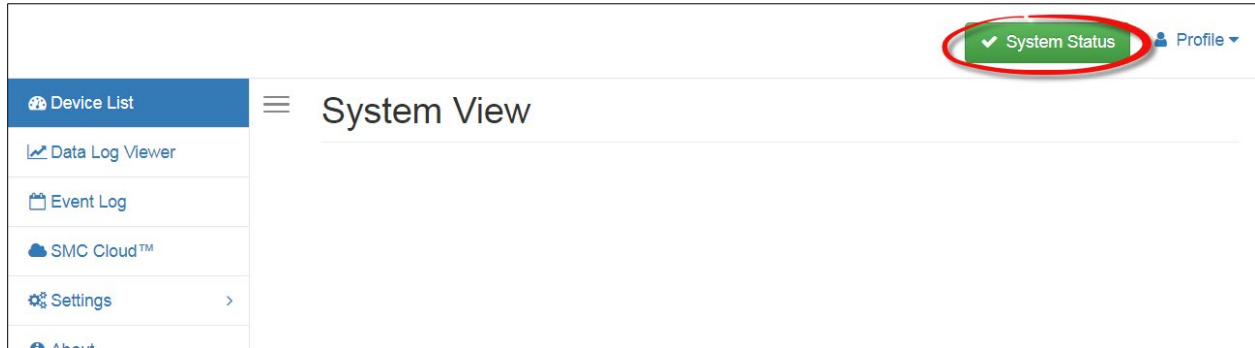
- Follow the directions presented in the warning message.
 - Go to the network settings by clicking the Settings tab and then click the Network tab
 - Check with the site's IT support that the DNS settings are setup correctly
 - Ensure that the MB485ETH-CG is properly connected to the Internet

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 aggregate of the Web App page's resource usage upon the local PC or mobile device, SMC Cloud connectivity and device alert level.



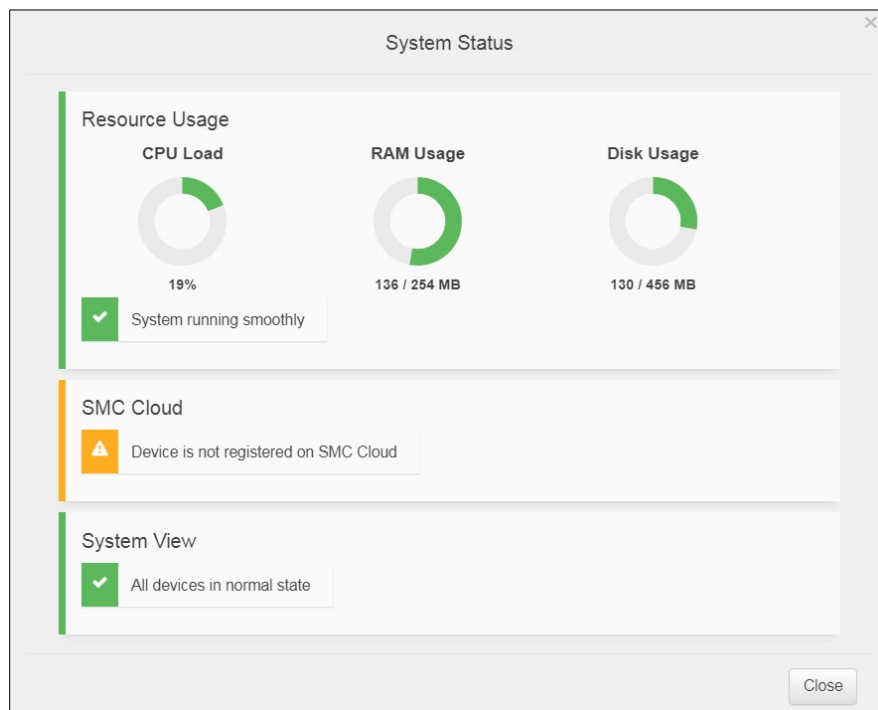
The color of the button represents the status of one to all three systems:

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/RX-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	<i>Input Voltage:</i> 9-30VDC or 24VAC <i>Current draw:</i> 24VAC 0.125A <i>Max Power:</i> 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 to 158°F)
Humidity	10-95% RH non-condensing
Wi-Fi 802.11 b/g/n	<i>Frequency:</i> 2.4 GHz <i>Channels:</i> 1 to 11 (inclusive) <i>Antenna Type:</i> SMA <i>Encryption:</i> 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	nvoPitVlVIn XXX	SNVT switch
Ignition_In	BI	5	Bit XXX[004]	4	3	X03	4	nvolgnInn XXX	SNVT switch
Blower_In	BI	6	Bit XXX[005]	4	3	X03	5	nvoBlwrln 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	nvoStInpnt 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	nvoRefACLIn XXX	SNVT switch
Ignition Out	BI	17	Bit XXX[017]	4	3	X03	17	nvolgnOutn XXX	SNVT switch
Pilot Valve Out	BI	18	Bit XXX[018]	4	3	X03	18	nvoPitVlVOut 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	nvolntSftyOt 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	Fit XXX[000]	4	3	X01	0	nvoOpState XXX	SNVT count f
Flame Signal Value	AI	2	Fit XXX[001]	4	3	X01	1	nvoFlmSigVal XXX	SNVT count f
System On Hours	AI	3	Fit XXX[002]	4	3	X01	2	nvoSysHrs XXX	SNVT time hour
Burner On Hours	AI	4	Fit XXX[003]	4	3	X01	3	nvoBurnerHrs XXX	SNVT time hour
Completed Burner Cycles	AI	5	Fit XXX[004]	4	3	X01	4	nvoCmpBrnHrs XXX	SNVT count f
Current Modulation Rate	AI	6	Fit XXX[005]	4	3	X01	5	nvoCurModRat XXX	SNVT count f
Current Modulation Reason Mode	AI	7	Fit XXX[006]	4	3	X01	6	nvoModMode XXX	SNVT count f
Current Internal Temp Of The Control	AI	8	Fit XXX[007]	4	3	X01	7	nvoCrIntTmp XXX	SNVT temp p
Current Profile Commission Point	AI	9	Fit XXX[008]	4	3	X01	8	nvoCurPrCmPt XXX	SNVT count f
Current Calculated CO2 Value	AI	10	Fit XXX[009]	4	3	X01	9	nvoCrCICO2VI XXX	SNVT lev percent
Control Type	AI	11	Fit XXX[010]	4	3	X01	10	nvoCtrlType XXX	SNVT count f
Current Selected Profile	AI	12	Fit XXX[011]	4	3	X01	11	nvoCurSelPrf XXX	SNVT count f
Total # Of Commissioned Points	AI	13	Fit XXX[012]	4	3	X01	12	nvoTotComPts XXX	SNVT count f
Current Prof Comm Pnt Range	AI	14	Fit XXX[013]	4	3	X01	13	nvoCrPrCmPRg XXX	SNVT count f
Current Digital Input Values	AI	15	Fit XXX[014]	4	3	X01	14	nvoCurrDIVal XXX	SNVT count f
Current VFD 1 Position	AI	16	Fit XXX[015]	4	3	X01	15	nvoCrVFD1Pos XXX	SNVT lev percent
Commanded VFD 1 Position	AI	17	Fit XXX[016]	4	3	X01	16	nvoCmVFD1Pos XXX	SNVT lev percent
Current VFD 2 Position	AI	18	Fit XXX[017]	4	3	X01	17	nvoCrVFD2Pos XXX	SNVT lev percent
