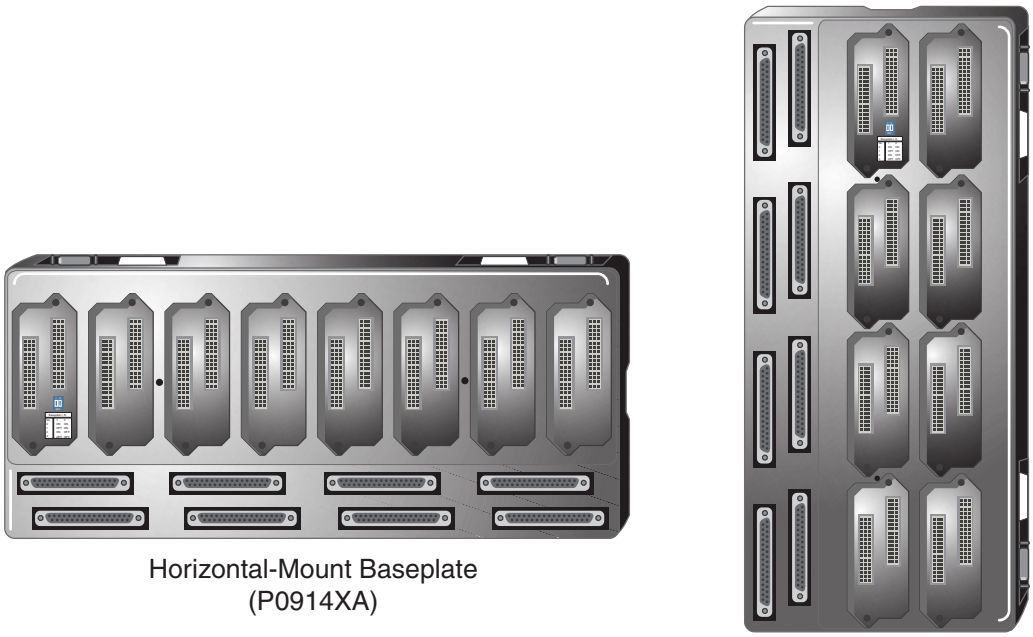
Also, as indicated in Figure 1-1, module Fieldbus distribution (baseplate-to-baseplate) can be implemented using shielded twisted-pair cabling, fiber optic cabling, or a combination of both. Baseplate-to-baseplate fiber optic cabling is implemented using FCM2F modules, a pair (for redundancy) in each of the connected baseplates. Twisted-pair cabling is implemented by simply making cable connections from one baseplate to the next. The following subsections provide more detailed information on the baseplate cabling configurations and the Ethernet trunk Fieldbus cabling configurations.

Baseplate Implementation

The DIN rail mounted Fieldbus Module baseplate (Figure 1-2) provides for the mounting of the 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 I/O signal cable connections.



Horizontal-Mount Baseplate
(P0914XA)

Vertical-Mount Baseplate
(P0914XB)

Figure 1-2. DIN Rail Mounted Fieldbus Module Baseplate

As shown in Figure 1-2, the baseplate is available in two basic configurations, one for horizontal DIN rail mounting and the other for vertical DIN rail mounting.

In addition, a mounting bracket kit is available for mounting of the horizontal baseplate in a standard, 483 mm (19-inch) rack. The kit (Foxboro part number P0930AY) provides for a 25.4 mm (1 in) mounting depth in the rack.

The FBMs and FCMs plug onto the baseplate by means of their two connectors, and each is fastened in place by two hex screws. In addition to the FBMs and FCMs, an FCM identification assembly (Figure 1-3) is mounted on the signal connectors adjacent to the FCM(s) in the first baseplate of the group of up to four. The FCM identification assembly provides for mounting of letterbug set(s), which provide identification, to the system software, of all mounted FBMs.

Baseplate Installation

NOTE

The B03, B04, and B05 enclosures are shipped with the baseplates in place. The instructions presented here are for custom mounting of the baseplates in user-supplied enclosures.

The DIN rail mounted Fieldbus module baseplate can be mounted three different ways:

- Horizontal mounting of the baseplate (P0914XA) on a brace-supported or backplate-supported horizontal DIN rail.
- Vertical mounting of the baseplate (P0914XB) on a brace-supported or backplate-supported vertical DIN rail.
- Horizontal mounting of the baseplate (P0914XA) in a standard, 483 mm (19-inch) rack, without the use of a DIN rail. A mounting bracket kit, P0930AS, contains the necessary hardware for mounting the Baseplate and provides a 25.4 mm (1 in) mounting depth. The mounting bracket attaches to the rear of the horizontal baseplate (P0914XA) using four screws provided with the bracket.

