NovarNet

NET — PC
SD   RD   SD   RD   RI   CD
POWER ○ ○ ○ ○ ○ ○ ○

NovarNet® Interface Module Setup Instructions

novar ®

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Description

NovarNet® is a communication protocol developed by Novar Controls Corporation that provides simultaneous peer-to-peer communications on a local area network (LAN). This module allows multiple executive modules and personal computers (PCs) running Novar Controls building management software to be set up as nodes on the LAN to communicate and monitor the remote system data and operating status.

In a NovarNet configuration, the executive modules are connected directly to the LAN. PCs, which are set up in Novar Controls' software as NovarNet monitoring stations, must be connected to the network using a NovarNet Interface Module.

This module features:

■ A 9-pin or 25-pin RS-232 port for connection to the PC.

■ An RS-485 port for connection to the LAN (through an executive module).

■ Configuration switches to set the address of the NovarNet monitoring station and several other configuration functions.

■ Modem-style light-emitting diodes (LEDs) communication indicators.

■ Built-in LAN and PC communication capabilities.

Specifications

Power Requirements

Voltage:	24 VAC (transformer supplied)
Consumption:	20 VA

Operating Environment

Temperature:	32° to 140°F (0° to 60°C)
Humidity:	0 to 95% Relative, noncondensing

Physical Dimensions

Height:	1.38 inches
Width:	4.88 inches
Length:	7 inches
Weight:	0.63 lb

Precautions

Take the following precautions during installation:

■ Observe all national and local electrical codes.

■ Use the Novar Controls–supplied transformer or an equivalent 24-VAC transformer for power.

Setting Up the NovarNet Interface Module

The NovarNet Interface Module is shipped with the following items:

■ A 9-pin RS-232 cable to be used to connect the module to a PC

A 25-pin cable adapter is also included to be used in place of a 9-pin port in case the PC requires a 25-pin serial port.

■ A 24-VAC transformer

■ A green, screw-type wiring connector (Figure 1), which is already plugged into the Network port on the back of the module. This connector can be removed to make the wiring connections.
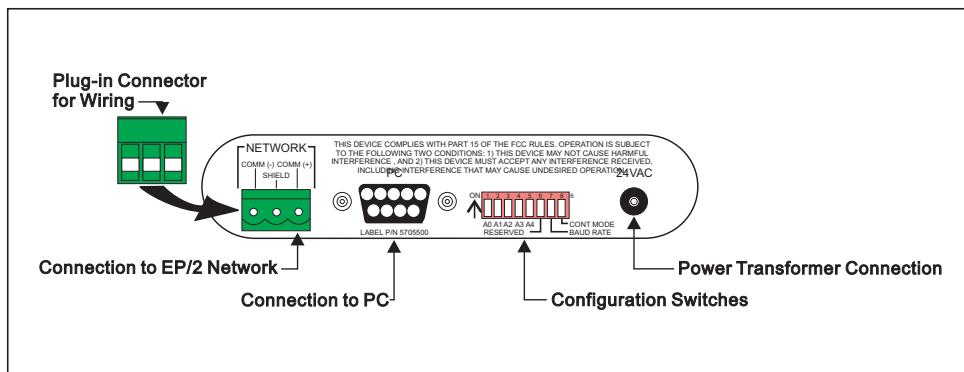

Figure 1.   Rear panel of NovarNet Interface Module

Use the following procedures to connect the module to the PC and the executive module and supply it with power.

Connecting to the PC

Use the following procedure to connect the module to a PC.

Step	Procedure
1	Connect the 9-pin cable supplied with the NovarNet Interface Module to the PC port on the back of the module.
2	Tighten the screws to secure the cable to the module.
3	Connect the other end of the cable to an unused 9-pin serial port on the PC *or* Connect the 25-pin adapter to the 9-pin cable and connect the adapter to the PC's serial port.