Commanded VFD 2 Position	AI	19	Fit XXX[018]	4	3	X01	18	nvoCmVFD2Pos XXX	SNVT lev percent
Boiler Efficiency	AI	20	Fit XXX[019]	4	3	X01	19	nvoBlrEff XXX	SNVT lev percent
Current O2 Target Value	AI	21	Fit XXX[020]	4	3	X01	20	nvoCurO2TgVI XXX	SNVT lev percent
Combustion Efficiency	AI	22	Fit XXX[021]	4	3	X01	21	nvoCombEff XXX	SNVT lev percent
O2 Probe Status	AI	23	Fit XXX[022]	4	3	X01	22	nvoO2PrbStat XXX	SNVT count f
O2 Probe Stack Temp	AI	24	Fit XXX[023]	4	3	X01	23	nvoO2PrStkTp XXX	SNVT count f
O2 Probe Ambient Temp	AI	25	Fit XXX[024]	4	3	X01	24	nvoO2PrAmbTp XXX	SNVT count f
O2 Probe O2 Level	AI	26	Fit XXX[025]	4	3	X01	25	nvoO2PrO2Lvl XXX	SNVT count f
Calibration Constant	AI	27	Fit XXX[026]	4	3	X01	26	nvoCalConst XXX	SNVT count f
Z Processor Firmware Major Revision	AI	28	Fit XXX[027]	4	3	X01	27	nvoZPrFwMjRv XXX	SNVT count f
Z Processor Firmware Minor Revision	AI	29	Fit XXX[028]	4	3	X01	28	nvoZPrFwMnRv XXX	SNVT count f
Sensor 1 Measured Raw Value	AI	30	Fit XXX[029]	4	3	X01	29	nvoSen1MsRaw XXX	SNVT count f
Sensor 2 Measured Raw Value	AI	31	Fit XXX[030]	4	3	X01	30	nvoSen2MsRaw XXX	SNVT count f
Sensor 3 Measured Raw Value	AI	32	Fit XXX[031]	4	3	X01	31	nvoSen3MsRaw XXX	SNVT count f
Sensor 4 Measured Raw Value	AI	33	Fit XXX[032]	4	3	X01	32	nvoSen4MsRaw XXX	SNVT count f
Sensor 5 Measured Raw Value	AI	34	Fit XXX[033]	4	3	X01	33	nvoSen5MsRaw XXX	SNVT count f
Servo 1 Current Position	AI	35	Fit XXX[034]	4	3	X01	34	nvoSr1CurPos XXX	SNVT lev percent
Servo 2 Current Position	AI	36	Fit XXX[035]	4	3	X01	35	nvoSr2CurPos XXX	SNVT lev percent
Servo 3 Current Position	AI	37	Fit XXX[036]	4	3	X01	36	nvoSr3CurPos XXX	SNVT lev percent
Servo 4 Current Position	AI	38	Fit XXX[037]	4	3	X01	37	nvoSr4CurPos XXX	SNVT lev percent
Servo 5 Current Position	AI	39	Fit XXX[038]	4	3	X01	38	nvoSr5CurPos XXX	SNVT lev percent
Servo 6 Current Position	AI	40	Fit XXX[039]	4	3	X01	39	nvoSr6CurPos XXX	SNVT lev percent
Servo 7 Current Position	AI	41	Fit XXX[040]	4	3	X01	40	nvoSr7CurPos XXX	SNVT lev percent
Servo 8 Current Position	AI	42	Fit XXX[041]	4	3	X01	41	nvoSr8CurPos XXX	SNVT lev percent
Servo 9 Current Position	AI	43	Fit XXX[042]	4	3	X01	42	nvoSr9CurPos XXX	SNVT lev percent
Servo 10 Current Position	AI	44	Fit XXX[043]	4	3	X01	43	nvoSr10CuPos XXX	SNVT lev percent
Amplifier Board Type	AI	45	Fit XXX[044]	4	3	X01	44	nvoAmpBrdTyp XXX	SNVT count f
Min Modulation For Profiles 1 & 2	AI	46	Fit XXX[045]	4	3	X01	45	nvoMinModP12 XXX	SNVT lev percent
Min Modulation For Profiles 3 & 4	AI	47	Fit XXX[046]	4	3	X01	46	nvoMinModP34 XXX	SNVT lev percent
8 Char Rev String For Main Microproc	AI	48	Fit XXX[047]	4	3	X01	47	nvo8ChrRevSt XXX	SNVT count f
Helper CPU Major Rev	AI	49	Fit XXX[048]	4	3	X01	48	nvoHICPUMjRv XXX	SNVT count f
Helper CPU Minor Rev	AI	50	Fit XXX[049]	4	3	X01	49	nvoHICPUMnRv XXX	SNVT count f
VFD CPU Rev	AI	51	Fit XXX[050]	4	3	X01	50	nvoVFDPCUPRev XXX	SNVT count f
FSG CPU Rev	AI	52	Fit XXX[051]	4	3	X01	51	nvoFSGCUPRev XXX	SNVT count f
Error Repeat Count	AI	53	Fit XXX[052]	4	3	X01	52	nvoErrRepCnt XXX	SNVT count f
Current Active Error Number	AI	54	Fit XXX[053]	4	3	X01	53	nvoCrActErNm XXX	SNVT count f
