

Powered Fiber Cable Surface Mount Module

1. General product information

This document provides the installation procedure for the Powered Fiber Cable Surface Mount Module (SMM). The module is designed to house and protect fiber optic and copper connections. The Powered Fiber SMM is specifically kitted with connectivity for LC fiber connection(s) and two pole low voltage power connection(s). See the **CommScope** Product Catalog for available configurations.

Powered Fiber Cable SMB Products	
Material ID	Description
760248944	KIT, SMM, 1 FIBER PORT / 1 POWER PORT, LT ALMOND
760248943	KIT, SMM, 1 FIBER PORT / 1 POWER PORT, WHITE
760248942	KIT, SMM, 1 FIBER PORT / 1 POWER PORT, BLACK
760249095	KIT, SMM, 2 FIBER PORT / 2 POWER PORT, LT ALMOND
760249094	KIT, SMM, 2 FIBER PORT / 2 POWER PORT, WHITE
760249093	KIT, SMM, 2 FIBER PORT / 2 POWER PORT, BLACK

2. Tools required

- Small Flat screwdriver
- Drill (as needed)
- Electrical Wire Stripper
- Flat Screwdriver
- Fiber optic termination and cleaning supplies

3. Components

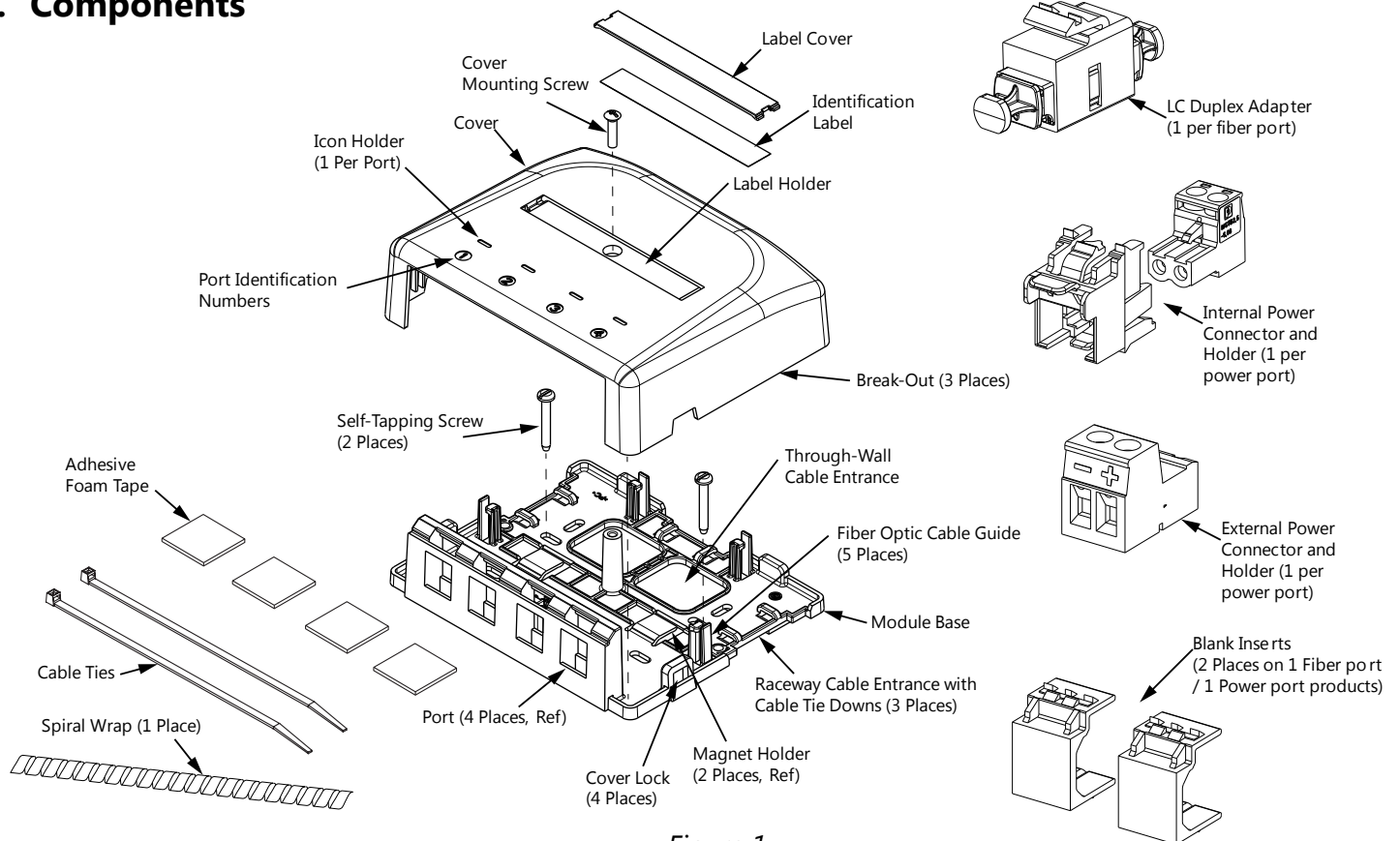


Figure 1

4. Description

Each kit contains a module base with two self-tapping mounting screws, a cover with a mounting screw, adhesive foam tape, an identification label and label cover, cable ties, and spiral wrap. Additionally, kits include both fiber port and power port connectivity. The 1 Fiber / 1 Power port kits contain one LC duplex adapter port, one set of power port connectivity, and two port blanks. The 2 Fiber / 2 Power port kits contain two LC duplex adapter ports, and two sets of power port connectivity.