DIN Rail Mounting of the Horizontal Baseplate

As illustrated in Figure 3-10 mechanical support is required for horizontal DIN rail mounting of the baseplate. This support, required for all mounting configurations of the baseplates, can be in the form of metal braces, a backplate, or a wall. The added support prevents unnecessary movement or twisting motion of the DIN rail/baseplate combination.

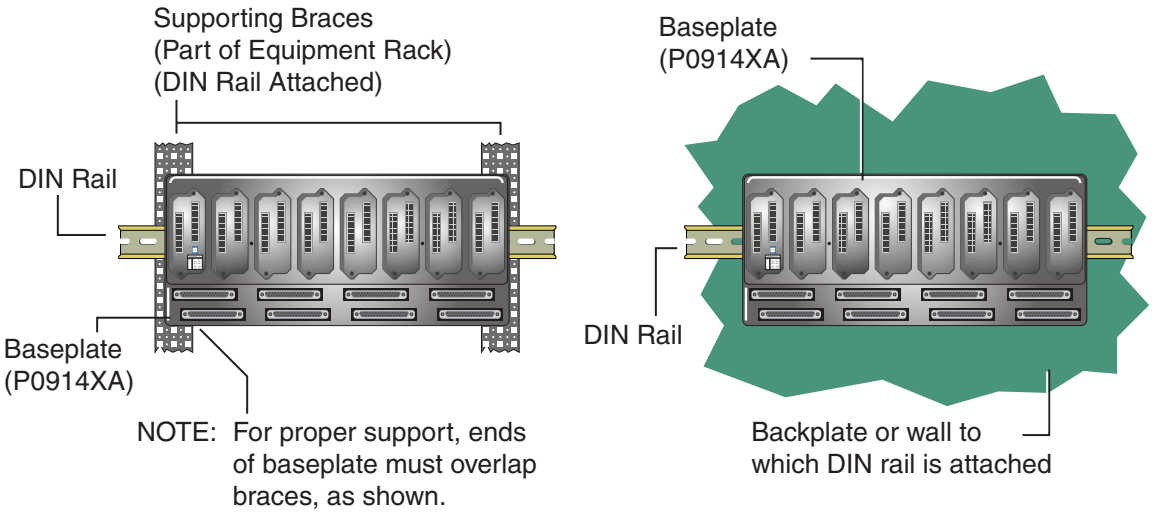
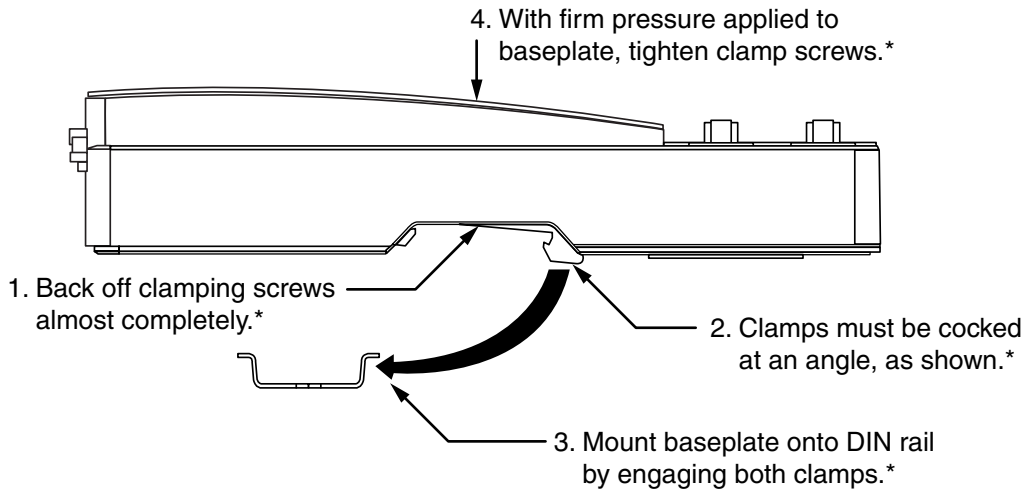


Figure 3-10. Required Support for Baseplate with Horizontal DIN Rail Mounting

To install a horizontally mounted DIN rail baseplate (P0914XA) or a vertically mounted baseplate (P0914XB) on a structurally supported DIN rail, proceed as follows:

