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FP-3000

FP-3000

FieldPoint Fieldbus Network Module



This document provides a quick guide to install and configure the FP-3000 network module. For more detailed information on using the network module, refer to the FP-3000 user manual.

Features

- FOUNDATION Fieldbus H1 interface to control network
- Runs on 11 to 30 VDC power
- Built-in high efficiency power supply powers I/O modules
- -40 to +60 °C operation

Kit Contents and Optional Equipment

Your kit contains the following items:

- FP-3000 network module
- Accessories: protective connector cover, two DIN rail stops, Device Description diskette

You can order the following optional equipment from National Instruments:

- Panel mount accessory, part number 777609-01
- Terminal bases and I/O modules, complete list of terminal bases and I/O modules in the National Instruments online catalog at www.natinst.com
- Cables
- 24 VDC power supply

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Installation



Caution To avoid damaging the FP-3000 and the terminal bases, make sure that power is not applied to the FP-3000 while you install or remove terminal bases.

Follow these steps to install the FP-3000:

1. Use a flat-bladed screwdriver to open the DIN rail clip to the unlocked position, as shown in Figure 1.

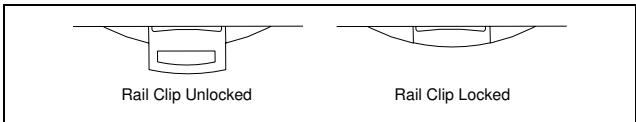


Figure 1. DIN Rail Clip

2. Mount the FP-3000 onto a 35 mm DIN rail or onto a panel mount accessory.
 - Installing onto a DIN rail:
 - a. Hook the lip on the rear of the FP-3000 onto the top of a 35 mm DIN rail and press the FP-3000 down onto the DIN rail, as shown in Figure 2.

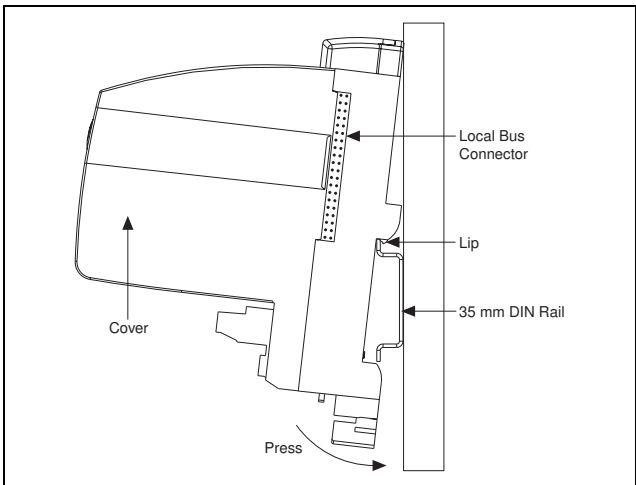


Figure 2. Mounting the FP-3000 onto a DIN Rail

- b. Slide the FP-3000 to the desired position along the DIN rail.
 - c. Lock the rail clip.
- Installing onto a panel mount accessory, which you can order separately from National Instruments:
 - a. Snap the panel mount accessory onto the module as shown in Figure 3.

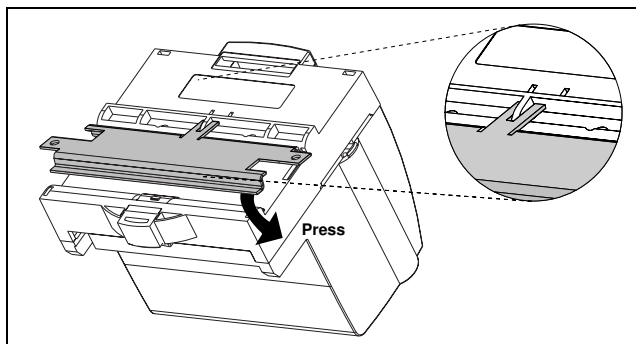


Figure 3. Mounting the FP-3000 onto a Panel Mount Accessory

- b. Lock the rail clip.
 - c. Mount the FP-3000 and panel mount accessory onto the desired surface. You can drill pilot holes using the directions in the *FieldPoint Network Module Panel Mount Accessory* installation guide.
3. Add terminal bases with their local bus connectors firmly mated to the FP-3000 local bus connector.
 4. Place the protective cover over the local bus connector of the last terminal base in the bank. Figure 4 shows an installed FP-3000 network module on a DIN rail.

