NATIONAL INSTRUMENTS
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# FP-TB-1/FP-TB-2

**FieldPoint Terminal Bases**

FieldPoint™

## Highlights

- Work with all FieldPoint I/O modules
- V and C terminals provide external supply voltages common to all channels
- DIN-rail mounting or panel mounting
- 32 terminals available for field connections
- Available with screw terminals (FP-TB-1) or spring terminals (FP-TB-2)
- -40° to +70° C operation

## Overview

The FP-TB-1 and FP-TB-2 terminal bases provide the intra-system communication link between FieldPoint I/O modules and network modules, provide a means for wiring field connections, and provide the mounting mechanism. Either terminal base can be used equally well with any of the FieldPoint I/O modules. The choice of terminal base depends on the type of field wiring terminal preferred: screw terminal or spring terminal.



*321699A-01*  *July 1997*

# DIN Rail Mounting

**NOTE:** ***Before connecting a terminal base to a network module, the network module MUST be powered off.***

The FieldPoint terminal bases have simple rail clips for mounting reliably onto a standard 35 mm DIN rail. To install the terminal base to the DIN rail, follow these steps:

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

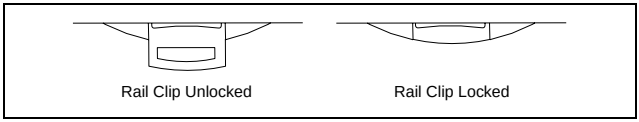


**Figure 1.** DIN Rail Clip

2. Hook the lip on the rear of the terminal base onto the top of a 35 mm DIN rail and rotate the terminal base down onto the DIN rail as shown in Figure 2.

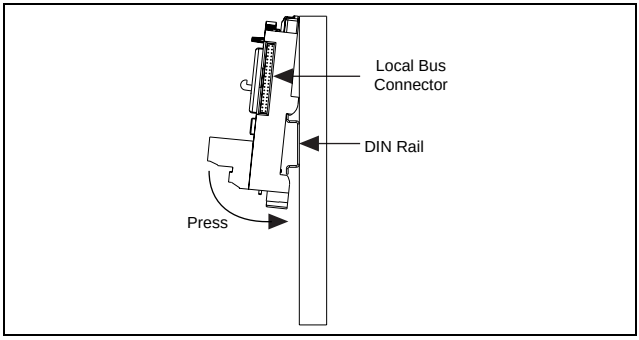


**Figure 2.** Installing the Terminal Base onto a DIN Rail

3. Slide the terminal base along the DIN rail until its local bus connector mates with the connector of the terminal base or network module adjacent to it.
4. Lock the terminal base to the DIN rail by pushing the rail clip in.

5. Remove the protective cover from the local bus connector, and place it over the local bus connector of the last terminal base in the stack. Figure 3 shows an installed terminal base.

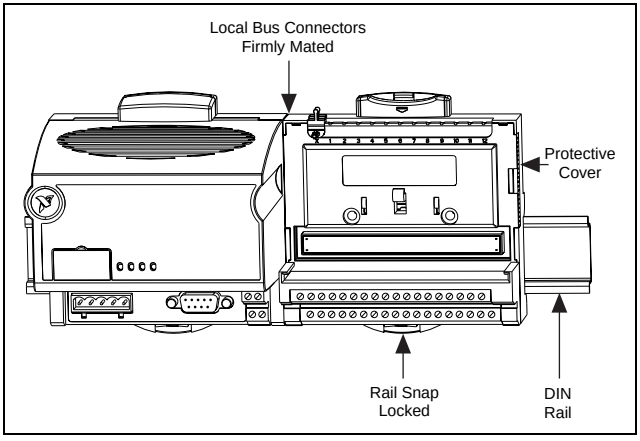


**Figure 3.** Installed Terminal Base

# Panel Mounting

The terminal bases may be directly mounted to a wall or panel, instead of onto a DIN rail. Use the mechanical dimensions drawing at the end of this document as a guide to locating mounting holes on your panel.

# Installing and Removing Modules

To install an I/O module onto a terminal base, refer to Figure 4 and follow these steps.

1. Slide the key to the appropriate position for the I/O module. The position marked X is a universal position that works for all modules.

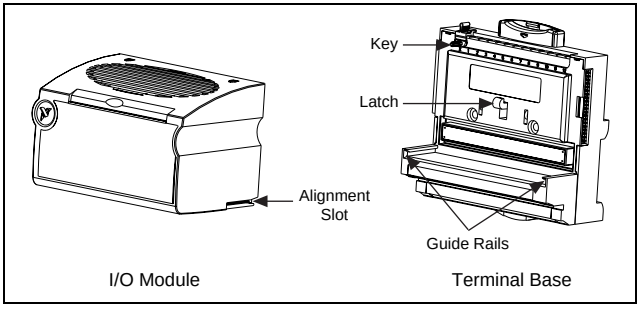


**Figure 4.** Module Installation Diagram

2. Position the I/O module with its alignment slots aligned with the guide rails on the terminal base.
3. Press firmly to seat the I/O module on the terminal base. The terminal base latch locks the I/O module into place when the module is firmly seated.

