FOXBORO®

PSS 21H-2X2 B4

I/A Series® Hardware
DIN Rail Mounted Fieldbus Module Baseplate



The DIN rail mounted Fieldbus Module baseplate provides a convenient, secure facility for the mounting of DIN rail mounted Fieldbus Modules (FBMs) and Fieldbus Communications Modules (FCMs). Its eight mounting positions can accommodate up to eight FBMs or a combination of FBMs and FCMs.The baseplate also provides the necessary connectors for redundant power, redundant module Fieldbus, and termination cables.

PLUG-IN MODULES

The DIN rail mounted FBMs accommodated by the baseplate are compact, plug-in modular assemblies used to interface field devices with the host control station. The FCMs, having the same form factor as the FBMs, perform signal interface functions.

For example, FCM10Es are used to interface the Ethernet trunk Fieldbus with the 2 Mbps module Fieldbus, and FCM2Fs are used for fiber optic communications extensions between baseplates. The FBMs and FCMs plug onto the baseplate by means of their two, 48-pin connectors, and each is fastened in place by two screws.

BASEPLATE MOUNTING

The baseplate is available in two basic mounting configurations — horizontal DIN rail mount or vertical DIN rail mount. Either of these configurations can be employed internal to, or external to an enclosure; however, in all cases the DIN rail must be amply supported, whether by means of metal braces, a backplate, or a supporting wall.

NOTE

CE compliance requires the use of a metal enclosure and Foxboro's power distribution unit.

In addition to DIN rail mounting of the baseplate, a mounting kit is available for mounting the baseplate horizontally in a standard, 483 mm (19 in) rack. The kit provides a 25.4 mm (1 in) mounting depth, to meet clearance requirements at the front of the 19-inch rack.

BASEPLATE IMPLEMENTATION

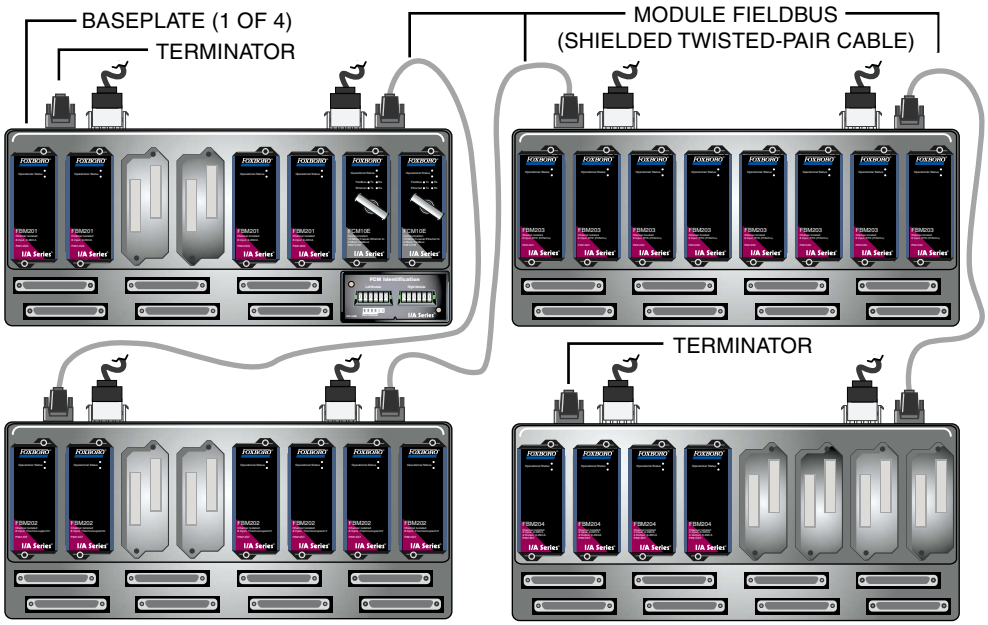
A grouping of up to four baseplates per FCM (pair) can be connected together, for mounting of up to 32 modules (30 FBMs and 2 FCMs). Multiple groups of baseplates can be connected to the Ethernet trunk Fieldbus, either directly (via Ethernet connectors) or through one or more multiport fiber optic converters (hubs). (Refer to PSS 21H-2W1 B3 for information on the various DIN rail mounted FBM subsystem communication topologies). Module Fieldbus interconnection between baseplates is made by shielded twisted-pair cable for local configurations and/or by fiber optic cable for remote configurations.

Using fiber optic topologies (refer to PSS 21H-2W1 B3), baseplates can be separated up to 10 km (6.2 mi).

Figure 1 shows baseplate implementation using only shielded twisted-pair cable connections. This configuration is used when the four (maximum) baseplates are mounted in the same general location. Using shielded twisted-pair cable, the baseplates can be interconnected up to 60 m (196 ft) total cable distance. Shielded twisted-pair cables are available in lengths of 0.25 m (10 in), 1 m (3.3 ft), 3 m (9.9 ft), 5 m (16.5 ft), 10 m (33 ft), 20 m (66 ft), 30 m (99 ft) and 60 m (198 ft), allowing placement of the baseplates (up to four in a group) in one or more enclosures.