Connecting to the Executive Module (Local Area Network)

Use a suitable shielded cable (Novar Controls WIR-1010, Belden 8761, or equivalent) to make the connections to the executive module at the LAN terminals.

Step	Procedure
1	Connect the negative (–) wire to: ■ EP/2: Terminal 23 ■ Lingo: Terminal 28
2	Connect the shield wire to: ■ EP/2: Terminal 24 ■ Lingo: Terminal 29
3	Connect the positive (+) wire to: ■ EP/2: Terminal 25 ■ Lingo: Terminal 30

Make the necessary network connections to the port labeled Network on the back of the NovarNet Interface Module. If necessary, the connector can be removed to make the connections.

Step	Procedure
1	Connect the negative (–) wire to the Comm negative (–) terminal.
2	Connect the shield wire to the Shield terminal.
3	Connect the positive (+) wire to the Comm positive (+) terminal.

Connecting Power

Use the transformer supplied with the module or an equivalent 24-VAC transformer and make the following connections to supply power to the module.

Step	Procedure
1	Connect the 24-VAC transformer to the 24-VAC port on the back of the module.
2	Plug the other end of the transformer into an available wall socket. ■ When power is supplied, the Power LED on the front of the module should light.

Setting the Address

The address switches are located on the back of the module (see Figure 1). The first five switches are used to set the address of the NovarNet monitoring station (the PC connected to the NovarNet Interface Module).

Refer to Figure 2 and set the first five switches to match the correct address of the module (default is address 16).

NOTE! The unit number in ESS32 is always one number higher than the unit address. Also, although address 00 is shown in Figure 2, a NovarNet Monitoring Station cannot use address 00; an executive module must use that address.
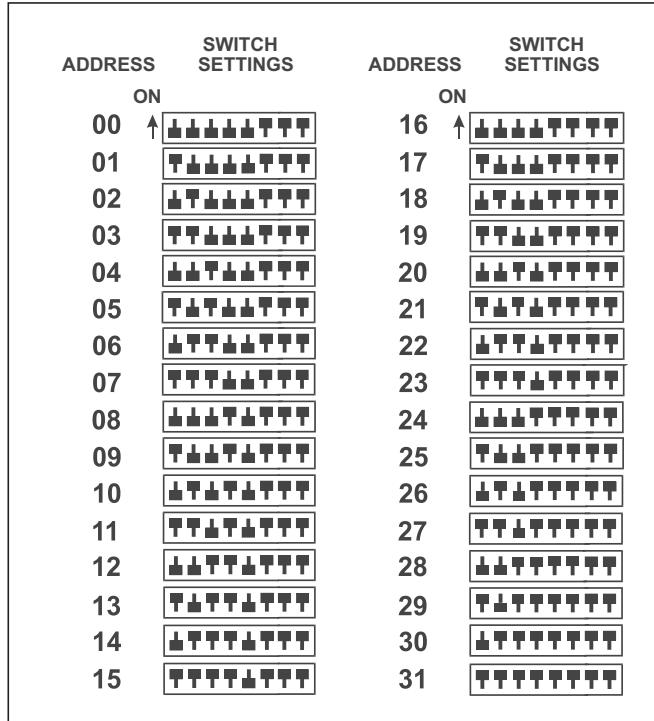
Figure 2.   Address settings

Configuration switches 6, 7, and 8 are used for specific settings (Figure 3) related to the operation of the NovarNet Interface Module with the PC and with NovarNet.
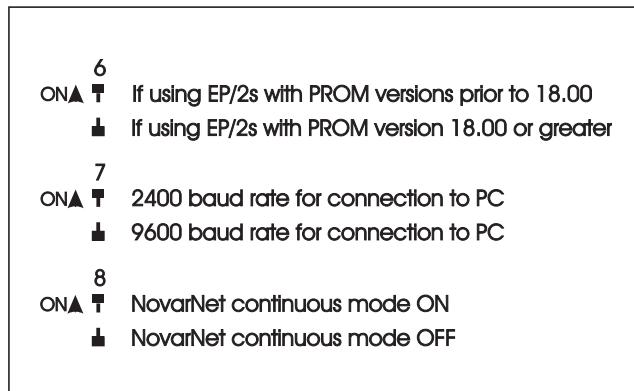
Figure 3. Settings for Configuration Switches 6, 7, and 8

■ Switch #6 is labeled "Reserved." This switch relates to a NovarNet communications timing operation that is dependent on the PROM level of the executive module being used.

