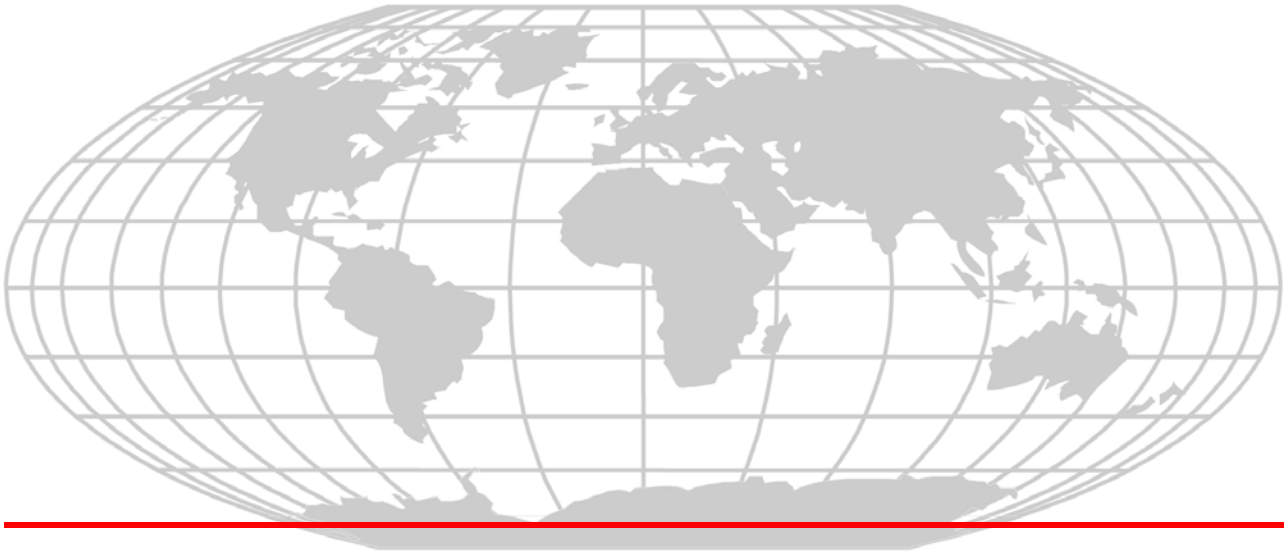
NOTIFIER®
by Honeywell



BACNET-GW-3

Installation and Operation Manual

Document LS10014-000NF-E
5/5/2017 Rev: C6
P/N LS10014-000NF-E:C6 ECN 17-0185

Fire Alarm & Emergency Communication System Limitations

While a life safety system may lower insurance rates, it is not a substitute for life and property insurance!

An automatic fire alarm system—typically made up of smoke detectors, heat detectors, manual pull stations, audible warning devices, and a fire alarm control panel (FACP) with remote notification capability—can provide early warning of a developing fire. Such a system, however, does not assure protection against property damage or loss of life resulting from a fire.

An emergency communication system—typically made up of an automatic fire alarm system (as described above) and a life safety communication system that may include an autonomous control unit (ACU), local operating console (LOC), voice communication, and other various interoperable communication methods—can broadcast a mass notification message. Such a system, however, does not assure protection against property damage or loss of life resulting from a fire or life safety event.

The Manufacturer recommends that smoke and/or heat detectors be located throughout a protected premises following the recommendations of the current edition of the National Fire Protection Association Standard 72 (NFPA 72), manufacturer's recommendations, State and local codes, and the recommendations contained in the Guide for Proper Use of System Smoke Detectors, which is made available at no charge to all installing dealers. This document can be found at http://www.systemsensor.com/appguides/. A study by the Federal Emergency Management Agency (an agency of the United States government) indicated that smoke detectors may not go off in as many as 35% of all fires. While fire alarm systems are designed to provide early warning against fire, they do not guarantee warning or protection against fire. A fire alarm system may not provide timely or adequate warning, or simply may not function, for a variety of reasons:

Smoke detectors may not sense fire where smoke cannot reach the detectors such as in chimneys, in or behind walls, on roofs, or on the other side of closed doors. Smoke detectors also may not sense a fire on another level or floor of a building. A second-floor detector, for example, may not sense a first-floor or basement fire.

Particles of combustion or "smoke" from a developing fire may not reach the sensing chambers of smoke detectors because:

- Barriers such as closed or partially closed doors, walls, chimneys, even wet or humid areas may inhibit particle or smoke flow.
- Smoke particles may become "cold," stratify, and not reach the ceiling or upper walls where detectors are located.
- Smoke particles may be blown away from detectors by air outlets, such as air conditioning vents.
- Smoke particles may be drawn into air returns before reaching the detector.

The amount of "smoke" present may be insufficient to alarm smoke detectors. Smoke detectors are designed to alarm at various levels of smoke density. If such density levels are not created by a developing fire at the location of detectors, the detectors will not go into alarm.

Smoke detectors, even when working properly, have sensing limitations. Detectors that have photoelectronic sensing chambers tend to detect smoldering fires better than flaming fires, which have little visible smoke. Detectors that have ionizing-type sensing chambers tend to detect fast-flaming fires better than smoldering fires. Because fires develop in different ways and are often unpredictable in their growth, neither type of detector is necessarily best and a given type of detector may not provide adequate warning of a fire.

Smoke detectors cannot be expected to provide adequate warning of fires caused by arson, children playing with matches (especially in bedrooms), smoking in bed, and violent explosions (caused by escaping gas, improper storage of flammable materials, etc.).

Heat detectors do not sense particles of combustion and alarm only when heat on their sensors increases at a predetermined rate or reaches a predetermined level. Rate-of-rise heat detectors may be subject to reduced sensitivity over time. For this reason, the rate-of-rise feature of each detector should be tested at least once per year by a qualified fire protection specialist. Heat detectors are designed to protect property, not life.

IMPORTANT! Smoke detectors must be installed in the same room as the control panel and in rooms used by the system for the connection of alarm transmission wiring, communications, signaling, and/or power. If detectors are not so located, a developing fire may damage the alarm system, compromising its ability to report a fire.

Audible warning devices such as bells, horns, strobes, speakers and displays may not alert people if these devices are located on the other side of closed or partly open doors or are located on another floor of a building. Any warning device may fail to alert people with a disability or those who have recently consumed drugs, alcohol, or medication. Please note that:

- An emergency communication system may take priority over a fire alarm system in the event of a life safety emergency.
- Voice messaging systems must be designed to meet intelligibility requirements as defined by NFPA, local codes, and Authorities Having Jurisdiction (AHJ).
- Language and instructional requirements must be clearly disseminated on any local displays.
- Strobes can, under certain circumstances, cause seizures in people with conditions such as epilepsy.
- Studies have shown that certain people, even when they hear a fire alarm signal, do not respond to or comprehend the meaning of the signal. Audible devices, such as horns and bells, can have different tonal patterns and frequencies. It is the property owner's responsibility to conduct fire drills and other training exercises to make people aware of fire alarm signals and instruct them on the proper reaction to alarm signals.
- In rare instances, the sounding of a warning device can cause temporary or permanent hearing loss.

A life safety system will not operate without any electrical power. If AC power fails, the system will operate from standby batteries only for a specified time and only if the batteries have been properly maintained and replaced regularly.

Equipment used in the system may not be technically compatible with the control panel. It is essential to use only equipment listed for service with your control panel.

Telephone lines needed to transmit alarm signals from a premises to a central monitoring station may be out of service or temporarily disabled. For added protection against telephone line failure, backup radio transmission systems are recommended.

The most common cause of life safety system malfunction is inadequate maintenance. To keep the entire life safety system in excellent working order, ongoing maintenance is required per the manufacturer's recommendations, and UL and NFPA standards. At a minimum, the requirements of NFPA 72 shall be followed. Environments with large amounts of dust, dirt, or high air velocity require more frequent maintenance. A maintenance agreement should be arranged through the local manufacturer's representative. Maintenance should be scheduled as required by National and/or local fire codes and should be performed by authorized professional life safety system installers only. Adequate written records of all inspections should be kept.

Limit-D2-2016

Installation Precautions

Adherence to the following will aid in problem-free installation with long-term reliability:

WARNING - Several different sources of power can be connected to the fire alarm control panel. Disconnect all sources of power before servicing. The control unit and associated equipment may be damaged by removing and/or inserting cards, modules, or interconnecting cables while the unit is energized. Do not attempt to install, service, or operate this unit until this manual is read and understood.

CAUTION - System Reacceptance Test after Software Changes. To ensure proper system operation, this product must be tested in accordance with NFPA 72 after any programming operation or change in site-specific software. Reacceptance testing is required after any change, addition or deletion of system components, or after any modification, repair or adjustment to system hardware or wiring.

All components, circuits, system operations, or software functions known to be affected by a change must be 100% tested. In addition, to ensure that other operations are not inadvertently affected, at least 10% of initiating devices that are not directly affected by the change, up to a maximum of 50 devices, must also be tested and proper system operation verified.

This system meets NFPA requirements for operation at 0°C to 49°C (32°F to 120°F) and at a relative humidity 93% ± 2% RH (non-condensing) at 32°C ± 2°C (90°F ± 3°F). However, the useful life of the system's standby batteries and the electronic components may be adversely affected by extreme temperature ranges and humidity. Therefore, it is recommended that this system and all peripherals be installed in an environment with a nominal room temperature of 15-27° C/60-80° F.

Verify that wire sizes are adequate for all initiating and indicating device loops. Most devices cannot tolerate more than a 10% I.R. drop from the specified device voltage.

Like all solid state electronic devices, this system may operate erratically or can be damaged when subjected to lightning-induced transients. Although no system is completely immune from lightning transients and interferences, proper grounding will reduce susceptibility. Overhead or outside aerial wiring is not recommended, due to an increased susceptibility to nearby lightning strikes. Consult with the Technical Services if any problems are anticipated or encountered.

Disconnect AC power and batteries prior to removing or inserting circuit boards. Failure to do so can damage circuits.

Remove all electronic assemblies prior to any drilling, filing, reaming, or punching of the enclosure. When possible, make all cable entries from the sides or rear. Before making modifications, verify that they will not interfere with battery, transformer, and printed circuit board location.

Do not tighten screw terminals more than 9 in-lbs. Over-tightening may damage threads, resulting in reduced terminal contact pressure and difficulty with screw terminal removal.

Though designed to last many years, system components can fail at any time. This system contains static-sensitive components. Always ground yourself with a proper wrist strap before handling any circuits so that static charges are removed from the body. Use static-suppressive packaging to protect electronic assemblies removed from the unit.