The module base features a through-wall cable entrance, raceway cable entrance with cable tie downs, and fiber optic cable guide to facilitate fiber management. The module base provides 3 mounting options, holes that accept the self-tapping screws, adhesive foam tape-both for mounting to a flat surface, and magnet holders that accept magnets (available separately) for mounting to a ferromagnetic surface. The module base may be mounted to single- and double-gang NEMA electrical boxes and faceplates with a hole spacing of 120.6mm (4.75 inches).

The cover features embossed port identification number, icon holder for each port, and a label holder. The cover has break-outs on the sides and back that accommodate commercial raceways (not included).

5. MOUNT THE MODULE

5.1 NEMA Electrical Box and European Mounting Base (recommended)

1. Align the module base mounting holes with the screw holes in the electrical box or mounting base.
2. Thread, then hand-tighten screws (customer supplied) until the module base is secure to the electrical box or mounting base.

5.2 Flat Surface

A. Using Foam Tape (Included in Module Kit)

1. Remove the protective adhesive paper from one side of the foam tape and place the foam tape on the bottom of the module base. Recommended location is shown in Figure 2.

2. Remove the protective adhesive paper from the foam tape and place the module on a flat surface. Press the module to secure the foam tape.

B. Using Self-Tapping Screws (Included in Module Kit)

1. Position the module base on the flat surface at the desired location. Mark holes on the surface using the mounting holes of the module base, then remove the module base. Refer to Figure 3.

Recommended Location of Foam Tape (Bottom of Module Base)

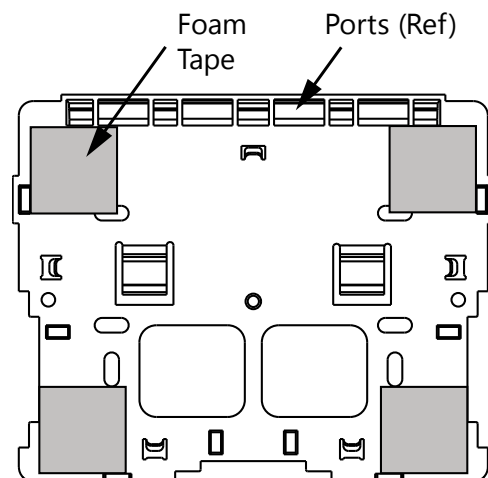


Figure 2

2. Drill the holes into the surface. If required, install screw mounting anchors (customer supplied).
3. Align the mounting holes of the module base with the drilled holes or mounting anchors. Install the self-tapping screws, then tighten them until the module base is flat against the surface.