1. Referring to Figure 3-11, using a 3/32 inch (2.4 mm) electrician's flat-head (common) screw driver, back off both clamping screws to within 3 to 4 threads of disengaging the clamp. (An easy check for this is that the end of the screw will be fully inside the body of the clamp.)
2. Confirm that both clamps are cocked at an angle (as shown in Figure 3-11). If a clamp is not cocked, press lightly in the center of the clamp and release. The clamp should spring back into the correct position.
3. Mount the baseplate onto the DIN rail by engaging both clamps. The hooks closest to the field cabling side must engage first. (Throughout the process, firm positive pressure must be applied to the baseplate.) Confirm that the clamps have successfully engaged by pulling up on the module side of the baseplate. If either corner lifts, one of the clamps is not fully engaged. If this is the case, remove the baseplate by jiggling it while gently pulling it away from the DIN rail, and then repeat steps 1 and 2.
4. While pressing the baseplate firmly against the DIN rail, continue the firm, positive pressure and tighten both clamping screws securely.



* See text for detailed procedure.

Figure 3-11. Mounting of Baseplate on DIN Rail

To remove a horizontally mounted baseplate from the DIN rail, proceed as follows:

1. Remove all modules (FBMs and FCMs) and cabling from the baseplate.
2. Loosen the two clamping screws, turning them ten turns counterclockwise."Float" the baseplate on the DIN rail and gently move it top-to-bottom while moving it toward you, causing the clamps to disengage from the DIN rail.

DIN Rail Mounting of the Vertical Baseplate

As illustrated in Figure 3-12 mechanical support is required for vertical DIN rail mounting of the baseplate. This support, required for all mounting configurations of the baseplates, can be in the form of metal braces, a backplate, or a wall. The added support prevents unnecessary movement or twisting motion of the DIN rail/baseplate combination.

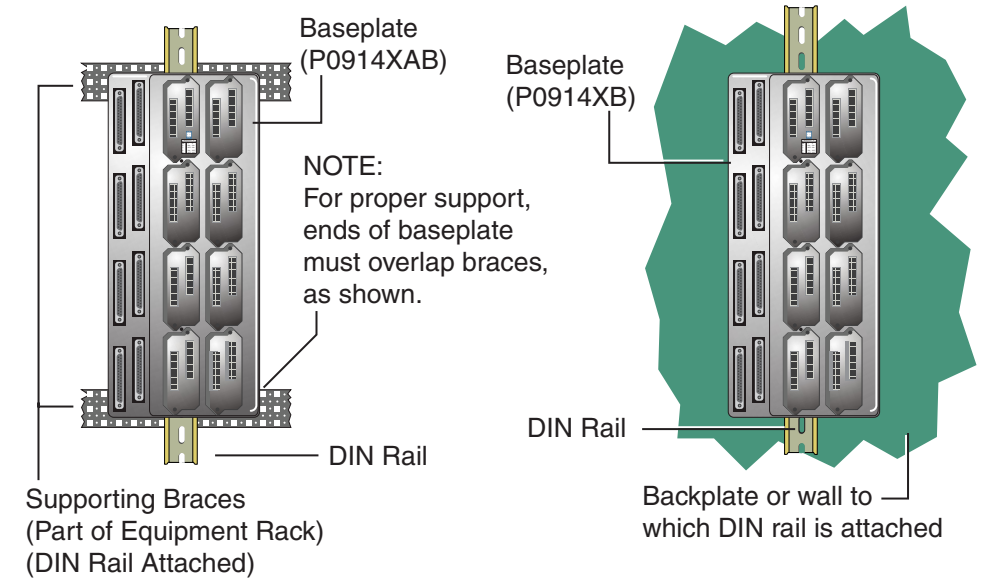


Figure 3-12. Required Support for Baseplate with Vertical DIN Rail Mounting

To install a vertically mounted DIN rail baseplate (P0914XB) on a structurally supported DIN rail, follow the procedure on page 61.

To remove the baseplate from the vertical DIN rail, proceed as follows:

1. Remove all modules (FBMs and FCMs) and cabling from the baseplate.
2. Loosen the lower baseplate set screw, turning it ten turns counterclockwise.

⚠ CAUTION

If the baseplate set screws are loosened without physically supporting the baseplate, the baseplate will slide down the DIN rail, causing possible damage to equipment. Always support the baseplate with one hand while loosening the set screws.