Follow the instructions in the installation, operating, and programming manuals. These instructions must be followed to avoid damage to the control panel and associated equipment. FACP operation and reliability depend upon proper installation by authorized personnel.

FCC Warning

WARNING: This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual may cause interference to radio communications. It has been tested and found to comply with the limits for class A computing devices pursuant to Subpart B of Part 15 of FCC Rules, which is designed to provide reasonable protection against such interference when devices are operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user will be required to correct the interference at his or her own expense.

Canadian Requirements

This digital apparatus does not exceed the Class A limits for radiation noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de la classe A prescrites dans le Reglement sur le brouillage radioelectrique edicte par le ministere des Communications du Canada.

Software Downloads

In order to supply the latest features and functionality in fire alarm and life safety technology to our customers, we make frequent upgrades to the embedded software in our products. To ensure that you are installing and programming the latest features, we strongly recommend that you download the most current version of software for each product prior to commissioning any system. Contact Technical Support with any questions about software and the appropriate version for a specific application.

Documentation Feedback

Your feedback helps us keep our documentation up-to-date and accurate. If you have any comments or suggestions about our on-line help or manuals, please e-mail us at FireSystems.TechPubs@honeywell.com.

On-Line Help – Please include the following information:

- Product name and version number (if applicable)
- Topic title
- The content you think should be corrected/improved
- Detailed suggestions for correction/improvement

Documents – Please include the following information:

- Document part number and title
- Page number and paragraph
- The content you think should be corrected/improved
- Detailed suggestions for correction/improvement

Please Note: If you have any technical issues, please contact Technical Services.

Manual Usage

This manual is written with the understanding that the user has been trained in the proper operations and services for this product. The information provided in this manual is intended to assist the user by describing the configurations and how they affect operations.

Table of Contents

Section 1 Product Overview

1.1 Operation

The BACNET-GW-3 serves as a bridge between the BACnet client application and the connected Fire Alarm Control Panels (FACPs), NFN or a high-speed NFN network.

The web portal feature serves as a bridge between eVance™ and the connected FACPs, NFN network, or high-speed NFN network.

1.2 Functionality

The BACNET-GW-3 translates the protocols and facilitates communications between a BACnet client and the connected FACPs, NFN network, or high-speed NFN network to protocols used by the workstation.

The web portal feature transmits network events and system information between eVance and the connected FACPs, NFN network, or high-speed NFN network. This information is for maintenance purposes only.

1.3 BACnet Clients

The BACnet client must conform to BACnet Standard Annex J for IP and support device objects, binary output objects, and multi-state input or life safety points/zones. It is also required to write to notification objects and receive confirmed/unconfirmed event notification messages. For details, refer to Appendix B, "BACnet PIC Statement".

1.4 Required Software

Chrome™ is required for use with the BACNET-GW-3.

1.5 Environmental Requirements

This product meets the following requirements for operation:

- Temperature - 0°C to 49°C (32°F - 120°F)
- Relative Humidity - 93 ±2% non-condensing at 32 ±2°C (90 ±3°F)

However, it is recommended that this product be installed in an environment with a normal room temperature of 15-27º C (60-80º F).

1.6 System Architecture

An Internet or Intranet IP network connection is used with the architectures described in Figures 1.1 and 1.2.

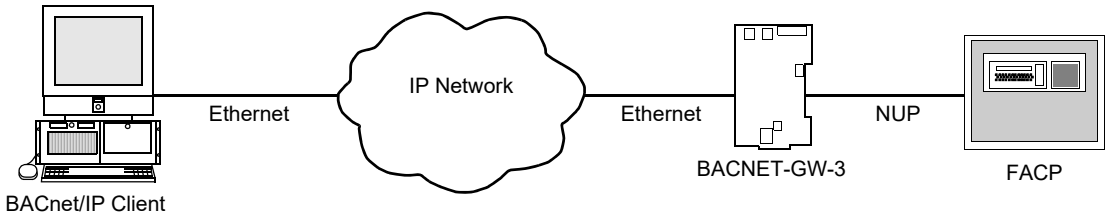


Figure 1.1 Single Panel Architecture

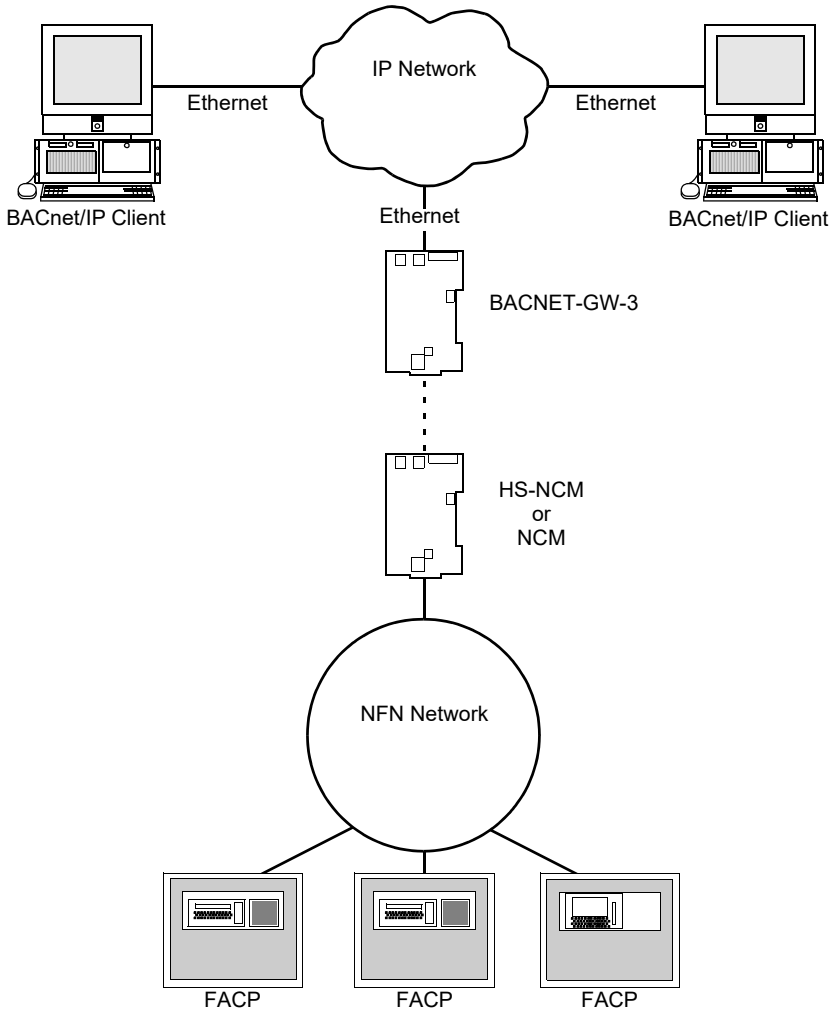


Figure 1.2 NFN Network Architecture

1.7 IP Requirements

1.7.1 IP Port Settings

The following IP ports must be available to the BACNET-GW-3:

Port	Type	Direction	Purpose
80	TCP	In	Web Based Configuration
443	TCP	In	HTTPS Communications
4016	UDP	In	Upgrades
47808	UDP	Both	BACnet

1.7.2 IP Restrictions

The following IP restrictions apply to the BACNET-GW-3:

- Must have a static IP address. DHCP is not supported.
- Web access via an HTTP proxy server is not supported.

1.8 Agency Listings

1.8.1 Standards

■ **Compliance** - This product has been investigated to, and found to be in compliance with, the following standards:

National Fire Protection Association

- NFPA 72 National Fire Alarm and Signaling Code

Underwriters Laboratories

- UL 864 Control Units for Fire Alarm Systems, Ninth Edition
- UL 2017 General Purpose Signaling Devices and Systems, First Edition
- UL 2572 Mass Notification Systems, First Edition

Underwriters Laboratories Canada

- CAN/ULC S527-11 Standard for Control Units for Fire Alarm Systems, Third Edition
- CAN/ULC S559-13 Standard for Equipment for Fire Signal Receiving Centres and Systems, Second Edition

■ **Installation** - This product is intended to be installed in accordance with the following:

Local

- AHJ Authority Having Jurisdiction

National Fire Protection Association

- NFPA 70 National Electrical Code
- NFPA 72 National Fire Alarm and Signaling Code
- NFPA 101 Life Safety Code

Underwriters Laboratories Canada

- CAN/ULC S524 Installation of Fire Alarm Systems
- CAN/ULC S561 Installation and Services for Fire Signal Receiving Centres and Systems

Canada

- CSA C22.1 Canadian Electrical Code, Part I, Safety Standard for Electrical Installations

1.8.2 Agency Restrictions and Limitations

- BACNET-GW-3 is UL 864 listed for supplementary use only.
- BACNET-GW-3 is UL 2572 listed for supplementary use only and cannot be used to trigger mass notification announcements.
- The web portal feature is listed for supplementary use only.

1.9 Compatible Equipment

The BACNET-GW-3 is compatible with the following equipment:

Table 1.1 Compatible Equipment

Type	Equipment
Fire Panels:	• NFS-320 • NFS2-640 • NFS2-3030
Network Cards:	• NCM-W, NCM-F • HS-NCM-W, HS-NCM-SF, HS-NCM-MF, HS-NCM-WSF, HS-NCM-WMF, HS-NCM-MFSF
Gateways:	• NFN-GW-EM-3 • PC NFN Gateways: – NFN-GW-PC-F – NFN-GW-PC-W – NFN-GW-PC-HNMF – NFN-GW-PC-HNSF – NFNGW-PC-HNW
Other Products:	• DVC • MODBUS-GW • NCA-2 • NWS-3 • VESDA-HLI-GW

Section 2 Installation

2.1 Required Equipment

BACNET-GW-3 Assembly:

The following components are shipped with the BACNET-GW-3:

- BACNET-GW-3 Printed Circuit Board
- Surge suppressor (P/N PNET-1)
- NUP-to-NUP Cable (P/N 75577) - Used to connect the BACNET-GW-3 board to an NCM-W or NCM-F board or supported panel.
- Wire Leads-to-NUP Cable (P/N 75583) - Used to connect 24V power from the BACNET-GW-3 board to an NCM-W or NCM-F board.
- USB Cable (P/N 75665) - Used to connect the BACNET-GW-3 board to an HS-NCM board:

  – HS-NCM-W
  – HS-NCM-WMF
  – HS-NCM-WSF
  – HS-NCM-MF
  – HS-NCM-SF
  – HS-NCM-MFSF

Network Components:

- High-speed Network Communication Module (HS-NCM) - Used to facilitate network communication between the BACNET-GW-3 and a high-speed NFN network (sold separately).