**Magnet Location
(Top of Module Base)**

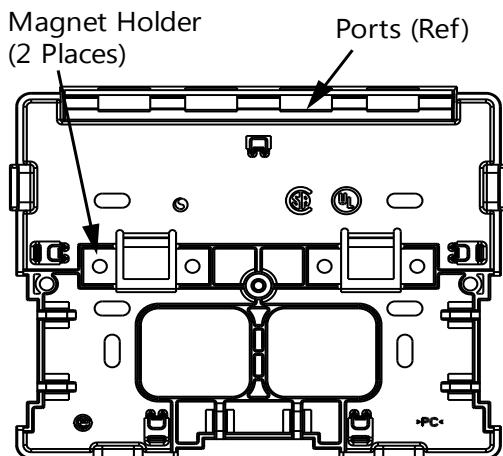


Figure 4

**Self-Tapping Screw Locations
(Top of Module Base)**

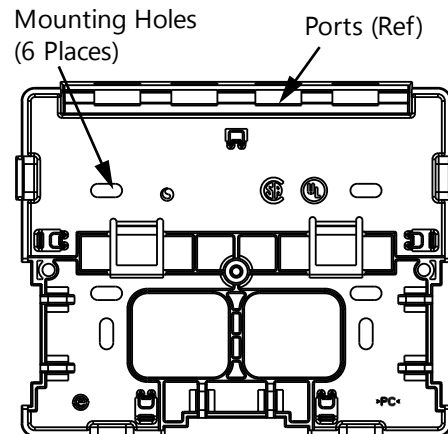


Figure 3

C. Using Magnet 1933677-1 (Available Separately)

1. Slide a magnet under each magnet holder on the top of the module base as shown in Figure 4.
2. Place the module on a flat ferromagnetic surface.

6. ASSEMBLY PROCEDURE

6.1 Route the Cable & Install Port Connectivity

1. Route the cable(s) through the through-wall cable entrance and/or raceway cable entrance of the module base (shown in Figure 1). For installation with electrical box it is recommended to strain relief the cables at the electrical box and run the individual conductor wires and fiber subunits into the module.

For fiber optic connectivity, use the provided spiral wrap to protect and route the loose optical fibers or buffered fibers through the module base fiber optic cable guides.

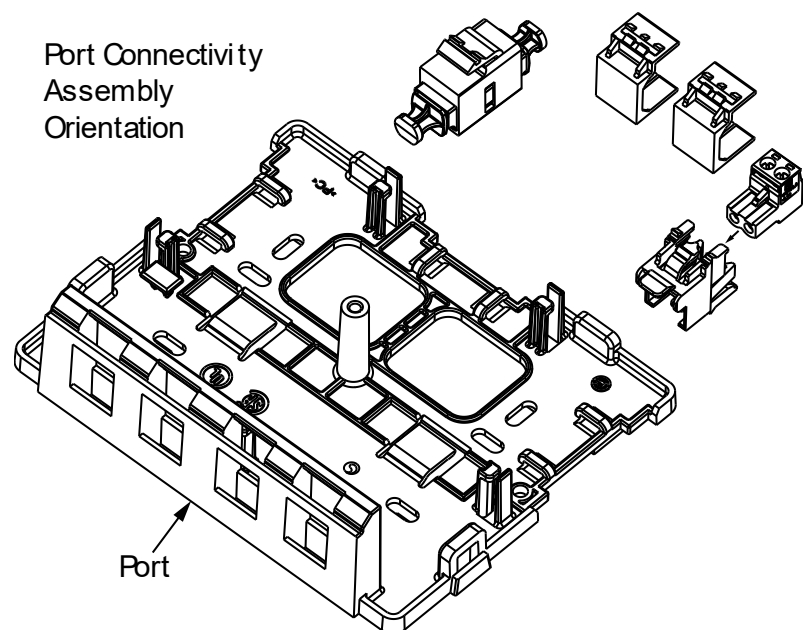


Figure 5

2. From the inside of the module base, align the LC Duplex Adapter with the appropriate port of the modular base. Make sure the movable latch is facing UP (away from the modular base). Insert the Adapter at a slight angle, into the port then rotate it upwards until the movable latch snaps into place. Repeat this step for a second LC Adapter on 2 Fiber Port/2 Power Port versions. Follow the procedure of this step to insert port blanks in unused ports for 1 Fiber/ 1 Power Port versions. Refer to Figures 5 and Figure 6.

3. Assemble Internal Power Connector into Connector Holder. From the inside of the module base, align the Holder with assembled Power Connector with the appropriate port of the modular base. Angle the Holder into the port as shown in Figure 7. Push and rotate Holder into port until it snaps in place.