3. With the baseplate supported, loosen the upper baseplate set screw, turning it ten turns counterclockwise.
4. "Float" the baseplate on the DIN rail and gently move the baseplate side-to-side while moving it toward you, causing the clamps to disengage from the DIN rail.

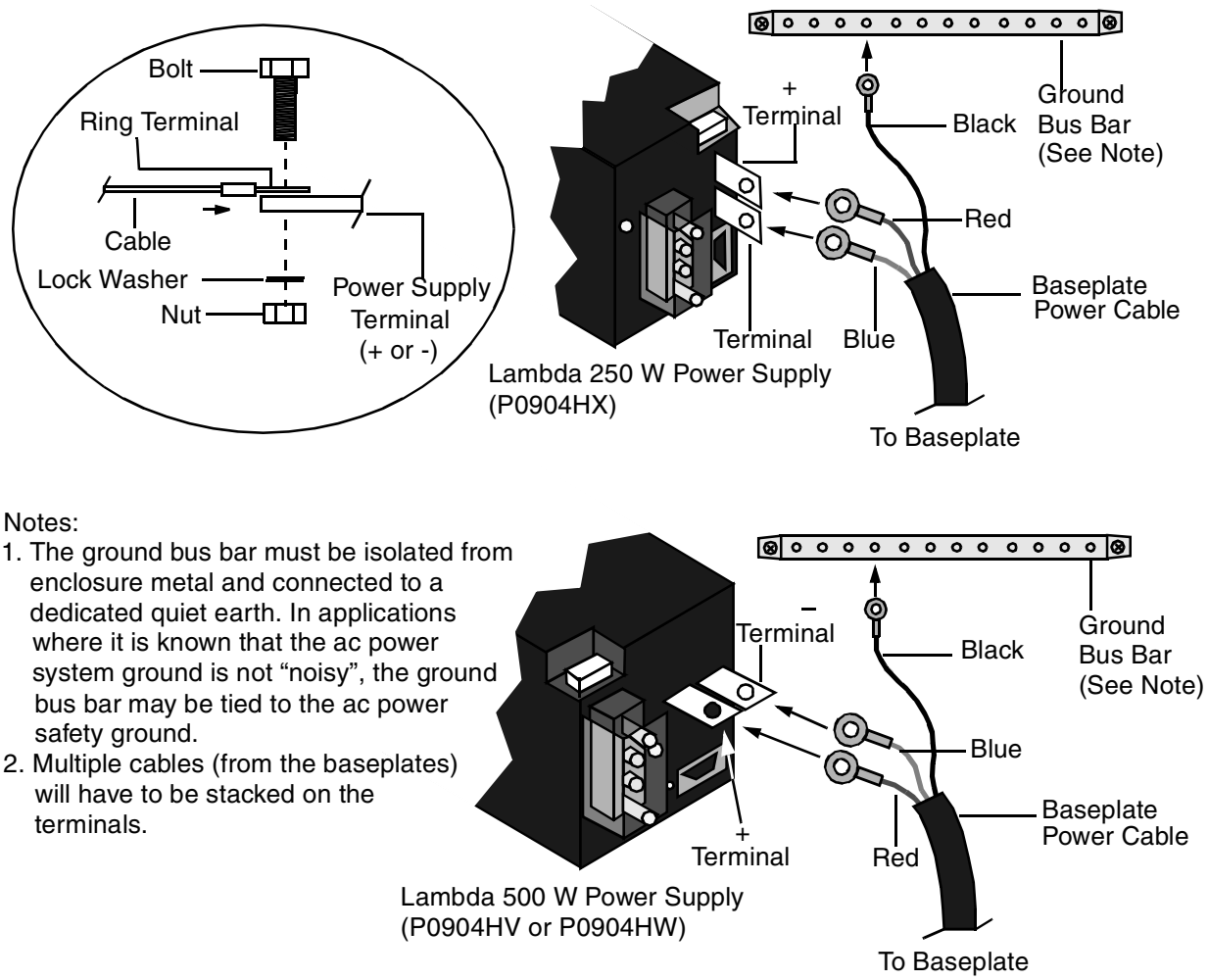


Figure 3-15. Baseplate Power Cable Connections to Lambda 250 W and 500 W Power Supplies

Proceed to “Baseplate Power Cable Connections” on page 67 to connect the power cables to the baseplate.