  OR

- Network Communication Module (NCM) - Used to facilitate network communication between the BACNET-GW-3 and an NFN network (sold separately).

  OR

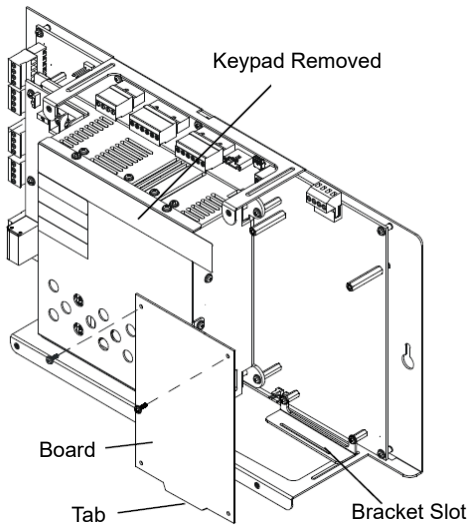
- Compatible FACP with NUP port.

Customer Supplied Equipment:

- Computer - Used to run a web browser to configure the BACNET-GW-3. Refer to 1.4, "Required Software" for recommended browsers.
- Ethernet Patch Cable - Used for connecting the BACNET-GW-3 to the Local Area Network (LAN).

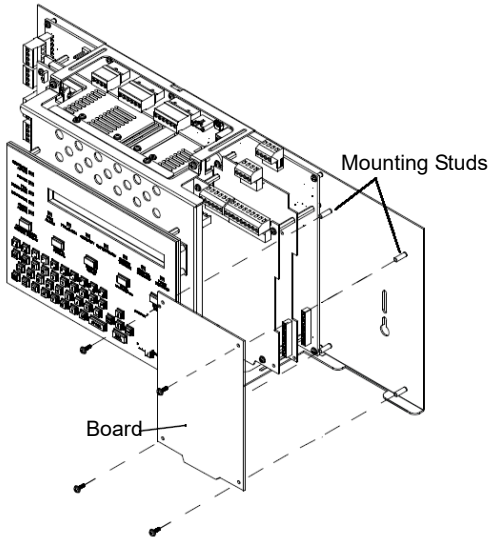
2.2 Board Installation

The BACNET-GW-3 may be installed in a CAB-3 or CAB-4 cabinet as shown below.



Install bracket on 1/2" standoffs. Place the board's tab in the bracket slot and screw the board to the top of the standoffs. May be stacked in front of or behind another board using standoffs of adequate length to clear the rear board.

Figure 2.1 NFS-320 Series Installation



Mount in 4th column of the NFS2-640 Series chassis. Mount chassis to backbox before installing the board in rear position. May be mounted in front of another board using standoffs of adequate length to clear the rear board.

Figure 2.2 NFS2-640 Series Installation

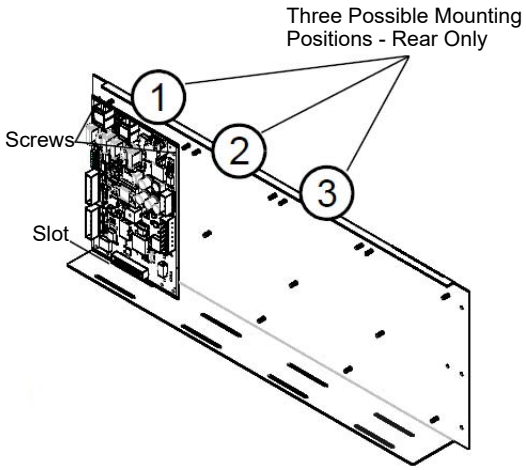


Figure 2.3 CHS-4L Installation

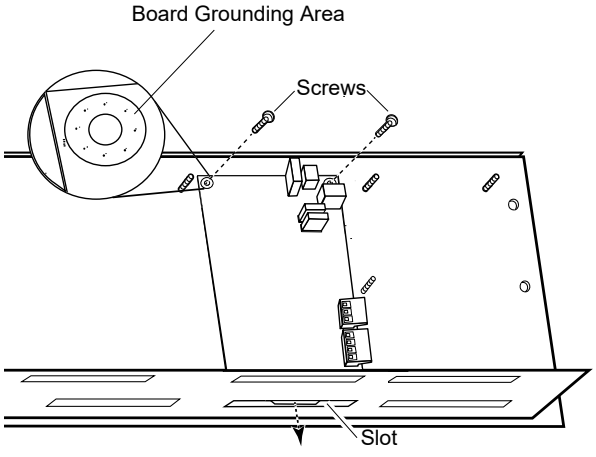


Figure 2.4 Securing the Board

2.3 Connections

2.3.1 Connecting the BACNET-GW-3

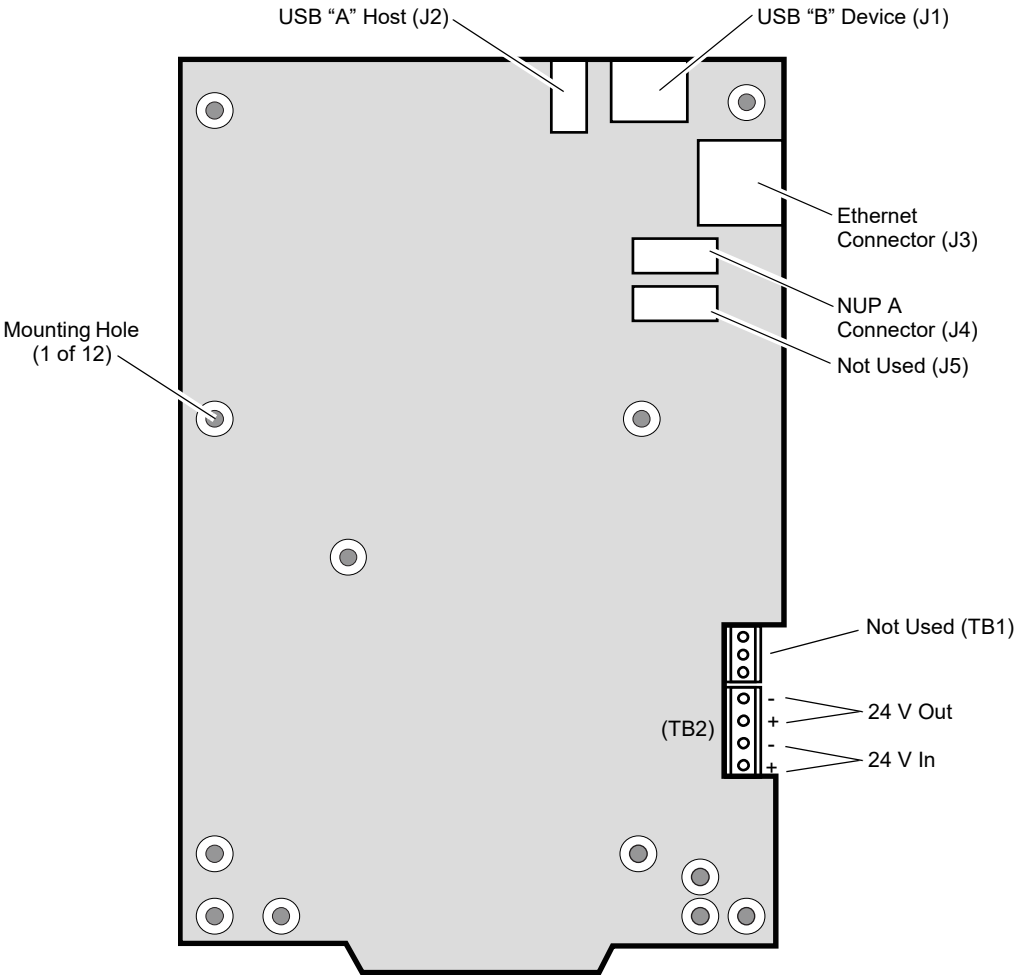


Figure 2.5 BACNET-GW-3 Connections

Table 2.1 Connection Specifications

Reference Designator	Description	Circuit Class	Specifications
TB2	DC Power	2	Power Source - FACP or UL 1481 listed 24 VDC regulated power supply Nominal Voltage: 24 VDC, Regulated Current: 125 mA Locate in same cabinet or use close nipple fitting
J1	USB B	2	Locate in same cabinet or use close nipple fitting
J2	USB A	2	Locate in same cabinet or use close nipple fitting
J3	Ethernet	2	Line Impedance 100 ohm Max Distance 328.083 ft. (100 m)
J4	NUP A	2	RS-232 Locate in same cabinet or use close nipple fitting
• All wiring from the power supply is power limited, and a separation of at least 1/4-inch (6.35 mm) must be maintained between power limited and non-power limited wiring. • All interconnects are power limited. • Ethernet connections are power limited and supervised except for ground faults.			