To remove an I/O module, insert a 1/4" flat-bladed screwdriver behind the ejector button and twist, as shown in Figure 5. This motion unlatches the I/O module, which can then be lifted off of the terminal base.

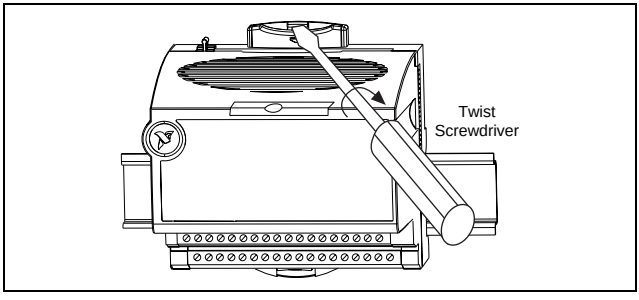


**Figure 5.** Unlatching an I/O Module from the Terminal Base

# Field Wiring

The terminal bases provide four dedicated terminals and 32 numbered terminals defined by the I/O module. The four dedicated terminals are two V and two C terminals, one of each at each end of the terminal base. The two V terminals are internally connected by the terminal base, as are the two C terminals. Generally, these terminals are intended to connect external power supplies to field devices. Refer to the appropriate I/O module operating instructions for details on the use of these terminals and the additional 32 terminals.

The total amount of current flowing through the V and C terminals must be limited to 10 A. If a single external supply is to be used for the field devices of more than one channel, then wire the supply to the V and C terminals as shown in Figure 6.

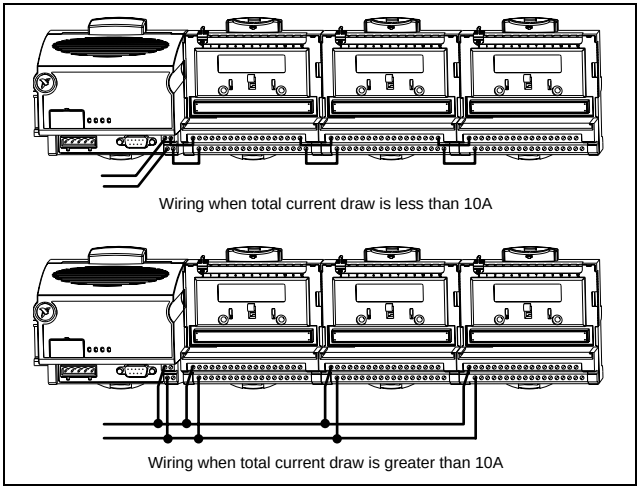


**Figure 6.** Wiring of External Supplies

# Specifications

Operating Temperature.....-40° C to +70° C

Storage Temperature.....-55° C to +100° C

Relative Humidity.....5% to 90% non-condensing

Weight

FP-TB-1.....210 g (7.4 oz.)

FP-TB-2.....160 g (5.7 oz.)

### Mechanical Dimensions

Figure 7 shows the mechanical dimensions of the FP-TB-1 and FP-TB-2 with an I/O module installed. Figure 8 shows two terminal bases connected.

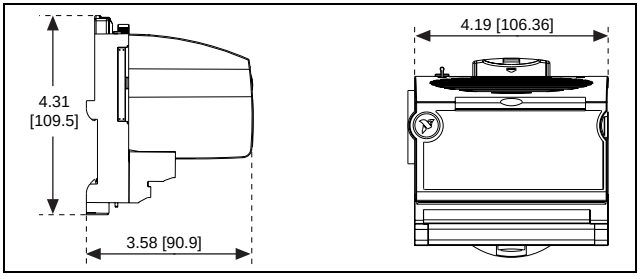


**Figure 7.** Mechanical Dimensions

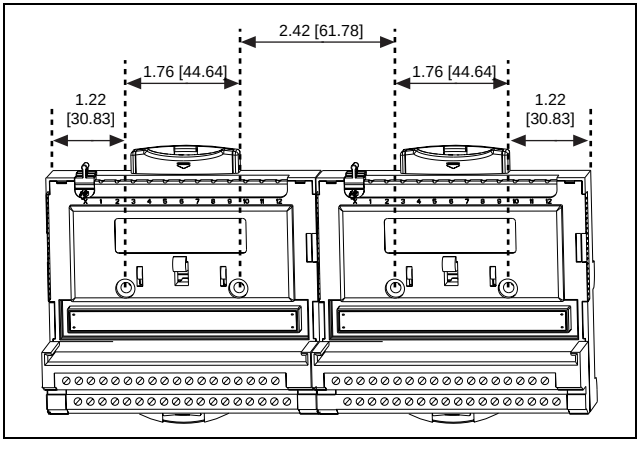


**Figure 8.** Mechanical Dimensions

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