Baseplate Power Cable Connections

Each baseplate accepts one cable for primary power, and a second cable for secondary power, if applicable. For ease of cable routing, select cables with a slightly greater length than the distance between the baseplate and the power supply. Make the connections at the baseplate as shown Figure 3-16

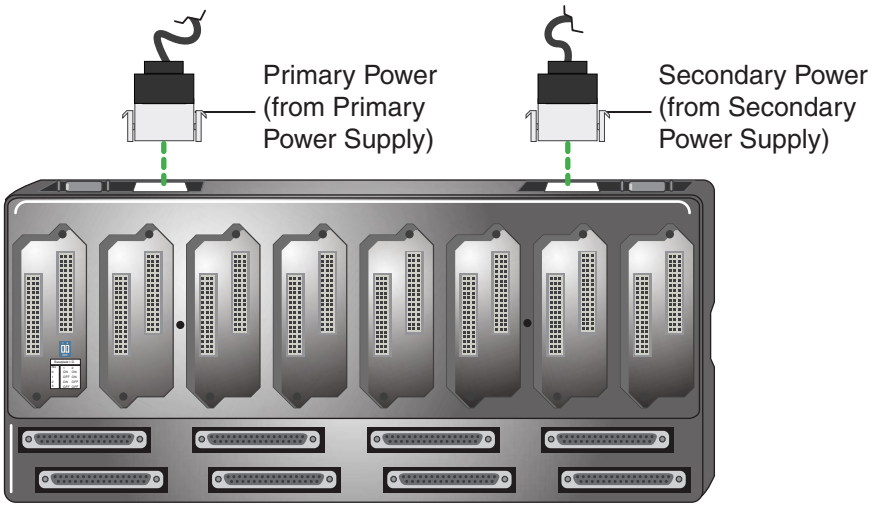


Figure 3-16. Power Supply Cable Connections at the Baseplate

Baseplate ID Switch Setting

Each baseplate contains a two-switch (four-position) DIP switch, which must be set for proper subsystem operation. The ID of each baseplate must be a number from 0 to 3, which is set by means of the two switches (see Figure 3-17).

The particular sequence of the baseplate ID numbers does not matter. The baseplates can be numbered according to their physical placement in the enclosure(s), or according to their positions in the cable connection scheme. However, no two baseplates in the grouping (on the same FCM or FCM pair) may be assigned the same ID number.

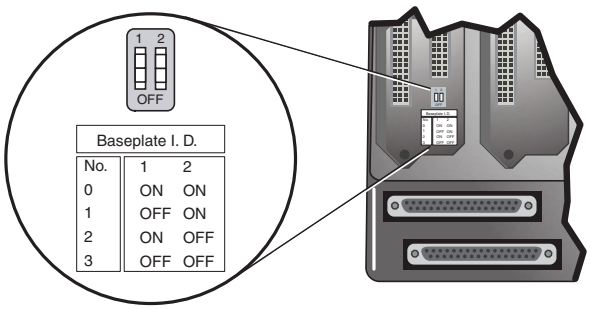


Figure 3-17. Baseplate ID Switches

Set the baseplate ID switches as indicated in Table 3-6. Pressing the upper part of the rocker switch places the switch in the ON (or CLOSED) state; pressing the lower part of the rocker switch places it in the OFF (or OPEN) state. (The factory default setting is OFF-OFF, or ID number 3.)

Table 3-6. Setting the Baseplate ID Switches

Baseplate ID Number	Switch 1[1]	Switch 2[1]
0	ON (up)	ON (up)
1	OFF (down)	ON (up)
2	ON (up)	OFF (down)
3	OFF (down)	OFF (down)

1. The actual designator printed on the switch may be OPEN instead of OFF.

Module Installation

Fieldbus Modules (FBMs) and Fieldbus Communications Modules (FCMs) are installed as shown in Figure 3-18. The following subsections present rules regarding placement of the FBMs and FCMs on the baseplate. To install any module:

1. Press the module in place on the baseplate (engaging the two connectors at the rear of the module with those on the baseplate).
2. Tighten the two self retaining hex screws on the module using a hex driver tool (Foxboro part number X0179AZ).

⚠ CAUTION

1. When installing the modules on the baseplate, use a 5/32 hex driver tool (Foxboro P/N X0179AZ). If another type of tool must be used, make sure that it does not generate more than 12 inch/pounds of torque, or you might strip the threaded inserts out of the baseplate.
2. The modules must be screwed in place for secure operation. Do not rely on the signal connectors to hold the modules in place.
3. For safety reasons, always consider the possible impact on plant operations before removing a module from the baseplate.

Modules can be removed/replaced while power is applied to the baseplate without damaging the module or baseplate electronics.