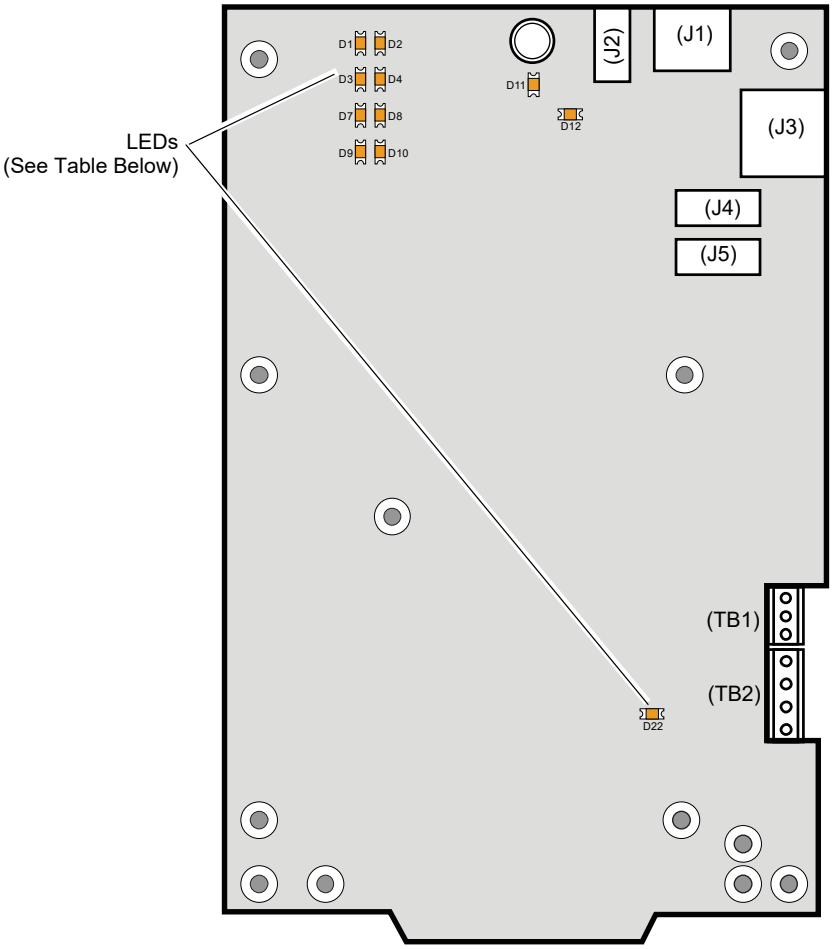


Figure 2.6 BACNET-GW-3 LEDs

Table 2.2 LED Definitions

Reference Designator	Label	Description
D1	ACTIVE	Active/Lit indicates that WinCE is running.
D2	NUPA RX	Blinks when data is received on the NUP A port (J4).
D3	PROGRAM	Not Used
D4	NUPB RX	Not Used
D7	USB B	Active/Lit indicates a device is connected to the USB B port (J1).
D8	NUPA TX	Blinks when data is sent on the NUP A port (J4).
D9	USB A	Active/Lit indicates a device is connected to the USB A port (J2).
D10	NUPB TX	Not Used
D11	DATA	Blinks to indicate data transmission to or from the Ethernet port (J3).
D12	LINK	Active/Lit indicates an Ethernet connection.
D22	WDT FAIL	Active/Lit indicates the system has undergone a reset due to a Watchdog circuit activating.

2.3.2 Connecting to a Standard NCM

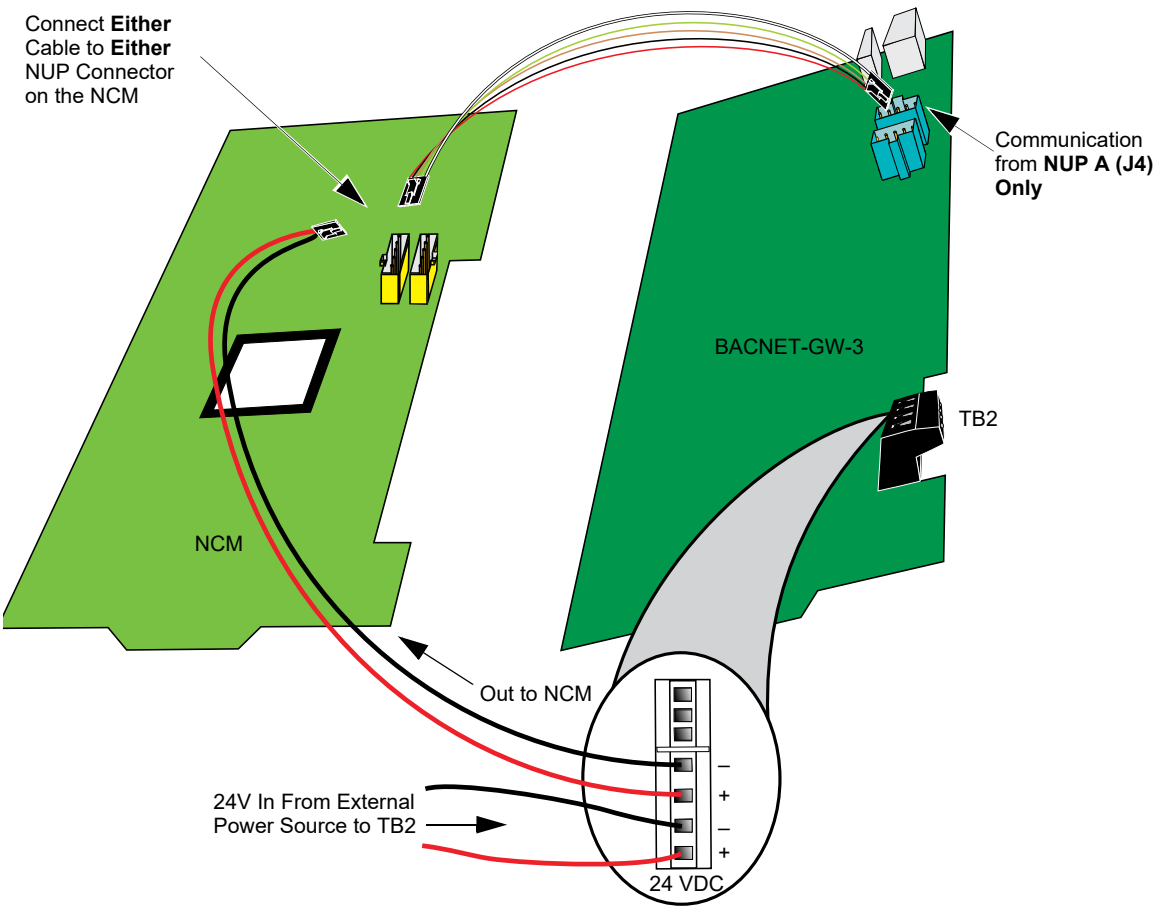


Figure 2.7 Routing Power and Communication to a Standard NCM

Table 2.3 Standard NCM Connections

Type	Connection
NCM-W	Twisted pair wire
NCM-F	Fiber-optic cable

2.3.3 Connecting to an HS-NCM

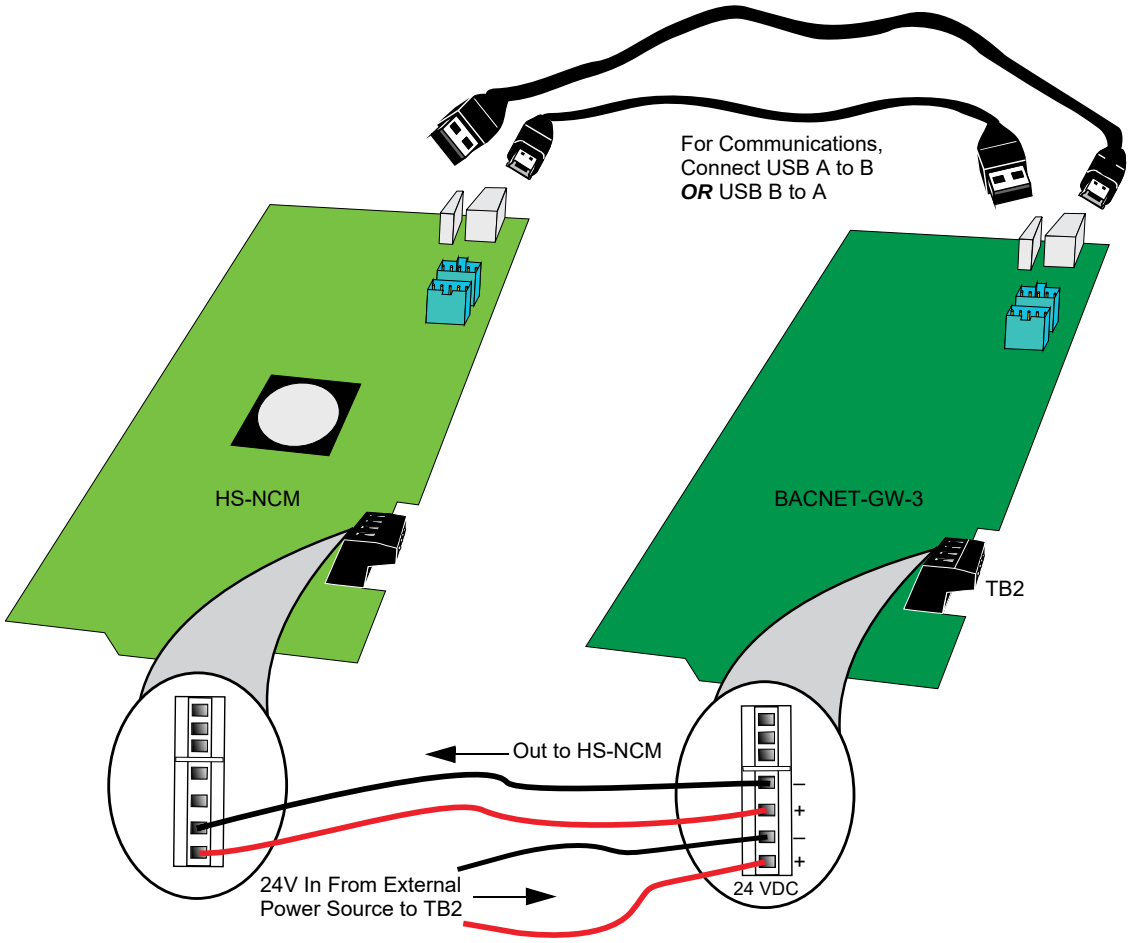


Figure 2.8 Routing Power and Communication to an HS-NCM

Table 2.4 HS-NCM Connections

Type	Connection
HS-NCM-W	Twisted pair wire
HS-NCM-SF	Single mode fiber-optic cable
HS-NCM-MF	Multimode fiber-optic cable
HS-NCM-WSF	Twisted pair wire, Single mode fiber-optic cable
HS-NCM-WMF	Twisted pair wire, Multimode fiber-optic cable
HS-NCM-MFSF	Multimode fiber-optic cable, Single mode fiber-optic cable