LC Adapter Assembly

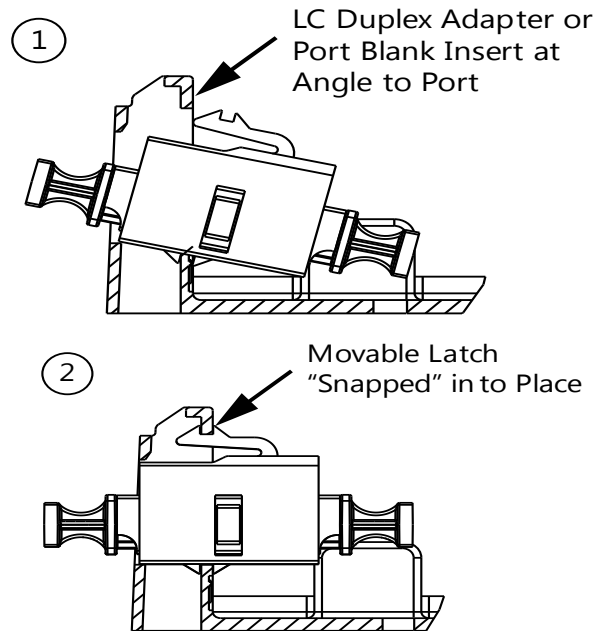


Figure 6

Power Connector Holder Assembly

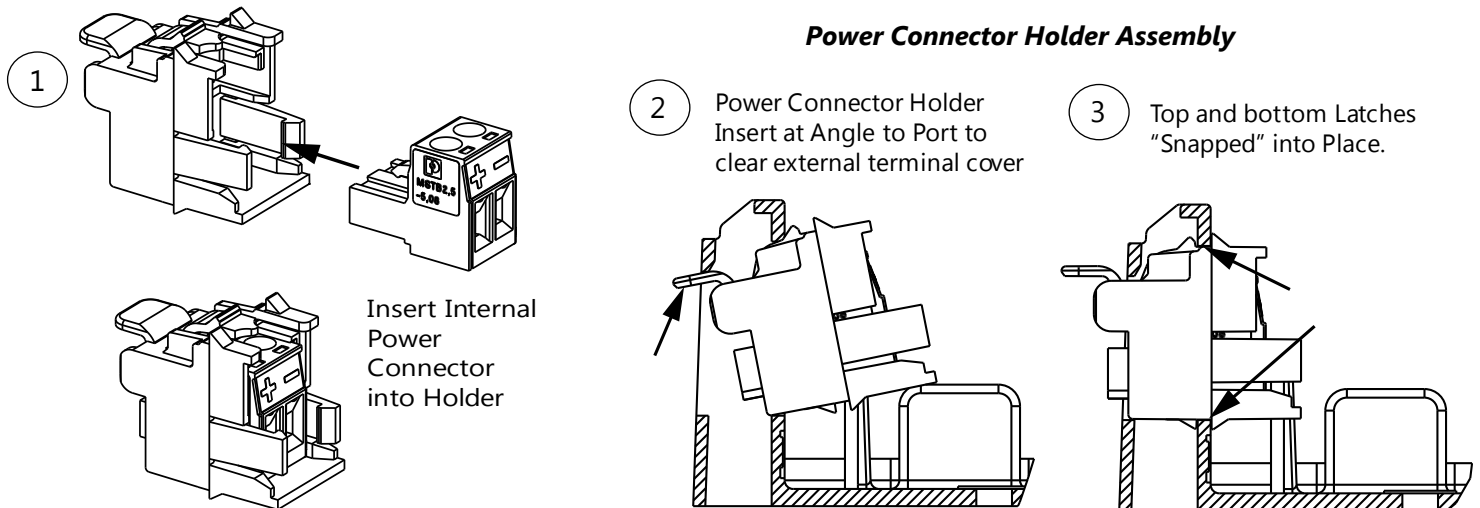


Figure 7

6.2 Fiber Optic Connector Termination

1. Terminate LC Fiber Optic plugs per product specifications instructions. Visit www.commscope.com for LC Connector application, instructions, and tool kit information.
2. Clean and install LC terminations into adapter; see installation and cleaning instructions: [TECP-96-194](#)