— For executive modules with PROM levels prior to version 18.00, set the switch to on.

— For executive modules with PROM versions 18.00 or greater, set the switch to off (the default).

■ Switch #7 refers to the communication baud rate between the NovarNet Interface Module and the PC.

— Setting the switch to the on position sets the baud rate at 2400.
— Setting the switch to the off (default) position sets the baud rate at 9600.

In most applications, Novar Controls recommends keeping the baud rate at 9600 unless communication problems occur at this setting.

■ Switch #8 refers to NovarNet continuous mode. Continuous mode is only functional when set at the node with the lowest address (typically 00) on a LAN. This switch is not applicable to the NovarNet Interface Module because a NovarNet monitoring station cannot be the lowest address on the network; only an executive module can. It has been included for possible future enhancements to NovarNet. Novar Controls recommends that this switch be set at the default on position.

LED Communication Indicators

Figure 4 shows the LED communication indicators on the front of the NovarNet Interface Module.
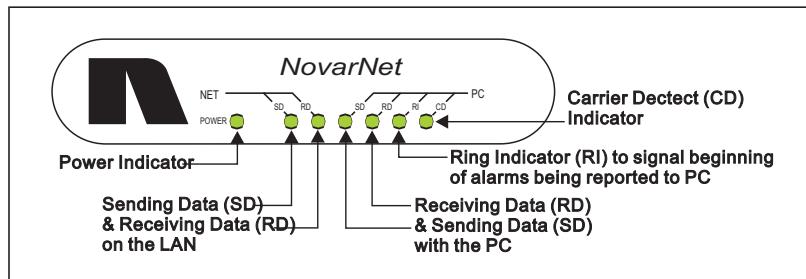

Figure 4.   Front view of NovarNet Interface Module

■ As indicated previously, the Power LED lights when power is successfully supplied to the module.

■ The send and receive data LEDs for the network side (the left SD and RD LEDs) and the PC side (the right SD and RD LEDs) flash when data is transmitted.

■ The ring indicator LED lights when an alarm session is beginning (the module has a speaker that will also emit a sound each time the ring indicator LED lights).

■ The carrier detect LED indicates that an online connection has been made between the PC and the remote system.

Software Installation Notes

The NovarNet Interface Module was designed for use with Novar Controls Corporation's iScope® and ESS32 software packages that run in the Windows® 95/98/NT operating systems. When installing this software, select NovarNet with the appropriate communication (Comm) port.

Refer to Novar Controls' *iScope® User's Manual* (Doc. No. 569041000) for information about installing iScope. Refer to the *Novar Controls Software Installation Instructions* (Doc. No. 569042000) for information about installing ESS32. Both documents are available through any authorized Novar Technology Center (NTC) or account representative.

Operating Notes

An advantage of the NovarNet Interface Module is that it can be left powered on even if the PC to which it is connected is turned off. The module continues to communicate with the LAN so that the network does not have to reconfigure each time the PC is turned on and off.

If communication problems occur, all connections should be checked to make sure they are secure.

Model and Part Numbers

Use the part numbers provided in Table 1 to order the necessary Novar Controls parts.

Table 1. Novar Controls Part Numbers		
PRODUCT	**MODEL NO.**	**PART NO.**
NovarNet Interface Module	NIM	734099000
Two-Conductor Shielded Cable	WIR-1010	709001000
ESS32/iScope Software Library CD)	ESS32/iScope	700199000