2.3.4 Connecting to a Fire Alarm Control Panel (FACP)

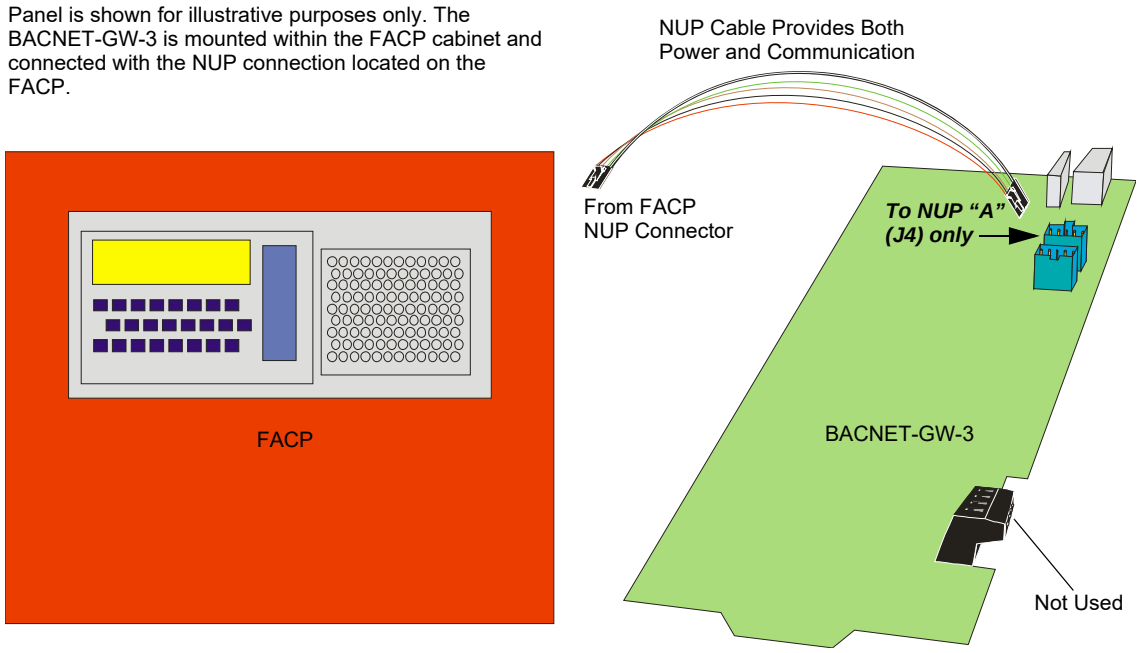


Figure 2.9 Connecting to an FACP

2.3.5 Connecting to the PNET-1 Surge Suppressor

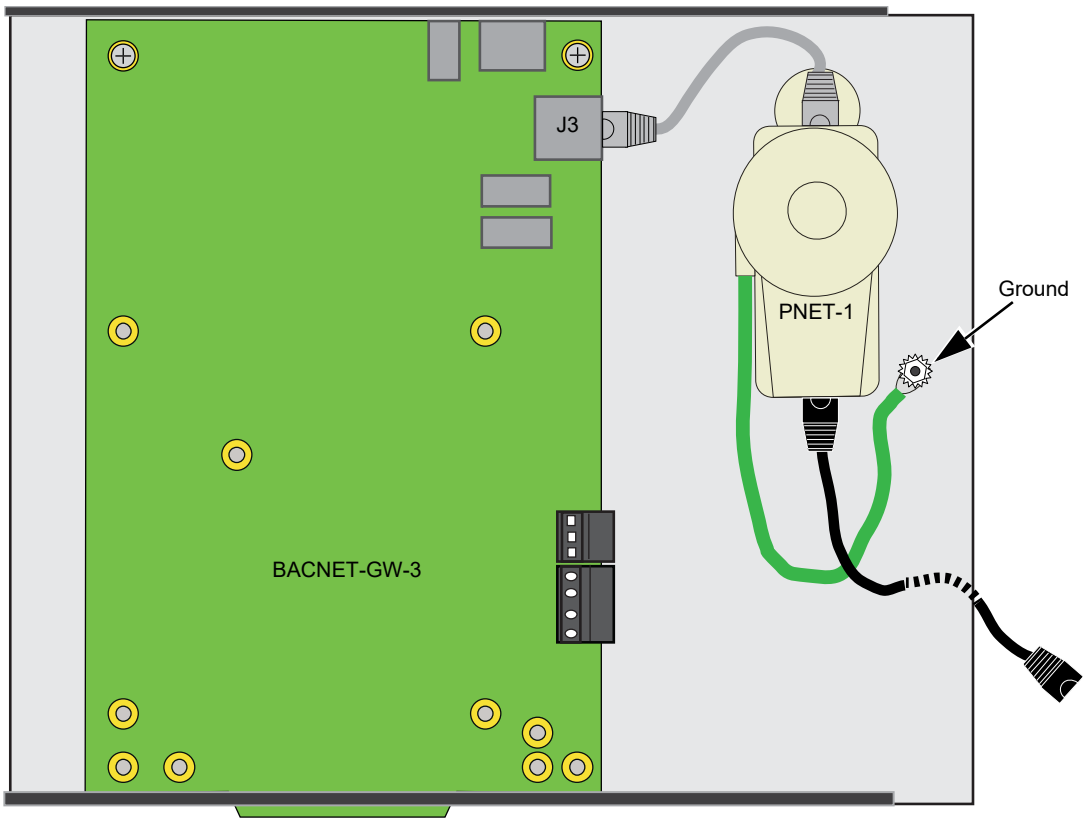


Figure 2.10 Connecting to the PNET-1

2.4 System Power

Table 2.5 Power Requirements

Power	Requirement
Input Voltage (Nominal)	24 VDC
Input Current @ 24 VDC	125 mA

2.5 Testing and Maintenance

Testing and maintenance should be performed according to the *Testing and Maintenance* section of NFPA-72 and CAN/ULC S536.

Section 3 Configuration

3.1 Configuration Web Page

Configuration of the BACNET-GW-3 is via a web page running on the BACNET-GW-3. Supported web browsers are listed in 1.4, "Required Software".

The following information applies to IP settings:

- Each BACNET-GW-3 is shipped with a default IP address of 192.168.1.2 and a default node number of 240.
- The computer used to configure the BACNET-GW-3 must be able to establish an IP connection to the gateway. Consult with a network administrator if unsure how to make this connection.
- Connecting more than one BACNET-GW-3 prior to reconfiguring the IP address will result in an IP address conflict.
- Refer to Appendix A, "Gateway Settings"for instructions on resetting and reviewing the IP settings of the BACNET-GW-3.

3.2 Configuring the BACNET-GW-3

3.2.1 Logging into the Web Page

Log into the BACNET-GW-3 as follows:

1. Start the web browser.
2. Navigate to the IP address of the gateway **(default http://192.168.1.2)**.
3. If a security warning appears, select the option to continue anyway. Refer to 3.3, "Security Certificate" for more information.
4. Log into the web page:
    a. If the password has already been established, enter the password and click **OK**.
    b. If any of the following conditions is true, go to Step 5:
        - A new gateway from the factory.
        - An upgrade of a gateway from a previous version for which the password has not been set (i.e. still using the default password).
        - After a factory reset of the gateway.
5. To set a new password:
    a. Enter the default password, 00000000 (eight zeros) and click **OK**. The Set Device Password dialog box appears.
    b. Reenter the default password.
    c. Enter a new password.
    d. Reenter the new password to confirm
    e. Click **OK**.

3.2.2 Basic Configuration Tool Layout

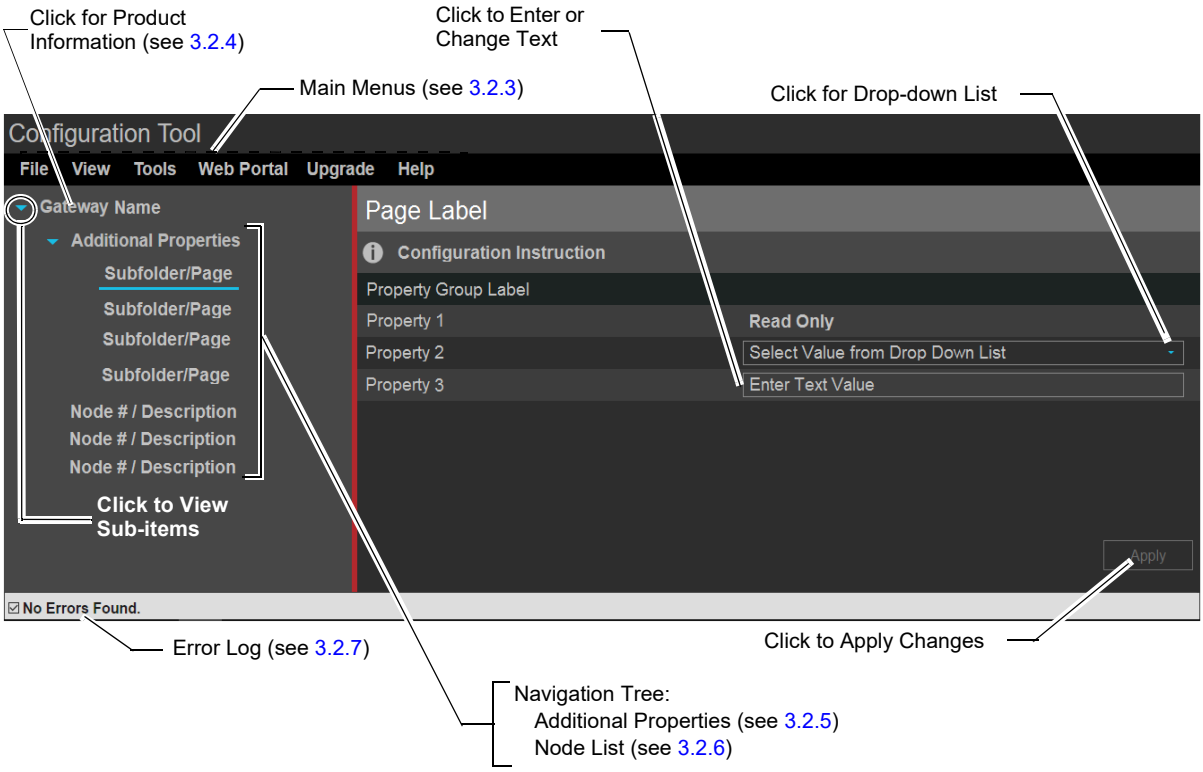


Figure 3.1 Basic Configuration Tool Layout

3.2.3 Main Menus

The following table describes the options available in the configuration tool main menus (see Figure 3.1).

Table 3.1 Main Menus

Menu	Option	Description
File	Reboot	Reboots the BACNET-GW-3.
View	Refresh Node List	Refreshes the node list in the navigation tree.
	Gateway Activity	Opens a window that displays connection information. Used for diagnostic purposes by technical support personnel. **Clear** - Deletes the information in the activity window.
Tools	Set Device Password	Opens a dialog box allowing the user to change the current password. Passwords are case sensitive. Alpha and numeric characters are supported. Eight (8) characters minimum, 64 characters maximum.
	Backup...	Click to download a backup file (.bkp) from the gateway to the PC running the browser. Save or move the file to an appropriate location so it can be used, if necessary, to restore the gateway settings.
	Restore...	Browse to (or search for) the backup file on the PC running the browser. Click **Open** and then **Send**. An on-screen message indicates a successful restoration.
	Send PFX Key File	Opens a dialog box allowing the user to upload an SSL Certificate File. Browse for the file, enter the password (if required), and click **Send**. Refer to 3.3, "Security Certificate" for additional information.
	Delete Objects Database	Opens a dialog box allowing the user to choose to delete the objects database and reboot.
Web Portal	Commission Web Portal	Selecting this option causes the web portal to request the point information from the FACP(s) to update the information on the eVance server.
	Unregister Web Portal	Used prior to removing the gateway from the FACP connection.
Upgrade	Firmware	Opens the Send Archive File dialog box. Click the **Choose File** button and select the filename that begins "**BGNUW**" and has the extension "**.AR**". Click **Open** and then click **Send**. An on-screen message indicates a successful upgrade. It is recommended that the browser be started after the upgrade.
Help	Legal	Displays legal information pertaining to the gateway.
	About	Displays software version information.
	Advance Diagnostics	Used for informational/diagnostic purposes.