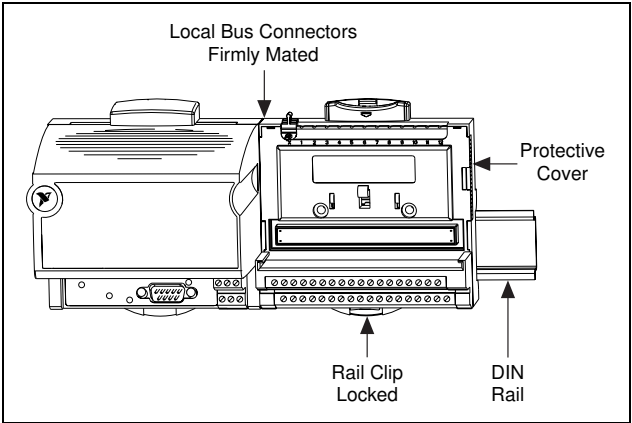


Figure 4. Network Module and Terminal Base Mounted on a DIN Rail

Network Connection

Connect the FP-3000 to a Fieldbus network using the 9-position DSub connector on the FP-3000. The pinout of the DSub connector is shown in Figure 5.

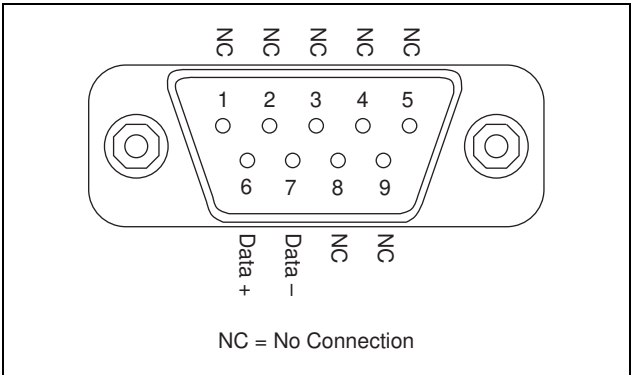


Figure 5. Dsub Connector Pinout

Powering the FP-3000



Caution Connect the FP-3000 to the terminal base before applying power to the FP-3000 to avoid damaging the FP-3000 or a terminal base.

An 11-30 VDC power supply is required by each FP-3000 on your network. The FP-3000 filters and regulates this supplied power and provides power for all the I/O modules in the bank. Therefore, you do not need to provide power separately to each FieldPoint I/O module in the bank. If your field I/O devices need to be powered separately, you can use the terminals provided on each terminal base for such power supply connections.

The power connector is a 6-pin screw terminal connector whose pinout is shown in Figure 6.

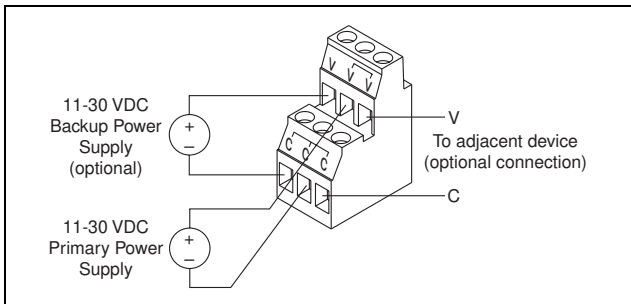


Figure 6. FP-3000 Power Connector Pinout

Connect the primary power supply to the center V and C pair. You can connect an optional backup power supply to the left V and C pair. The right V and C pair provides a convenient means of connecting power to the V and C terminals of a terminal base. Figure 6 shows this optional connection.

Specifications

FP-3000.....	FOUNDATION Fieldbus H1
Integrity.....	Checksum
Power supply range.....	11 to 30 VDC
Maximum terminal bases/bank.....	9

Maximum banks/fieldbus	
Segment (without repeaters)	32
Power consumption.....	$6\text{ W} + 1.15 * \sum(\text{I/O module consumption})$
Operating temperature	-40 to +60 °C
Storage temperature	-55 to +100 °C
Relative humidity.....	5% to 90% non-condensing

CE Mark Compliance

This product meets applicable EU directive(s) as follows:

EMC directive

Immunity EN 50082-1:1994

Emissions EN 55011:1991 Group I
Class A at 10 meters

Mechanical Dimensions

Figure 7 shows the mechanical dimensions of the FP-3000. Dimensions are given in inches [millimeters].

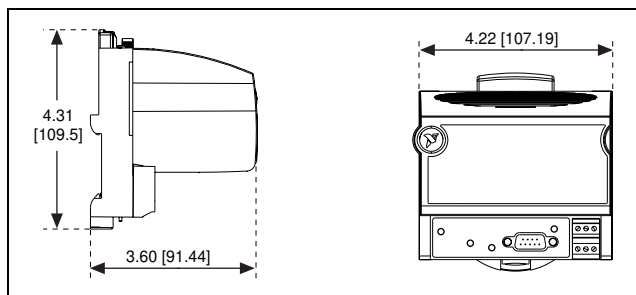


Figure 7. Mechanical Dimensions



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