6.3 Power Connector Termination (Low Voltage, 2 Terminal, 12-24 AWG wire)

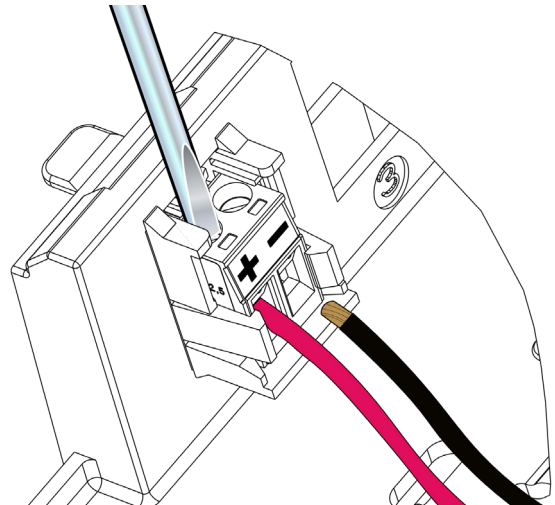
⚠ WARNING

Disconnect power before installation. All electrical work should be done in accordance with all applicable local and national electrical codes.

6.3.1 Internal Power Connector

1. Cut insulated power conductors to length. Strip off 5mm of insulation from the conductors using an electrical wire stripper (12 AWG – 2.0mm; 14 AWG – 1.6mm; 16 AWG – 1.3mm; 18 AWG -1.0 mm; 20 AWG – 0.8mm; 22 AWG – 0.65mm; 24 AWG – 0.5mm).
2. As necessary, match the wire polarity from cable plant with connector polarity. Polarity markings are provided on the Power Connectors.
3. Using a small flat screwdriver open the screw terminals until wires insert into connector ports. Push each wire into its port. Screw each terminal down hand tight to make contact between the terminal and the wire conductor. Verify wires are secure in connector with no exposed wire conductor.

Power Connector Termination



6.3.2 External Power Connector

For External Power Connector termination repeat steps 1 – 3 from section 6.3.1, verifying any external powered equipment wiring polarity with External Power Connector polarity, as necessary.

Note: If External Power Connector will not be terminated at time of Module installation, it is recommended to plug connector into the installed Internal Power Connector for connector parking until later termination.

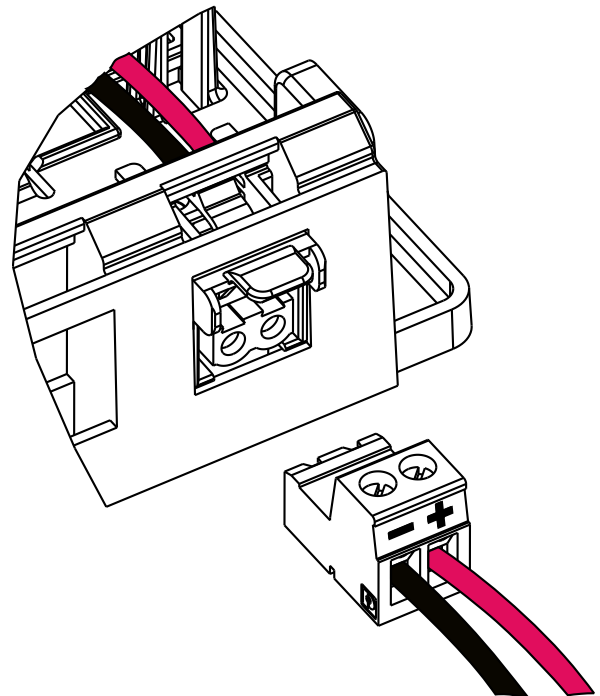


Figure 8

6.4 Install the Cover

1. If using raceway(s), proceed as follows:
 - a. Use a sharp instrument to scribe the appropriate break-out(s) of the cover, then remove the break-out(s). Refer to Figure 9.
 - b. Install an appropriate-sized raceway(s) (customer supplied) onto the break-out(s) according to manufacturer recommendations. Complete Internal Power connector termination