Total Number Of Errors Detected	AI	55	Fit XXX[054]	4	3	X01	54	nvoToNmErDet XXX	SNVT count f
Fault 1	AI	56	Fit XXX[055]	4	3	X01	55	nvoFit1_XXX	SNVT count f
Fault 1 - Error Code	AI	57	Fit XXX[056]	4	3	X01	56	nvoFt1ErCod XXX	SNVT count f
Fault 1 - Time Of Fault Occurrence	AI	58	Fit XXX[057]	4	3	X01	57	nvoFt1TimFit XXX	SNVT count f
Fault 1 - Date Of Fault Occ Day/Hour	AI	59	Fit XXX[058]	4	3	X01	58	nvoFt1DtDyHr XXX	SNVT count f
Fault 1 - Date Of Fault Occ Wk/Month	AI	60	Fit XXX[059]	4	3	X01	59	nvoFt1DtWkMt XXX	SNVT count f
Fault 1 - Year Of Fault Occ	AI	61	Fit XXX[060]	4	3	X01	60	nvoFt1Year XXX	SNVT count f
Fault 2/	AI	62	Fit 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	Fit XXX[062]	4	3	X01	62	nvoFt2ErCod XXX	SNVT count f
Fault 2 - Time Of Fault Occ	AI	64	Fit XXX[063]	4	3	X01	63	nvoFt2TimFit XXX	SNVT count f
Fault 2 - Date Of Fault Occ Day/Hour	AI	65	Fit XXX[064]	4	3	X01	64	nvoFt2DtDyHr XXX	SNVT count f
Fault 2 - Date Of Fault Occ Wk/Month	AI	66	Fit XXX[065]	4	3	X01	65	nvoFt2DtWkMt XXX	SNVT count f
Fault 2 - Year Of Fault Occ	AI	67	Fit XXX[066]	4	3	X01	66	nvoFt2Year XXX	SNVT count f
Fault 3	AI	68	Fit XXX[067]	4	3	X01	67	nvoFt3 XXX	SNVT count f
Fault 3 - Error Code	AI	69	Fit XXX[068]	4	3	X01	68	nvoFt3ErCod XXX	SNVT count f
Fault 3 - Time Of Fault Occ	AI	70	Fit XXX[069]	4	3	X01	69	nvoFt3TimFit XXX	SNVT count f
Fault 3 - Date Of Fault Occ Day/Hour	AI	71	Fit XXX[070]	4	3	X01	70	nvoFt3DtDyHr XXX	SNVT count f
Fault 3 - Date Of Fault Occ Wk/Month	AI	72	Fit XXX[071]	4	3	X01	71	nvoFt3DtWkMt XXX	SNVT count f
Fault 3 - Year Of Fault Occ	AI	73	Fit XXX[072]	4	3	X01	72	nvoFt3Year XXX	SNVT count f
Fault 4	AI	74	Fit XXX[073]	4	3	X01	73	nvoFt4 XXX	SNVT count f
Fault 4 - Error Code	AI	75	Fit XXX[074]	4	3	X01	74	nvoFt4ErCod XXX	SNVT count f
Fault 4 - Time Of Fault Occ	AI	76	Fit XXX[075]	4	3	X01	75	nvoFt4TimFit XXX	SNVT count f
Fault 4 - Date Of Fault Occ Day/Hour	AI	77	Fit XXX[076]	4	3	X01	76	nvoFt4DtDyHr XXX	SNVT count f
Fault 4 - Date Of Fault Occ Wk/Month	AI	78	Fit XXX[077]	4	3	X01	77	nvoFt4DtWkMt XXX	SNVT count f
Fault 4 - Year Of Fault Occ	AI	79	Fit XXX[078]	4	3	X01	78	nvoFt4Year XXX	SNVT count f
Fault 5	AI	80	Fit XXX[079]	4	3	X01	79	nvoFt5 XXX	SNVT count f
Fault 5 - Error Code	AI	81	Fit XXX[080]	4	3	X01	80	nvoFt5ErCod XXX	SNVT count f
Fault 5 - Time Of Fault Occ	AI	82	Fit XXX[081]	4	3	X01	81	nvoFt5TimFit XXX	SNVT count f
Fault 5 - Date Of Fault Occ Day/Hour	AI	83	Fit XXX[082]	4	3	X01	82	nvoFt5DtDyHr XXX	SNVT count f
Fault 5 - Date Of Fault Occ Wk/Month	AI	84	Fit XXX[083]	4	3	X01	83	nvoFt5DtWkMt XXX	SNVT count f
Fault 5 - Year Of Fault Occ	AI	85	Fit XXX[084]	4	3	X01	84	nvoFt5Year XXX	SNVT count f
Fault 6	AI	86	Fit XXX[085]	4	3	X01	85	nvoFt6 XXX	SNVT count f
Fault 6 - Error Code	AI	87	Fit XXX[086]	4	3	X01	86	nvoFt6ErCod XXX	SNVT count f
Fault 6 - Time Of Fault Occ	AI	88	Fit XXX[087]	4	3	X01	87	nvoFt6TimFit XXX	SNVT count f
Fault 6 - Date Of Fault Occ Day/Hour	AI	89	Fit XXX[088]	4	3	X01	88	nvoFt6DtDyHr XXX	SNVT count f
Fault 6 - Date Of Fault Occ Wk/Month	AI	90	Fit XXX[089]	4	3	X01	89	nvoFt6DtWkMt XXX	SNVT count f
Fault 6 - Year Of Fault Occ	AI	91	Fit XXX[090]	4	3	X01	90	nvoFt6Year XXX	SNVT count f
Fault 7	AI	92	Fit XXX[091]	4	3	X01	91	nvoFt7 XXX	SNVT count f