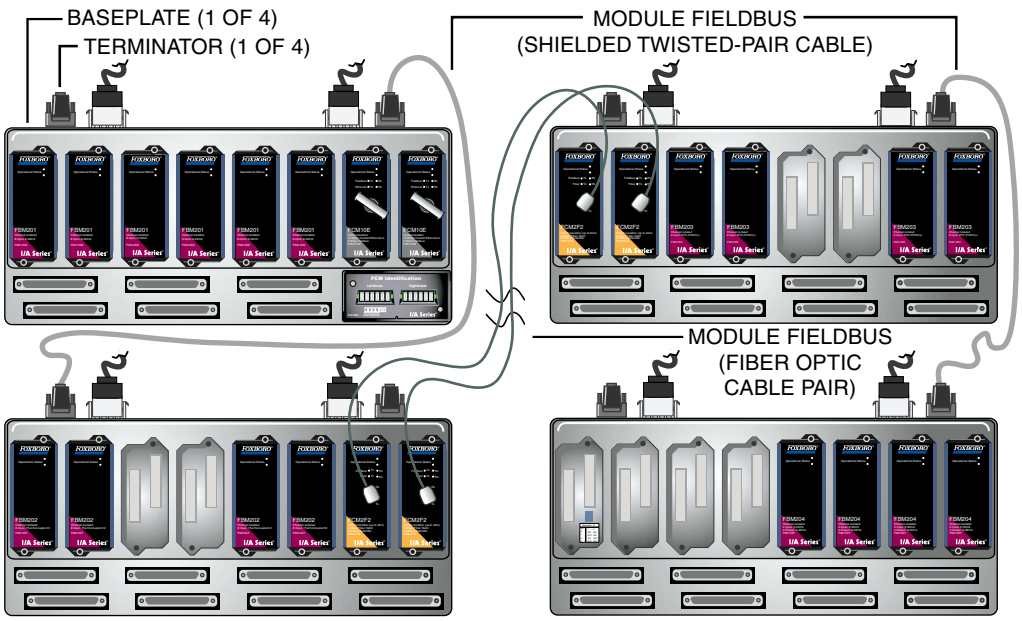
Figure 2 shows how baseplate implementation can be extended using fiber optic cabling. In this configuration, up to three module Fieldbus segments can be fiber optic, allowing the baseplates to be dispersed over a wider area. The FCM2Fs provide three different fiber optic cabling distances between baseplates: 2 km (1.24 mi), 4 km (2.48 mi), or 10 km (6.2 mi). Refer to PSS 21H-2Y3 B3 for additional information on baseplate implementation using this configuration.

Figure 3 shows the key elements of a typical baseplate.



NOTES:
1. MAXIMUM BASEPLATE QUANTITY IS FOUR, PER CABLE DROP.
2. MAXIMUM TOTAL CABLE RUN OF ALL MODULE FIELDBUS CABLES IS 60 m (198 ft).

Figure 1. Baseplate Connections (Example) Using Shielded Twisted-Pair Cabling



NOTES:
1. MAXIMUM BASEPLATE QUANTITY IS FOUR.
2. THE FIBER OPTIC EXTENSION CAN BE BETWEEN ANY TWO BASEPLATES, WITH UP TO THREE EXTENSIONS PER BASEPLATE GROUPING.
3. FOR MAXIMUM FIBER OPTIC CABLING DISTANCES, REFER TO PSS 21H-2W1 B3.

Figure 2. Baseplate Connections (Example) Using Shielded Twisted-Pair and Fiber Optic Cabling

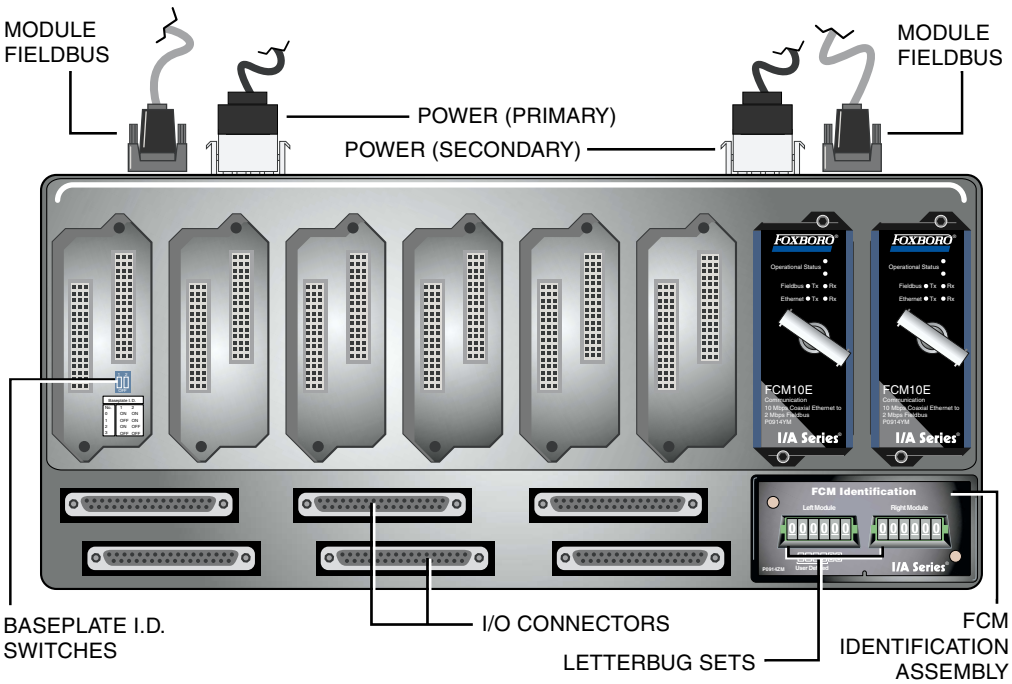


Figure 3. Baseplate Details