3.2.4 Product Information

The product information displays when initially opening the configuration tool. It can also be accessed by clicking the first entry in the navigation tree (see Figure 3.1). After configuring the settings, click **Apply** in the lower right corner of the window.

Table 3.2 Product Information

Label	Property	Value
BACnet Gateway	Type	Displays the gateway type by name.
	Version	Displays the gateway version number.
	Board Type	Displays the hardware model type.
	Kernel Version	Displays additional software version information.
	Boot Version	Displays additional software version information.
	Current Time/Date	Displays the current date and time information after the gateway synchronizes the clock with the SNTP server.
Gateway Properties	Notification Type	Select the operating mode for the gateway from the drop-down menu: • Multi State • Life Safety
	Network Number	Enter the base network number for the gateway. **Note:** If using more than one BACNET-GW-3 on the same network, separate network numbers by at least 100.
	BACnet Port	Enter the port number that is used for BACNET-GW-3 communications.
	Network Update Time	Enter the time of day (24-hour format) at which the gateway will query the network each day.
Foreign Device Configuration	Foreign Device	• Select **Yes** if the gateway will operate in Foreign Device Mode. • Select **No** if the gateway will not operate in Foreign Device Mode.
	IP Address	Enter the IP address to be used in Foreign Device Mode.
	Port	Enter the value for the IP port to be used for communication in Foreign Device Mode.
	Register Time	Enter the polling time (in seconds) to be used in Foreign Device Mode.

3.2.5 Additional Properties

The following table describes the options available under Additional Properties in the navigation tree (see Figure 3.1). After configuring the settings, click **Apply** in the lower right corner of the window.

Table 3.3 Additional Properties

Navigation Tree Label	Property	Value
IP Address Settings	**IP Address Settings**	
	IP Address	Enter the IP address of the BACNET-GW-3. (Default is 192.168.1.2) **Note:** If a new IP address is entered, the user must enter the new IP address in the browser address bar to log into the gateway at its new address.
	Subnet Mask	Enter the subnet address of the BACNET-GW-3. (Default is 255.255.255.0)
	IP Gateway	Enter the IP address of the default gateway for the host network. (Default is 0.0.0.0)
	MAC Address	Displays the Media Access Control (MAC) address of the gateway Ethernet port and is not configurable.
	DNS Server Settings	
	Preferred DNS Server	Enter the IP address of the primary Domain Name System (DNS) server.
	Alternate DNS Server	Enter the IP address of the alternate DNS server.
NFN Settings	**General Information**	
	Connection Port	Displays the type of connection port used (Serial, USB, etc.)
	Connection Type	Describes how the gateway is connected to the NFN network.
	NCM Version	Displays the NCM version number. **Note:** This property does not appear when there is no NFN connection.
	NCM Status Bits	Displays the NCM status, which can be: Piezo, UPS Failure, Network Fail Port A, Network Fail Port B, High Speed Audio, NCM Sniffer Mode Active, Local Connection Limit Exceeded, or None. **Note:** This property does not appear if/when there is no NFN connection.
	Fire Network Time Policy	Always displays “Accept Time” since BACNET-GW-3 does not synchronize time with the network.
	Node Settings	
	Node	Enter the NFN node number of the BACNET-GW-3. (Default is 240)
	Panel Label	Enter the panel label.
	Network Settings	
	Channel A Threshold	• Select **High** for a high-noise NFN network. • Select **Low** for a low-noise NFN network.
	Channel B Threshold	• Select **High** for a high-noise NFN network. • Select **Low** for a low-noise NFN network.
	Style 7	• Select **Yes** for a Style 7 SLC (Signaling Line Circuit) configured NFN network. • Select **No** for a Style 4 SLC configured NFN network (default).

Table 3.3 Additional Properties *(Continued)*

Navigation Tree Label	Property	Value
Node Mapping	Automatic Mapping	• Select **Yes** to enable automatic mapping of the first 14 nodes the BACNET-GW-3 discovers on the NFN network that are currently online and monitor appropriate devices. • Select **No** to disable automatic node mapping.
	Show Online or Mapped Nodes - Show All Nodes	The property label toggles between “Show All Nodes” and “Show Online or Mapped Nodes” depending on the mode selected. Select **Yes** to display the list of nodes in the mode indicated by the property label.
	Node List	An asterisked field is present to the right of the list of all nodes that the BACNET-GW-3 can monitor. Up to 14 nodes can be monitored. • Select **Yes** to enable monitoring of the node. • Select **No** to disable monitoring of the node. **Note:** If an “Unknown” node comes on line and is found to be of the wrong type for the BACNET-GW-3 to monitor, its field is automatically set to “No”.
Web Portal Setup	Configures the Web Portal feature for use with eVance. Requires the eVance user ID, password, unique web portal name, and web portal description. Utilizes predefined customers and buildings from eVance. Refer to 3.4, "Web Portal Setup" for additional information.	

3.2.6 Node List

Click the desired node label in the navigation tree area of the configuration tool screen (see Figure 3.1) to view information about that node. The information displayed is dependent on the node type. Labels for off-line nodes display in red text.

3.2.7 Error Log

The error log displays specific information when the BACNET-GW-3 detects a problem with the web portal connection. The following table defines the meaning of the label text.

Table 3.4 Error Log Label Definition

Label	Description
No Errors Found	The gateway is not reporting any web portal connection errors.
# Errors Found. Click here to view errors.	The gateway is reporting a web portal connection error. The number of errors is indicated in the label. Clicking the error label opens the Error Log that lists the date, time, and a description of the error(s).

When the error is corrected, the enrty is removed from the log and the label at the bottom of the screen returns to its “No Errors Found” status. Information about the error is also recorded in the web portal history log (**View > History**).

3.3 Security Certificate

The BACNET-GW-3 communicates with the browser using secure communications facilitated by a self-signed security certificate. Using the self-signed security certificate will cause the browser to display a warning similar to the following:

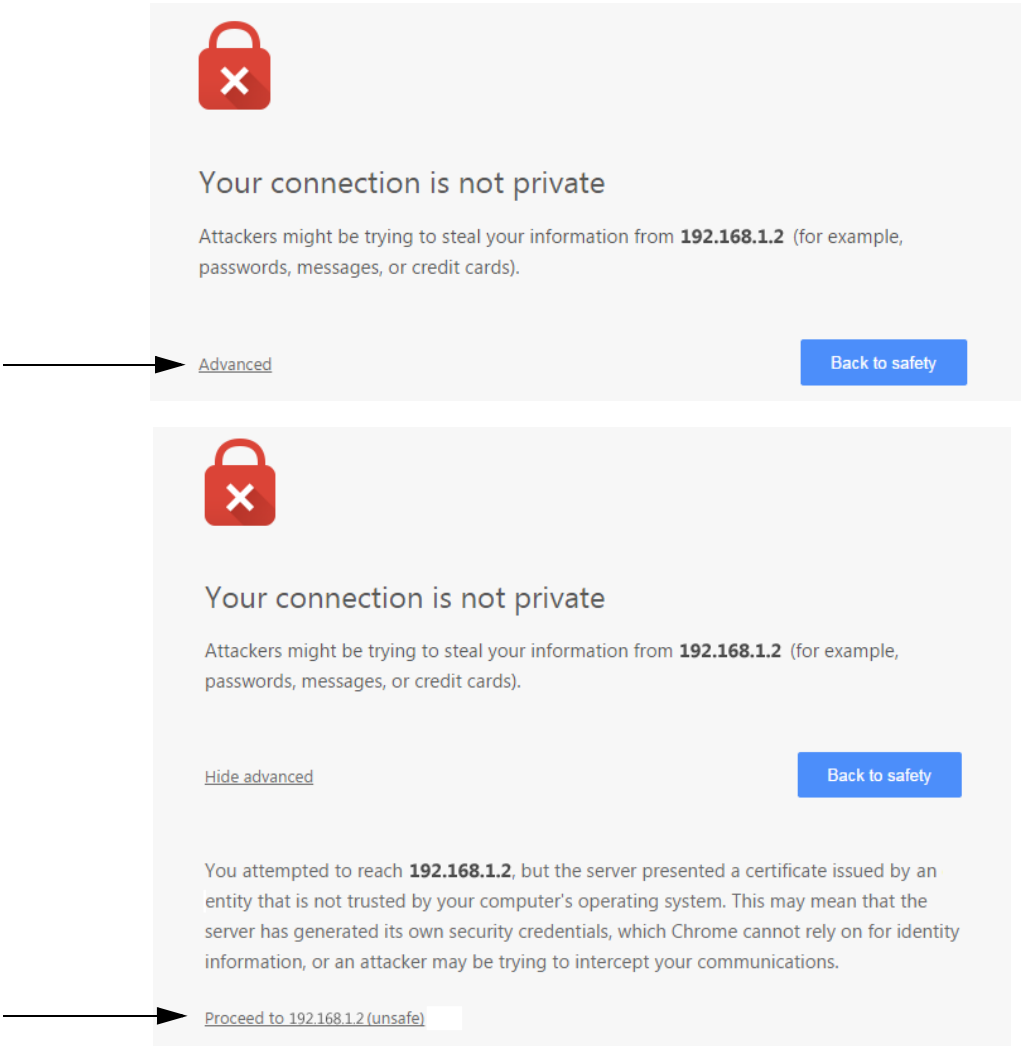


Figure 3.2 Chrome Security Warning Example

The browser warning is displayed upon each connection to the gateway. The warning may be removed by obtaining a security certificate from a security authority. The certificate may originate from a local certificate authority or a commercial certificate authority if the gateway is directly connected to the Internet with a unique IP address. Regardless of which type of certificate authority is selected, the IP address of the gateway must be provided. The certificate is specific to the specified IP address. If the IP address is changed, a new certificate will be required. In addition, the certificates have an expiration date. Once the certificate expires, a new certificate needs to be sent to the gateway. If the certificate expires, a different warning is displayed by the browser.