Fault 7 - Error Code	AI	93	Fit XXX[092]	4	3	X01	92	nvoFt7ErCod XXX	SNVT count f
Fault 7 - Time Of Fault Occ	AI	94	Fit XXX[093]	4	3	X01	93	nvoFt7TimFit XXX	SNVT count f
Fault 7 - Date Of Fault Occ Day/Hour	AI	95	Fit XXX[094]	4	3	X01	94	nvoFt7DtDyHr XXX	SNVT count f
Fault 7 - Date Of Fault Occ Wk/Month	AI	96	Fit XXX[095]	4	3	X01	95	nvoFt7DtWkMt XXX	SNVT count f
Fault 7 - Year Of Fault Occ	AI	97	Fit XXX[096]	4	3	X01	96	nvoFt7Year XXX	SNVT count f
Fault 8	AI	98	Fit XXX[097]	4	3	X01	97	nvoFt8 XXX	SNVT count f
Fault 8 - Error Code	AI	99	Fit XXX[098]	4	3	X01	98	nvoFt8ErCod XXX	SNVT count f
Fault 8 - Time Of Fault Occ	AI	100	Fit XXX[099]	4	3	X01	99	nvoFt8TimFit XXX	SNVT count f
Fault 8 - Date Of Fault Occ Day/Hour	AI	101	Fit XXX[100]	4	3	X01	100	nvoFt8DtDyHr XXX	SNVT count f
Fault 8 - Date Of Fault Occ Wk/Month	AI	102	Fit XXX[101]	4	3	X01	101	nvoFt8DtWkMt XXX	SNVT count f
Fault 8 - Year Of Fault Occ	AI	103	Fit XXX[102]	4	3	X01	102	nvoFt8Year XXX	SNVT count f
Fault 9	AI	104	Fit XXX[103]	4	3	X01	103	nvoFt9 XXX	SNVT count f
Fault 9 - Error Code	AI	105	Fit XXX[104]	4	3	X01	104	nvoFt9ErCod XXX	SNVT count f
Fault 9 - Time Of Fault Occ	AI	106	Fit XXX[105]	4	3	X01	105	nvoFt9TimFit XXX	SNVT count f
Fault 9 - Date Of Fault Occ Day/Hour	AI	107	Fit XXX[106]	4	3	X01	106	nvoFt9DtDyHr XXX	SNVT count f
Fault 9 - Date Of Fault Occ Wk/Month	AI	108	Fit XXX[107]	4	3	X01	107	nvoFt9DtWkMt XXX	SNVT count f
Fault 9 - Year Of Fault Occ	AI	109	Fit XXX[108]	4	3	X01	108	nvoFt9Year XXX	SNVT count f
Fault 10	AI	110	Fit XXX[109]	4	3	X01	109	nvoFt10 XXX	SNVT count f
Fault 10 - Error Code	AI	111	Fit XXX[110]	4	3	X01	110	nvoFt10ErCod XXX	SNVT count f
Fault 10 - Time Of Fault Occ	AI	112	Fit XXX[111]	4	3	X01	111	nvoFt10TimFit XXX	SNVT count f
Fault 10 - Date Of Fault Occ Day/Hr	AI	113	Fit XXX[112]	4	3	X01	112	nvoFt10DtDyHr XXX	SNVT count f
Fault 10 - Date Of Fault Occ Wk/Mnth	AI	114	Fit XXX[113]	4	3	X01	113	nvoFt10DtWkMt XXX	SNVT count f
Fault 10 - Year Of Fault Occ	AI	115	Fit XXX[114]	4	3	X01	114	nvoFt10Year XXX	SNVT count f
Unit Of Measurement	AI	116	Fit XXX[115]	4	3	X01	115	nvoUnitMeas XXX	SNVT count f
Sensor 1 Type & Range	AI	117	Fit XXX[116]	4	3	X01	116	nvoSen1TyRng XXX	SNVT count f
Sensor 2 Type & Range	AI	118	Fit XXX[117]	4	3	X01	117	nvoSen2TyRng XXX	SNVT count f
Sensor 3 Type & Range	AI	119	Fit XXX[118]	4	3	X01	118	nvoSen3TyRng XXX	SNVT count f
Sensor 4 Type & Range	AI	120	Fit XXX[119]	4	3	X01	119	nvoSen4TyRng XXX	SNVT count f
Sensor 5 Type & Range	AI	121	Fit XXX[120]	4	3	X01	120	nvoSen5TyRng XXX	SNVT count f
Setpoint 1 Sensor Usage	AI	122	Fit XXX[121]	4	3	X01	121	nvoSP1SenUsg XXX	SNVT count f
Setpoint 1 Derivative & Integral	AI	123	Fit XXX[122]	4	3	X01	122	nvoSP1DerInt XXX	SNVT count f
Sensor 1 Set Point Value	AI	124	Fit XXX[123]	4	3	X01	123	nvoSn1SPVI XXX	SNVT count f
Sensor 1 Cut In Value	AI	125	Fit XXX[124]	4	3	X01	124	nvoSn1CtInVI XXX	SNVT count f
Sensor 1 Cut Out Value	AI	126	Fit XXX[125]	4	3	X01	125	nvoSn1CtOtVI 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	Fit XXX[126]	4	3	X01	126	nvoSn1MgAIVI_XXX	SNVT_count_f
Sensor 1 Limit Alarm Value	AI	128	Fit XXX[127]	4	3	X01	127	nvoSn1LmAIVI_XXX	SNVT_count_f