Installing Cover

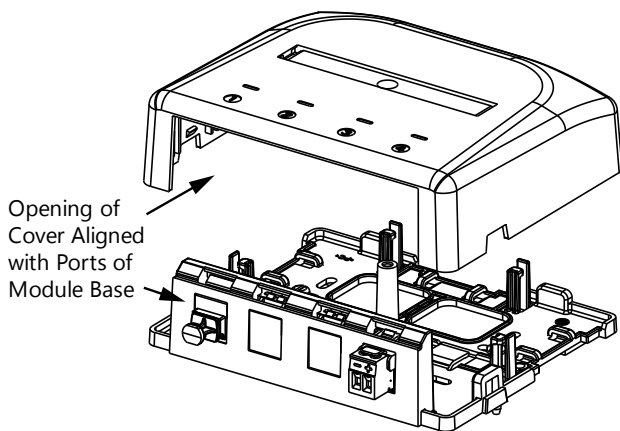
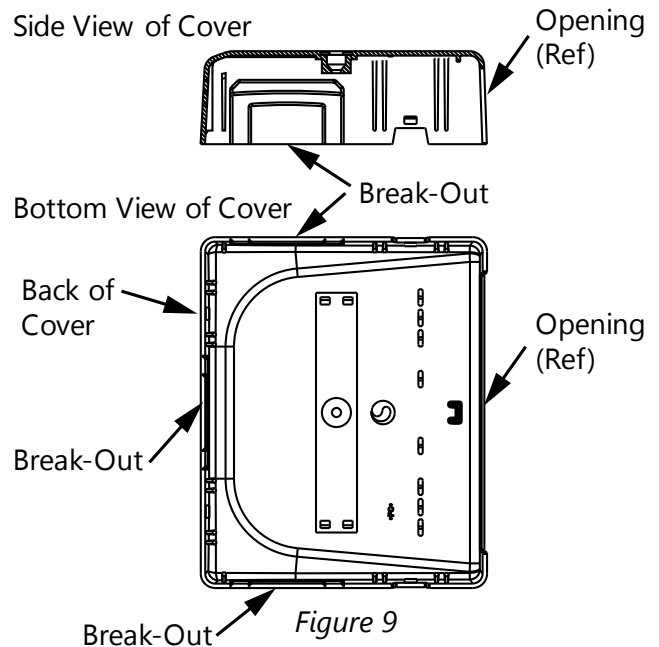


Figure 10

3. Thread the cover screw into the hole in the top of the cover; tighten the screw until it is snug and the head of the screw is below the surface of the label holder. See Figure 11.
4. If desired, write on the identification label, then lay the label into the label holder, and install the cover onto the label holder.
5. If desired, install icons into the icon holders for port or fiber type identification.

Cable Opening Break-out Locations



2. Align the opening of the cover with the ports of the module base, and push the cover onto the module base until all the locks engage and the bottom of the cover is against the mounting surface. See Figure 10

Cover Fastening and Labeling

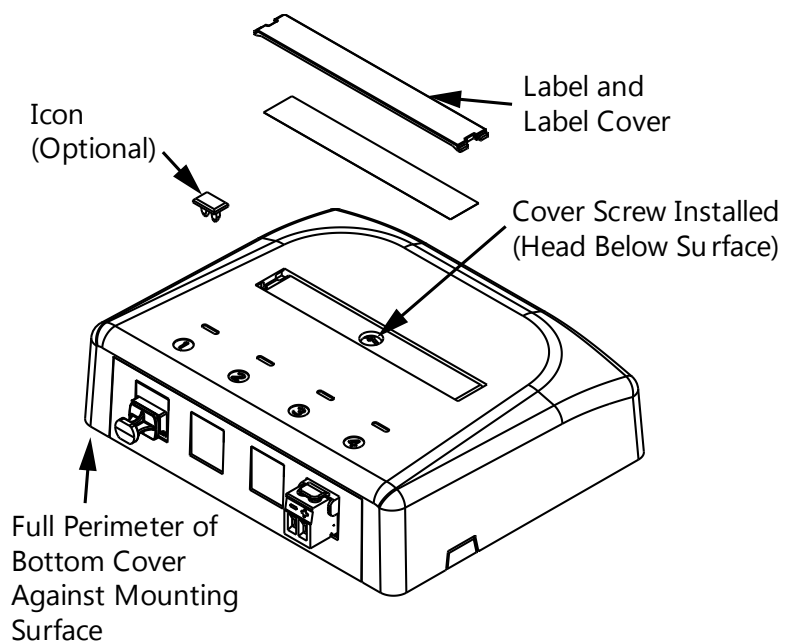


Figure 11

7. Removal

7.1 Removing Cover

1. Remove the label cover and label from the label holder of the cover.
2. Remove the cover screw from the top of the cover.
3. Insert the tip of a small flat instrument into either slot located on the sides of the cover, and twist the instrument until the cover disengages. Do the same with the other slot. Then, lift the cover off the module base.