The security certificate must be in the PFX format. The PFX file is uploaded to the gateway using the **Tools > Send PFX Key File** option in the gateway configuration tool. It may be necessary to install a file on each PC used to configure the gateway to fully resolve the security configuration.

The BACNET-GW-3 includes a self-signed security certificate. The certificate is generated with a three year expiration. In addition, the certificate is generated using the default IP address of the gateway, 192.168.1.2. A certificate authority may be used to create a valid certificate based on the IP address of the BACNET-GW-3. If a certificate authority is not available, a local IT administrator may use a security

certificate generation application such as OpenSSL to generate the certificate.

The site network administrator may be able to assist with any additional details regarding security certificates.

3.4 Web Portal Setup

To receive events and configuration information for use in tools such as the Inspection Manager, the BACNET-GW-3 must be associated with a specific site, as follows:

1. In the navigation tree section of the gateway configuration tool, select **Additional Properties > Web Portal Setup**.
2. Enter the information in the text boxes in the right-hand column. The user name and password are the same as those used to access the eVance web site. The web portal name must be unique for the eVance account to register this web portal. The web portal description is used in eVance to identify this specific gateway.
3. Click **Apply**. When successfully completed, a dialog box displays.
4. Click **OK**. The “Assign the Web Portal…” dialog box displays.
5. From the customer drop-down list, select the appropriate customer for this site. The web portal displays the node number(s) for the connected FACP(s).
6. Select the appropriate building for each node using its drop-down list.

   There are additional selections for “<Unassigned – Delete Equipment>” and “Unassigned” options. In both of these cases, the panel’s points will not be configured on eVance and, with the Delete Equipment option, the existing equipment for that node will be deleted from eVance.
7. Click **Apply**. A commissioning prompt displays.
8. Click **Yes**. The gateway communicates with each connected panel and sends a list of all the configured points to eVance. Because these points are defined in eVance, they are displayed when a new test session is created.

Appendix A Gateway Settings

NOTE: The procedures in this appendix require the use of a USB flash memory drive.

A.1 Viewing Existing IP Settings

1. Connect the flash drive to the BACNET-GW-3.
2. Reboot the gateway.

   A file is created that matches the configured IP address of the gateway, followed by the extension "**.txt**" (e.g., **192.168.1.2.txt**). If the file already exists on the drive, it will be altered to match the gateway configuration. The file contains additional information such as the MAC address of the gateway.
3. Connect the drive to a PC and view the files.

   The flash drive should contain a file that matches the configured IP address of the gateway, followed by the extension "**.txt**" (e.g., **192.168.1.2.txt**). If the file already exists on the drive, it has been altered to match the gateway configuration. The file contains additional information such as the MAC address of the gateway.

A.2 Resetting Factory Default Values

1. Connect the flash drive to a PC and create a file named "**default.ldc"**. The contents of the file is not significant; however, ensure that the file does not have an additional hidden file extension. This file will be automatically deleted from the flash drive by the gateway.
2. Eject the flash drive from the PC.
3. Disconnect power from the gateway.
4. Disconnect the communication cable to the gateway USB port (if present) and connect the flash drive.
5. Reconnect the 24 VDC power supply to the gateway.
6. After approximately one minute, disconnect the flash drive from the USB port and (if necessary) reconnect the cable removed in Step 4.
7. Connect the flash drive to the PC and verify that the file named **192.168.1.2.txt** is on the drive.
   - If the file is on the flash drive, the reset has been accomplished.
   - If the file **is not** on the flash drive:
     – The flash drive may not have been connected during the reboot period or was removed early.
     – The flash drive is not seen as a valid drive by the hardware.
     – A software error has occurred and technical support may need to be contacted.

Appendix B BACnet PIC Statement

Protocol Implementation Conformance Statement (Normative)

BACnet Protocol Revision: 1.2

B.1 Product Description

This product presents NOTIFIER® Fire Panel and Annunciator nodes (operating as part of an NFN network or stand-alone) and their associated objects as BACnet objects. Event notification for Alarms, Troubles, and other states are sent to registered BACnet client workstations.

B.2 BACnet Standardized Device Profile (Annex L):

- ☐ BACnet Operator Workstation (B-OWS)
- ☐ BACnet Building Controller (B-BC)
- ☑ BACnet Advanced Application Controller (B-AAC)
- ☐ BACnet Application Specific Controller (B-ASC)
- ☐ BACnet Smart Sensor (B-SS)
- ☐ BACnet Smart Actuator (B-SA)

B.3 BACnet Interoperability Building Blocks Supported (Annex K)

Data Sharing	Device & Network Management	Scheduling	Alarm & Event Management	Trending
DS-RP-B	DM-DDB-B		AE-ACK-B	
DS-RPM-B	DM-DOB-A		AE-ASUM-B	
DS-WP-B	DM-DOB-B		AE-N-I-B	
DS-WPM-B	DM-LM-B		AE-INFO-B	

B.4 Segmentation Capability

- ☑ Segmented requests supported, Window Size 1024 Max
- ☑ Segmented responses supported, Window Size 1024 Max

B.5 Standard Object Types Supported - Life Safety Point/Life Safety Zone

Present Value	**BACnet Enumeration**	**BACnet LifeSafetyState**	**NFN State**
	0	IssQuiet	Normal
	1	IssPreAlarm	PreAlarm
	2	IssAlarm	Fire Alarm, Security Alarm (Life/Property), Critical Process Alarm, (Life/Property), Medical Emergency
	3	IssFault	Security Trouble, Fire Trouble, Non-Fire Trouble, Fire Device or Zone, Disabled, Non-Fire Device Disabled
	7	IssActive	Non-Fire Activation
	22	IssSupervisory	Supervisory (Equipment), Supervisory (Guard's Tour)
Tracking Value	**BACnet Enumeration**	**BACnet LifeSafetyState**	**NFN State**
	0	IssQuiet	Normal
	1	IssPreAlarm	PreAlarm
	2	IssAlarm	Fire Alarm, Security Alarm (Life/Property), Critical Process Alarm (Life/Property), Medical Emergency
	3	IssFault	Security Trouble, Fire Trouble, Non-Fire Trouble, Fire Device or Zone, Disabled, Non-Fire Device Disabled
	7	IssActive	Non-Fire Activation
	22	IssSupervisory	Supervisory (Equipment), Supervisory (Guard's Tour)
Event State	**BACnet Enumeration**	**BACnet Event State**	**NFN State**
	0	EsNormal	Normal
	1	EsFault	Security Trouble, Fire Trouble, Non-Fire Trouble, Fire Device Disabled, Non-Fire Device Disabled
	2	EsOffNormal	All statuses other than normal and fault.
Reliability	**BACnet Enumeration**	**BACnet Reliability**	**NFN State**
	0	reNoFaultDetected	All statuses other than trouble.
	7	re_UnreliableOther	Security Trouble, Fire Trouble, Non-Fire Trouble
Mode	**BACnet Enumeration**	**BACnet Mode**	**NFN State**
	0	IsmOff	Power-Up State
	11	IsmEnabled	Set if point has been disabled and subsequently enabled since startup.
	12	IsmDisabled	Fire Device or Zone Disabled, Non-Fire Device Disabled

Silence State	**BACnet Enumeration**		**NFN State**
	0	ssUnsilenced	Audibles Unsilenced
	1	ssAudiblesSilenced	Audibles Silenced
Operation Expected	**BACnet Enumeration**		**NFN State**
	0		NA
Maintenance Expected	**BACnet Enumeration**		**NFN State**
	NA	NA	NA
Event Enable	**BACnet Event Transition Bit**		**NFN State**
		toOffNormal	
		toFault	
Direct Reading	REAL	NA	% Alarm
Proprietary Property 1001	REAL	NA	Drift Compensation Percent (ONYX Series Panels Only)
Status Flags	**Boolean**	**BACnet Status Flags**	**NFN State**
	0,0,0,0		Normal
	1,0,0,0	InAlarm	Fire Alarm, Security Alarm (Life/Property), Critical Process Alarm (Life/Property), Medical Emergency
	1,1,0,0	InAlarm, Fault	Security Trouble, Fire Trouble, Non-Fire Trouble, PreAlarm
	1,0,0,1	InAlarm, OutOfService	Fire Device or Zone Disabled, Non-Fire Device Disabled
Out of Service	**Boolean**		**NFN State**
	0	FALSE	All statuses other than disable
	1	TRUE	Fire Device or Zone Disabled, Non-Fire Device Disabled

B.6 Standard Object Types Supported - Multi-State Input Standard Object Types

Present Value	**BACnet Enumeration**		**NFN State**
	1	None	Normal
	2	None	All statuses other than those included in 3 and 4 below.
	3	None	Security Trouble, Fire Trouble, Non-Fire Trouble
	4	None	Fire Device or Zone Disabled, Non-Fire Device Disabled
Event State	**BACnet Enumeration**	**BACnet Event State**	**NFN State**
	0	EsNormal	Normal
	1	EsFault	Security Trouble, Fire Trouble, Non-Fire Trouble, Fire Device Disabled, Non-Fire Device Disabled
	2	EsOffNormal	All statuses other than normal and fault.
Reliability	**BACnet Enumeration**	**BACnet Reliability**	**NFN State**
	0	reNoFaultDetected	All statuses other than trouble.
	7	re_UnreliableOther	Security Trouble, Fire Trouble, Non-Fire Trouble
Status Flags	**Boolean**	**BACnet Status Flags**	**NFN State**
	0,0,0,0		Normal
	1,0,0,0	InAlarm	Fire Alarm, Security Alarm (Life/Property), Critical Process Alarm (Life/Property), Medical Emergency
	1,1,0,0	InAlarm, Fault	Security Trouble, Fire Trouble, Non-Fire Trouble, PreAlarm
	1,0,0,1	InAlarm, OutOfService	Fire Device or Zone Disabled, Non-Fire Device Disabled
Out of Service	**Boolean**		**NFN State**
	0	FALSE	All statuses other than disable
	1	TRUE	Fire Device or Zone Disabled, Non-Fire Device Disabled