Sensor 2 Set Point Value	AI	129	Fit XXX[128]	4	3	X01	128	nvoSn2SPVI_XXX	SNVT_count_f
Sensor 2 Cut In Value	AI	130	Fit XXX[129]	4	3	X01	129	nvoSn2CtInVI_XXX	SNVT_count_f
Sensor 2 Cut Out Value	AI	131	Fit XXX[130]	4	3	X01	130	nvoSn2CtOtVI_XXX	SNVT_count_f
Sensor 2 Margin Alarm Value	AI	132	Fit XXX[131]	4	3	X01	131	nvoSn2MgAIVI_XXX	SNVT_count_f
Sensor 2 Limit Alarm Value	AI	133	Fit XXX[132]	4	3	X01	132	nvoSn2LmAIVI_XXX	SNVT_count_f
Sensor 3 Set Point Value	AI	134	Fit XXX[133]	4	3	X01	133	nvoSn3SPVI_XXX	SNVT_count_f
Sensor 3 Cut In Value	AI	135	Fit XXX[134]	4	3	X01	134	nvoSn3CtInVI_XXX	SNVT_count_f
Sensor 3 Cut Out Value	AI	136	Fit XXX[135]	4	3	X01	135	nvoSn3CtOtVI_XXX	SNVT_count_f
Sensor 3 Margin Alarm Value	AI	137	Fit XXX[136]	4	3	X01	136	nvoSn3MgAIVI_XXX	SNVT_count_f
Sensor 3 Limit Alarm Value	AI	138	Fit XXX[137]	4	3	X01	137	nvoSn3LmAIVI_XXX	SNVT_count_f
Sensor 4 Set Point Value	AI	139	Fit XXX[138]	4	3	X01	138	nvoSn4SPVI_XXX	SNVT_count_f
Sensor 4 Cut In Value	AI	140	Fit XXX[139]	4	3	X01	139	nvoSn4CtInVI_XXX	SNVT_count_f
Sensor 4 Cut Out Value	AI	141	Fit XXX[140]	4	3	X01	140	nvoSn4CtOtVI_XXX	SNVT_count_f
Sensor 4 Margin Alarm Value	AI	142	Fit XXX[141]	4	3	X01	141	nvoSn4MgAIVI_XXX	SNVT_count_f
Sensor 4 Limit Alarm Value	AI	143	Fit XXX[142]	4	3	X01	142	nvoSn4LmAIVI_XXX	SNVT_count_f
Sensor 5 Set Point Value	AI	144	Fit XXX[143]	4	3	X01	143	nvoSn5SPVI_XXX	SNVT_count_f
Sensor 5 Cut In Value	AI	145	Fit XXX[144]	4	3	X01	144	nvoSn5CtInVI_XXX	SNVT_count_f
Sensor 5 Cut Out Value	AI	146	Fit XXX[145]	4	3	X01	145	nvoSn5CtOtVI_XXX	SNVT_count_f
Sensor 5 Margin Alarm Value	AI	147	Fit XXX[146]	4	3	X01	146	nvoSn5MgAIVI_XXX	SNVT_count_f
Sensor 5 Limit Alarm Value	AI	148	Fit XXX[147]	4	3	X01	147	nvoSn5LmAIVI_XXX	SNVT_count_f
Valve Proving Testtime 1 & 2	AI	149	Fit XXX[148]	4	3	X01	148	nvoVIPrTsT12_XXX	SNVT_count_f
Valve Prov Test Method And Duration	AI	150	Fit XXX[149]	4	3	X01	149	nvoVIPrTsMth_XXX	SNVT_count_f
Pcv Setpoint String	AI	151	Fit XXX[150]	4	3	X01	150	nvoPCV_SPStr_XXX	SNVT_count_f
Pcv Measured Value String	AI	152	Fit XXX[151]	4	3	X01	151	nvoPCVMsVIStr_XXX	SNVT_count_f
Max Modulation Rate & Name 1	AI	153	Fit XXX[152]	4	3	X01	152	nvoMxMdRtNm1_XXX	SNVT_count_f
Max Modulation Rate & Name 2	AI	154	Fit XXX[153]	4	3	X01	153	nvoMxMdRtNm2_XXX	SNVT_count_f
Max Modulation Rate & Name 3	AI	155	Fit XXX[154]	4	3	X01	154	nvoMxMdRtNm3_XXX	SNVT_count_f
Max Modulation Rate & Name 4	AI	156	Fit XXX[155]	4	3	X01	155	nvoMxMdRtNm4_XXX	SNVT_count_f
Post Purge Time & Prove Perm Input	AI	157	Fit XXX[156]	4	3	X01	156	nvoPstPrgTme_XXX	SNVT_count_f
Ptfi Time & Recycle	AI	158	Fit XXX[157]	4	3	X01	157	nvoPtfiTmRec_XXX	SNVT_count_f
Mtft Time & Intermittent Pilot	AI	159	Fit XXX[158]	4	3	X01	158	nvoMtfiTime_XXX	SNVT_count_f
Profile Select & Fprt Time	AI	160	Fit XXX[159]	4	3	X01	159	nvoPrSelFprt_XXX	SNVT_count_f
Prove Airflow	AI	161	Fit XXX[160]	4	3	X01	160	nvoPrveArFlw_XXX	SNVT_count_f
Purge Time	AI	162	Fit XXX[161]	4	3	X01	161	nvoPrgTime_XXX	SNVT_count_f
Reset	AV	163	Fit XXX[162]	4	3	X01	162	nvi/nvoReset_XXX	SNVT_count_f
Burner Control On/Off	AV	164	Fit XXX[163]	4	3	X01	163	nvi/nvoBnCtOnOff_XXX	SNVT_count_f