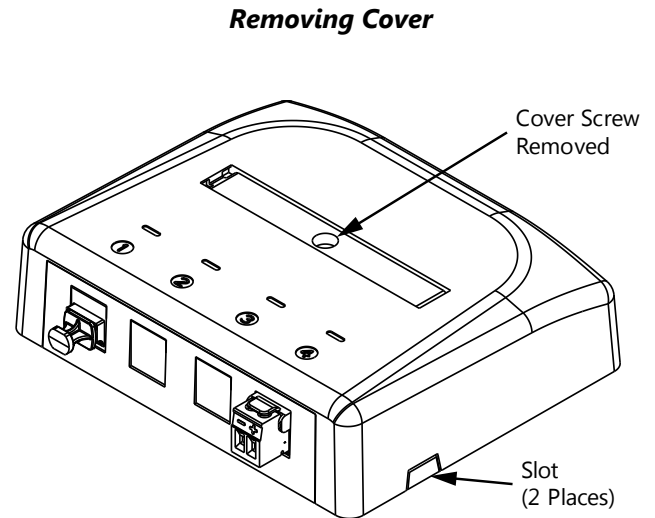


Figure 12

7.2 Removing LC Duplex Adapter

1. Place the tip of a small screwdriver under the movable latch of the LC Duplex Adapter, then pry the tip downward slightly until the latch partially disengages. See Figure 13.
2. Rotate the Adapter away from the port until the latch is fully disengaged; then remove the Adapter from the port.

Removing Fiber Adapter

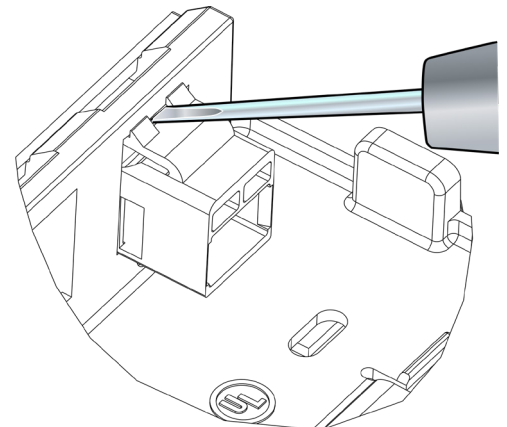


Figure 13

7.3 Removing Power Connector Holder

 WARNING
Disconnect power before removal

1. Place the tip of a small flat screwdriver through the port front to actuate the Holder bottom latch. Slightly tip out the bottom of the Holder out the back of the port.
2. Place the tip of the small flat screwdriver on the top latch lever and press down to disengage; then remove the Holder from the port. See Figure 14

Removing Power Connector Holder

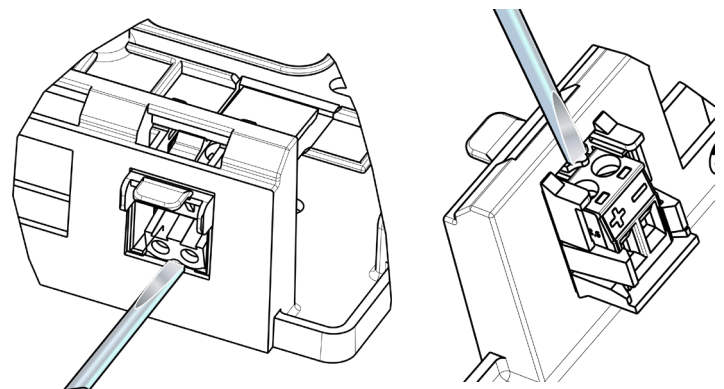


Figure 14

8. Revision history

- Initial Release