B.7 Supported - Binary Output

Present Value	**BACnet Enumeration**	**BACnet LifeSafetyState**	**NFN State**
	0	IssQuiet	Normal
	1	IssPreAlarm	PreAlarm
	2	IssAlarm	Fire Alarm, Security Alarm (Life/Property), Critical Process Alarm, (Life/Property), Medical Emergency
	3	IssFault	Security Trouble, Fire Trouble, Non-Fire Trouble, Fire Device or Zone, Disabled, Non-Fire Device Disabled
	7	IssActive	Non-Fire Activation
	22	IssSupervisory	Supervisory (Equipment), Supervisory (Guard's Tour)
Tracking Value	**BACnet Enumeration**	**BACnet LifeSafetyState**	**NFN State**
	0	IssQuiet	Normal
	1	IssPreAlarm	PreAlarm
	2	IssAlarm	Fire Alarm, Security Alarm (Life/Property), Critical Process Alarm (Life/Property), Medical Emergency
	3	IssFault	Security Trouble, Fire Trouble, Non-Fire Trouble, Fire Device or Zone, Disabled, Non-Fire Device Disabled
	7	IssActive	Non-Fire Activation
	22	IssSupervisory	Supervisory (Equipment), Supervisory (Guard's Tour)
Event State	**BACnet Enumeration**	**BACnet Event State**	**NFN State**
	0	EsNormal	Normal
	1	EsFault	Security Trouble, Fire Trouble, Non-Fire Trouble, Fireevice Disabled, Non-Fire Device Disabled
	2	EsOffNormal	All statuses other than normal and fault.
Reliability	**BACnet Enumeration**	**BACnet Reliability**	**NFN State**
	0	reNoFaultDetected	All statuses other than trouble.
	7	re_UnreliableOther	Security Trouble, Fire Trouble, Non-Fire Trouble
Mode	**BACnet Enumeration**	**BACnet Mode**	**NFN State**
	0	IsmOff	Power-Up State
	11	IsmEnabled	Set if point has been disabled and subsequently enabled since startup.
	12	IsmDisabled	Fire Device or Zone Disabled, Non-Fire Device Disabled

Silence State	**BACnet Enumeration**		**NFN State**
	0	ssUnsilenced	Audibles Unsilenced
	1	ssAudiblesSilenced	Audibles Silenced
Operation Expected	**BACnet Enumeration**		**NFN State**
	0		NA
Maintenance Expected	**BACnet Enumeration**		**NFN State**
	NA	NA	NA
Event Enable	**BACnet Event Transition Bit**		
		toOffNormal	
		toFault	
Direct Reading	REAL	NA	% Alarm
Status Flags	**Boolean**	**BACnet Status Flags**	**NFN State**
	0,0,0,0		Normal
	1,0,0,0	InAlarm	Fire Alarm, Security Alarm (Life/Property), Critical Process Alarm (Life/Property), Medical Emergency
	1,1,0,0	InAlarm, Fault	Security Trouble, Fire Trouble, Non-Fire Trouble, PreAlarm
	1,0,0,1	InAlarm, OutOfService	Fire Device or Zone Disabled, Non-Fire Device Disabled
Out of Service	**Boolean**		**NFN State**
	0	FALSE	All statuses other than disable
	1	TRUE	Fire Device or Zone Disabled, Non-Fire Device Disabled

B.8 Standard Object Types Supported - Notification Class

Write Property/Add List element required for Intrinsic Reporting.

■ **Data Link Layer Options:**

☑ BACnet IP, (Annex J)

☑ BACnet IP, (Annex J), Foreign Device

☐ ISO 8802-3, Ethernet (Clause 7)

☐ ANSI/ATA 878.1, 2.5 Mb. ARCNET (Clause 8)

☐ ANSI/ATA 878.1, RS-485 ARCNET (Clause 8), baud rate(s): _____

☐ MS/TP MASTER (Clause 9), baud rate(s): _____

☐ MS/TP SLAVE (Clause 9), baud rate(s): _____

☐ Point-To-Point, EIA 232 (Clause 10), baud rate(s): _____

☐ Point-To-Point, modem, (Clause 10), baud rate(s):

☐ LonTalk, (Clause 11), medium: _____

☐ Other: _____

B.8.1 Device Address Binding

Is static device binding supported? (This is currently necessary for two-way communication with MS/TP slaves and certain other devices.)

☑ Yes ☐ No

B.8.2 Networking Options

☑ Router, Clause 6 - List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc. BACnet to Proprietary ARCnet Fire Network

☐ Annex H, BACnet Tunneling Router over IP

☐ BACnet Broadcast Management Device (BBMD)

Does the BBMD support registrations by Foreign Devices? ☐ Yes ☑ No

B.8.3 Character Sets Supported

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

☑ ANSI X3.4

☐ IBM/Microsoft DBCS

☐ ISO 8859-1

☐ ISO 10646 (UCS-2)

☐ ISO 10646 (ICS-4)

☐ JIS C 6226

B.8.4 Supported Non-BACnet Equipment/Networks

This product supports communications between NOTIFIER® Fire Panels and Annunciator nodes compatible with network v 5.0 and later operating in a network or stand-alone configuration. Refer to 1.9, "Compatible Equipment".

Appendix C BACNET-GW-3 Equations

Equations for Object IDs (Instance Numbers)

In the BACNET-GW-3, each NFN node has 10,000 object IDs available to it. For each NFN node, multiply its node number by 10,000 and add the offset calculated below based on what type of point it is. These numbers define the 22 bits of the BACnet Object Identifier field.

Examples

- Node 15, L01D025 -> (15 x 10000) + ((1 - 1) x 1000) + (25 - 1) = 150024
- Node 201, L02M014 -> (201 x 10000) + ((2 - 1) x 1000) + (14 + 199) = 2011213
- Node 114, Annunciator 001 -> (114 x 10000) + (1 + 699) = 1140700
- Node 20, ZONE0002 -> (20 x 10000) + 1502 = 201502

Panel Node Number x 10000 = Base Panel Address

Generic Panel Points (MULTI_STATE_INPUT or LIFE_SAFETY_POINT)

506 = "PANEL"

507 = "RESET"

579 = "NETWORK_A"

580 = "NETWORK_B"

582 = "WALK TEST"

505 = "CPU"

500 = "GROUND"

502 = "BATTERY"

501 = "ACPOWER"

503 = "LOOP 1"

504 = "LOOP 2"

605 = "LOOP 3"

677 = "LOOP 4"

678 = "LOOP 5"

679 = "LOOP 6"

680 = "LOOP 7"

681 = "LOOP 8"

682 = "LOOP 9"

683 = "LOOP10"

SLC Devices (MULTI_STATE_INPUT or LIFE_SAFETY_POINT)

Detectors = ((Loop - 1) x 1000) + (Detector Address - 1)

Modules = ((Loop - 1) x 1000) + (Module Address + 199)

Panel Circuits (BINARY_OUTPUT)

(Panel# x 10) + (circuit# - 1) + 350

Annunciators (MULTI_STATE_INPUT or LIFE_SAFETY_POINT)

(ANNUN# + 699)

Zones (MULTI_STATE_INPUT or LIFE_SAFETY_ZONE)

ZONE (0 - 499) => (ZONE# + 1500)

ZONE (500-999) => (ZONE# + 2000)

Logic Zones (MULTI_STATE_INPUT or LIFE_SAFETY_ZONE)

LZONE (1 to 499) => (ZONE# + 3499)

LZONE (500 to 999) => (ZONE# + 4000)

LZONE (1000 to 1499) => (ZONE# + 6500)

LZONE (1500 to 2000) => (ZONE# + 7000)

Special Zones (MULTI_STATE_INPUT or LIFE_SAFETY_ZONE)

FZONE (0-47) => (ZONE# + 6400)

Trouble Zones (MULTI_STATE_INPUT or LIFE_SAFETY_ZONE)

TZONE (1-99) => (ZONE# + 5540)

Releasing Zones (MULTI_STATE_INPUT or LIFE_SAFETY_ZONE)

RZONE (0-9) => (ZONE# + 6500)

DAA Speaker Circuit

(DAA# - 1) x 4 + (Spk# - 1) + 6600

Input, Output, and ZoneNotify (NOTIFICATION_CLASS)

These objects will always be the same object ID on each device. You do not need to add the Node Number offset.

INPUTNOTIFY = 1

OUTPUTNOTIFY = 2

ZONENOTIFY = 3

Manufacturer Warranties and Limitation of Liability

Manufacturer Warranties. Subject to the limitations set forth herein, Manufacturer warrants that the Products manufactured by it in its Northford, Connecticut facility and sold by it to its authorized Distributors shall be free, under normal use and service, from defects in material and workmanship for a period of thirty six months (36) months from the date of manufacture (effective Jan. 1, 2009). The Products manufactured and sold by Manufacturer are date stamped at the time of production. Manufacturer does not warrant Products that are not manufactured by it in its Northford, Connecticut facility but assigns to its Distributor, to the extent possible, any warranty offered by the manufacturer of such product. This warranty shall be void if a Product is altered, serviced or repaired by anyone other than Manufacturer or its authorized Distributors. This warranty shall also be void if there is a failure to maintain the Products and the systems in which they operate in proper working conditions.

MANUFACTURER MAKES NO FURTHER WARRANTIES, AND DISCLAIMS ANY AND ALL OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE PRODUCTS, TRADEMARKS, PROGRAMS AND SERVICES RENDERED BY MANUFACTURER INCLUDING WITHOUT LIMITATION, INFRINGEMENT, TITLE, MERCHANTABILITY, OR FITNESS FOR ANY PARTICULAR PURPOSE. MANUFACTURER SHALL NOT BE LIABLE FOR ANY PERSONAL INJURY OR DEATH WHICH MAY ARISE IN THE COURSE OF, OR AS A RESULT OF, PERSONAL, COMMERCIAL OR INDUSTRIAL USES OF ITS PRODUCTS.

This document constitutes the only warranty made by Manufacturer with respect to its products and replaces all previous warranties and is the only warranty made by Manufacturer. No increase or alteration, written or verbal, of the obligation of this warranty is authorized. Manufacturer does not represent that its products will prevent any loss by fire or otherwise.

Warranty Claims. Manufacturer shall replace or repair, at Manufacturer's discretion, each part returned by its authorized Distributor and acknowledged by Manufacturer to be defective, provided that such part shall have been returned to Manufacturer with all charges prepaid and the authorized Distributor has completed Manufacturer's Return Material Authorization form. The replacement part shall come from Manufacturer's stock and may be new or refurbished. THE FOREGOING IS DISTRIBUTOR'S SOLE AND EXCLUSIVE REMEDY IN THE EVENT OF A WARRANTY CLAIM.

Warn-HL-08-2009.fm

NOTIFIER®
by Honeywell

World Headquarters
12 Clintonville Road
Northford, CT 06472-1610 USA
203-484-7161
fax 203-484-7118

www.notifier.com

ISO 9001
CERTIFIED
ENGINEERING & MANUFACTURING
QUALITY SYSTEMS