Burner Control Low Fire	AV	165	Fit XXX[164]	4	3	X01	164	nvi/nvoBrCtLoFir_XXX	SNVT_count_f
Burner Control Lead Lag	AV	166	Fit XXX[165]	4	3	X01	165	nvi/nvoBrCtLdLg_XXX	SNVT_count_f
Burner Control Auto Manual	AV	167	Fit XXX[166]	4	3	X01	166	nvi/nvoBrCtAutMn_XXX	SNVT_count_f
Manual Modulation Rate	AV	168	Fit 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_DeIVlv_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_Rnlnlk_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_HIFrn_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_Ignitn_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_DeIVl_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	nvoYZHiOITmp_XXX	SNVT_switch
YZ300 Lo Oil Temp	BV	90	Bit_XXX[039]	4	3	X03	39	nvoYZLoOITmp_XXX	SNVT_switch
YZ300 Lo Oil Press	BV	91	Bit_XXX[040]	4	3	X03	40	nvoYZLoOIPrs_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	nvi/nvoModRate 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	nvoF02FitNum_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	nvoF03FitNum_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	nvoF04FitNum_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	nvoF05FitNum_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	nvoF06FitNum_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	nvoF07FitNum_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	nvoF08FitNum_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	nvoF09FitNum_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	nvoF10FitNum_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	nvoF11FitNum_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	nvoF12FitNum_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	nvoF13FitNum_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	nvoF14FitNum_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	nvoF15FitNum_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	nvoF16FitNum_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	nvoF17FitNum_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	nvoF18FitNum_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	nvoF19FitNum_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	nvoF20FitNum_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	nvoF21FitNum_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	nvoF22FitNum_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	nvoF23FitNum_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	ScI XXX[000]	4	3	X03	0	nvi/nvoSP1CtrlVI_XXX	SNVT count f
SP 2 Ctrl Value	AV	2	ScI XXX[001]	4	3	X03	1	nvi/nvoSP2CtrlVI_XXX	SNVT count f
SP 1 Low Ctrl Limit	AV	3	ScI XXX[002]	4	3	X03	2	nvi/nvoSP1LoCtLm_XXX	SNVT count f
SP 2 Low Ctrl Limit	AV	4	ScI XXX[003]	4	3	X03	3	nvi/nvoSP2LoCtLm_XXX	SNVT count f
SP 1 High Ctrl Limit	AV	5	ScI XXX[004]	4	3	X03	4	nvi/nvoSP1HiCtLm_XXX	SNVT count f
SP 2 High Ctrl Limit	AV	6	ScI XXX[005]	4	3	X03	5	nvi/nvoSP2HiCtLm_XXX	SNVT count f
Modulation Rate Cmd	AV	7	ScI 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 MainFI 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 MnFI 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	nvoAtFISgAvg 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_OpCntrl_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 Scr1	BV	13	Bit_XXX[006]	4	3	X03	6	nvoIN_Scr1_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	nvolgnition_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	nvoMnFIVlv1_XXX	SNVT_switch
Main Fuel Valve 2 (MV2)	BI	11	U16_XXX[010]	4	3	X01	10	nvoMnFIVlv2_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	nvoLH1BrnCyc_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	nvoLH2BrnCyc_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	nvoLH3BrnCyc_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	nvoLH4BrnCyc_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	nvoLH5BrnCyc_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	nvoLsFIHtTyp_XXX	SNVT_count_inc_f
Last Fault History Data	AI	21	U16_XXX[016]	4	3	X01	16	nvoLsFIHtDat_XXX	SNVT_count_inc_f
2nd to Last Fault History Type	AI	22	U16_XXX[017]	4	3	X01	17	nvo2FIHtTyp_XXX	SNVT_count_inc_f
2nd to Last Fault History Data	AI	23	U16_XXX[018]	4	3	X01	18	nvo2FIHtDat_XXX	SNVT_count_inc_f
3rd to Last Fault History Type	AI	24	U16_XXX[019]	4	3	X01	19	nvo3FIHtTyp_XXX	SNVT_count_inc_f
3rd to Last Fault History Data	AI	25	U16_XXX[020]	4	3	X01	20	nvo3FIHtDat_XXX	SNVT_count_inc_f
4th to Last Fault History Type	AI	26	U16_XXX[021]	4	3	X01	21	nvo4FIHtTyp_XXX	SNVT_count_inc_f
4th to Last Fault History Data	AI	27	U16_XXX[022]	4	3	X01	22	nvo4FIHtDat_XXX	SNVT_count_inc_f
5th to Last Fault History Type	AI	28	U16_XXX[023]	4	3	X01	23	nvo5FIHtTyp_XXX	SNVT_count_inc_f
5th to Last Fault History Data	AI	29	U16_XXX[024]	4	3	X01	24	nvo5FIHtDat_XXX	SNVT_count_inc_f
6th to Last Fault History Type	AI	30	U16_XXX[025]	4	3	X01	25	nvo6FIHtTyp_XXX	SNVT_count_inc_f
6th to Last Fault History Data	AI	31	U16_XXX[026]	4	3	X01	26	nvo6FIHtDat_XXX	SNVT_count_inc_f
7th to Last Fault History Type	AI	32	U16_XXX[027]	4	3	X01	27	nvo7FIHtTyp_XXX	SNVT_count_inc_f
7th to Last Fault History Data	AI	33	U16_XXX[028]	4	3	X01	28	nvo7FIHtDat_XXX	SNVT_count_inc_f
8th to Last Fault History Type	AI	34	U16_XXX[029]	4	3	X01	29	nvo8FIHtTyp_XXX	SNVT_count_inc_f
8th to Last Fault History Data	AI	35	U16_XXX[030]	4	3	X01	30	nvo8FIHtDat_XXX	SNVT_count_inc_f
9th to Last Fault History Type	AI	36	U16_XXX[031]	4	3	X01	31	nvo9FIHtTyp_XXX	SNVT_count_inc_f
9th to Last Fault History Data	AI	37	U16_XXX[032]	4	3	X01	32	nvo9FIHtDat_XXX	SNVT_count_inc_f
10th to Last Fault History Type	AI	38	U16_XXX[033]	4	3	X01	33	nvo10FIHtTyp_XXX	SNVT_count_inc_f
10th to Last Fault History Data	AI	39	U16_XXX[034]	4	3	X01	34	nvo10FIHtDat_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_switich
OFF2	BV	2	DO XXX[001]	4	3	X04	1	nvi/nvoOff2_XXX	SNVT_switich
OFF3	BV	3	DO XXX[002]	4	3	X04	2	nvi/nvoOff3_XXX	SNVT_switich
START	BV	4	DO XXX[003]	4	3	X04	3	nvi/nvoStart_XXX	SNVT_switich
RAMP_HOLD	BV	5	DO XXX[005]	4	3	X04	5	nvi/nvoRampHold_XXX	SNVT_switich
RAMP_IN_ZERO	BV	6	DO XXX[006]	4	3	X04	6	nvi/nvoRmpInZero_XXX	SNVT_switich
RESET	BV	7	DO XXX[007]	4	3	X04	7	nvi/nvoReset_XXX	SNVT_switich
EXT2 DO	BV	8	DO XXX[011]	4	3	X04	11	nvi/nvoExt2DO_XXX	SNVT_switich
Relay Output 1	BV	9	DO XXX[032]	4	3	X04	32	nvi/nvoRelOut1_XXX	SNVT_switich
Relay Output 2	BV	10	DO XXX[033]	4	3	X04	33	nvi/nvoRelOut2_XXX	SNVT_switich
Relay Output 3	BV	11	DO XXX[034]	4	3	X04	34	nvi/nvoRelOut3_XXX	SNVT_switich
Relay Output 4	BV	12	DO XXX[035]	4	3	X04	35	nvi/nvoRelOut4_XXX	SNVT_switich
Relay Output 5	BV	13	DO XXX[036]	4	3	X04	36	nvi/nvoRelOut5_XXX	SNVT_switich
Relay Output 6	BV	14	DO XXX[037]	4	3	X04	37	nvi/nvoRelOut6_XXX	SNVT_switich
RDY_ON	BI	15	DI XXX[000]	4	3	X03	0	nvoRdy_On_XXX	SNVT_switich
RDY_RUN	BI	16	DI XXX[001]	4	3	X03	1	nvoRdy_Run_XXX	SNVT_switich
RDY_REF	BI	17	DI XXX[002]	4	3	X03	2	nvoRdy_Ref_XXX	SNVT_switich
TRIPPED	BI	18	DI XXX[003]	4	3	X03	3	nvoTripped_XXX	SNVT_switich
OFF_2_STA	BI	19	DI XXX[004]	4	3	X03	4	nvoOff_2_Sta_XXX	SNVT_switich
OFF_3_STA	BI	20	DI XXX[005]	4	3	X03	5	nvoOff_3_Sta_XXX	SNVT_switich
SWC_ON_INHIB	BI	21	DI XXX[006]	4	3	X03	6	nvoSwcOnInh_XXX	SNVT_switich
ALARM	BI	22	DI XXX[007]	4	3	X03	7	nvoAlarm_XXX	SNVT_switich
AT_SETPOINT	BI	23	DI XXX[008]	4	3	X03	8	nvoAT_Setpnt_XXX	SNVT_switich
REMOTE	BI	24	DI XXX[009]	4	3	X03	9	nvoRemote_XXX	SNVT_switich
ABOVE_LIMIT	BI	25	DI XXX[010]	4	3	X03	10	nvoAbvLimit_XXX	SNVT_switich
EXT2 DI	BI	26	DI XXX[011]	4	3	X03	11	nvoExt2DI_XXX	SNVT_switich
RUN_ENABLE	BI	27	DI XXX[012]	4	3	X03	12	nvoRunEnbl_XXX	SNVT_switich
DI1	BI	28	DI XXX[032]	4	3	X03	32	nvoDI1_XXX	SNVT_switich
DI2	BI	29	DI XXX[033]	4	3	X03	33	nvoDI2_XXX	SNVT_switich
DI3	BI	30	DI XXX[034]	4	3	X03	34	nvoDI3_XXX	SNVT_switich
DI4	BI	31	DI XXX[035]	4	3	X03	35	nvoDI4_XXX	SNVT_switich
DI5	BI	32	DI XXX[036]	4	3	X03	36	nvoDI5_XXX	SNVT_switich
DI6	BI	33	DI XXX[037]	4	3	X03	37	nvoDI6_XXX	SNVT_switich
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_FiSI_XXX	SNVT count inc f
EEPROM: LANGUAGE SELECT	AI	69	S16 XXX[070]	4	3	X01	70	nvoEEP_LanSI_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_RmFIS_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_FIFITim_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_FIFITim_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_FIFITim_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 FIFITim 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	nvoLnOffIRFeg XXX	SNVT count inc f
LEARN OFF UV FEG	AI	238	S16 XXX[239]	4	3	X01	239	nvoLnOffUVFeg XXX	SNVT count inc f
IR FQ GOAL	AI	239	S16 XXX[240]	4	3	X01	240	nvoLRFqGoal 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	nvoFimSigVal 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	nvoCrCICO2VI 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	nvoHICPUMjRv XXX	SNVT count inc f
Helper Cpu Minor Revision Number	AI	120	Srv XXX[119]	4	3	X01	119	nvoHICPUMnRv 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	nvoSP1HiMgLn XXX	SNVT count inc f
Setpoint 1 High Alarm Limit	AI	249	Srv XXX[248]	4	3	X01	248	nvoSP1HiAILm 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	nvoVIPrTsTm1_XXX	SNVT_count_inc_f
Valve Proving Test Time 2	AI	269	Srv_XXX[268]	4	3	X01	268	nvoVIPrTsTm2_XXX	SNVT_count_inc_f
Valve Proving Test Duration	BI	270	Srv_XXX[269]	4	3	X01	269	nvoVIPrTsDur_XXX	SNVT_switch
Valve Proving Test Method	AI	271	Srv_XXX[270]	4	3	X01	270	nvoVIPrTsMth_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	nvoFSGPrArFI_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