

SYSTIMAX® PATCHMAX® GS3 and PowerSUM Modular Panel Instructions

General

The **SYSTIMAX® PATCHMAX®** GS3 and **PowerSUM** modular panels are available in a 24-port (2U) and 48-port (3U) version. These panels are approved components for use in **SYSTIMAX PowerSUM** and **GigaSPEED XL®** systems.

SYSTIMAX PATCHMAX panel systems are designed for premises high speed data and voice networks. Wire terminations can be performed from the front or rear of the frame. These panels can be used for EIA-T568A or EIA-T568B wiring applications.

The panels use snap-in distribution modules, each with six modular jacks. Panel kits are available unpopulated for use with separately ordered modules.

Ordering information is listed below:

| Material ID | Part No. | Description |
|-------------|---------------------------------|--|
| 760062356 | PM-GS3-24 w/Termination Mgt. | PATCHMAX GS3 Cat 6 U/UTP copper patch panel, 24-port, equipped with termination manager |
| 760062364 | PM-GS3-48 w/Termination Mgt. | PATCHMAX GS3 Cat 6 U/UTP copper patch panel, 48-port, equipped with termination manager |
| 760001669 | PM-GS3-2U | PATCHMAX GS3 24-port panel kit (without modules) |
| 760001677 | PM-GS3-3U | PATCHMAX GS3 48-port panel kit (without modules) |
| 760205260 | PM-PS-24 | PATCHMAX PowerSUM copper patch panel, 24-port (2U), equipped with termination manager |
| 760205278 | PM-PS-48 | PATCHMAX PowerSUM copper patch panel, 48-port (3U), equipped with termination manager |
| 760205286 | PM-PS-2U Panel Kit | PATCHMAX PowerSUM 2U panel kit (without modules) |
| 760205294 | PM-PS-3U Panel Kit | PATCHMAX PowerSUM 3U panel kit (without modules) |

How to Contact Us

- To find out more about **CommScope®** products, visit us on the web at www.commscope.com/
- For technical assistance:
 - Within the United States, contact your local account representative or technical support at 1-800-344-0223. Outside the United States, contact your local account representative or **PartnerPRO™** Network Partner.
 - Within the United States, report any missing/damaged parts or any other issues to **CommScope** Customer Claims at 1-866-539-2795 or email to claims@commscope.com. Outside the United States, contact your local account representative or **PartnerPRO** Network Partner.



Tools Required

- Phillips head screwdriver
- Cable jacket scoring tool
- D-914 punch tool with M110 blade

Parts List

Verify parts against the parts list below:

| Quantity | | | | Description |
|---------------|---------------|--------------|--------------|---|
| 24-Port Panel | 48-Port Panel | 2U Panel Kit | 3U Panel Kit | |
| 1 | 1 | – | – | Panel |
| – | – | 1 | 1 | Panel frame |
| 4 | 8 | – | – | Rear label, T568A wiring |
| 1 | 2 | 1 | 2 | Cable management bar |
| 28 | 56 | – | – | Termination managers |
| 1 | 2 | 1 | 2 | Label sheet, White (4 labels per sheet) |
| 1 | 2 | 1 | 2 | Label sheet, Blue (4 labels per sheet) |
| 4 | 8 | 4 | 8 | Hook-and-loop straps |
| 4 | 4 | 4 | 4 | Mounting screws |
| 1 | 1 | 1 | 1 | Instruction sheet |

Specifications

Wire Termination

Wire Size:

22-24 AWG (0.64 -0.51mm) Solid Copper

22-24 AWG (0.64 - 0.51mm) Seven Stranded Copper

Insulation Size:

0.042-inch maximum DOD

Insulation Types:

Polyethylene, Polypropylene, and FEP

IDC Reterminations:

20 minimum

Modular Jack Mating Cycles:

750 minimum

Environmental Data

Temperature Range:

-40°F (-40°C) to 158°F (70°C) (Storage)

14°F (-10°C) to 140°F (60°C) (Operational)

Humidity:

95% Noncondensing

Separately Orderable Parts

Modules for the PM-GS3 and PM-PS panel kits must be ordered separately and are listed below:

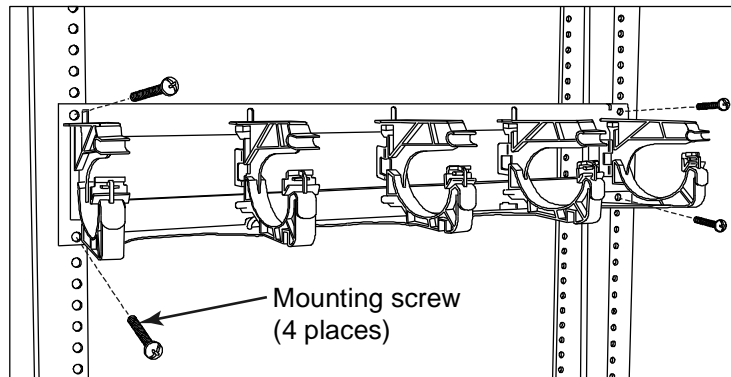
| Material ID | Product Number | Description |
|-------------|----------------|--|
| 760065763 | PM-GS3-DM | PATCHMAX GS3 Category 6 U/UTP distribution module |
| 760205302 | PM-PS-DM | PATCHMAX PowerSUM Category 5e U/UTP distribution module |
| 760051201 | 1100GS5-TM | Termination manager kit |

WARNING – Important Safety Instructions

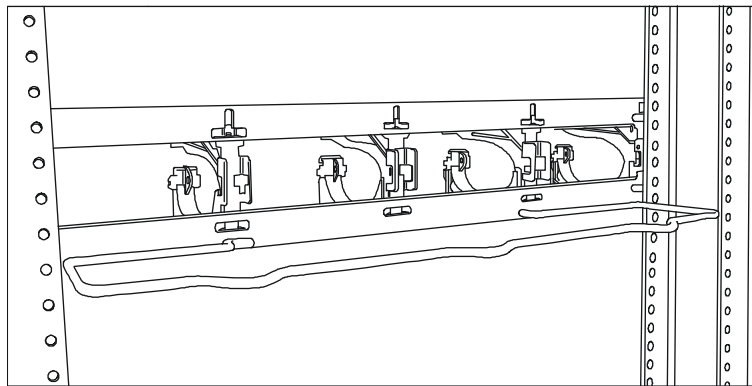
When using this product, the following basic safety precautions should be followed to reduce the risk of fire, electric shock, and injury to persons:

1. Never install communications wiring in wet locations unless it is designed for wet locations.
2. Never install this product during a lightning storm. There is a remote risk of electric shock.
3. Never touch uninsulated communication wiring or terminals unless the communication circuit has been disconnected at the network interface.
4. **Caution:** All wiring that connects to this equipment must meet applicable local and national building codes and network wiring standards for communication cable.

Step 1 – Mount Panel to Rack



1. Using four screws (included), attach panel to 19-inch rack.



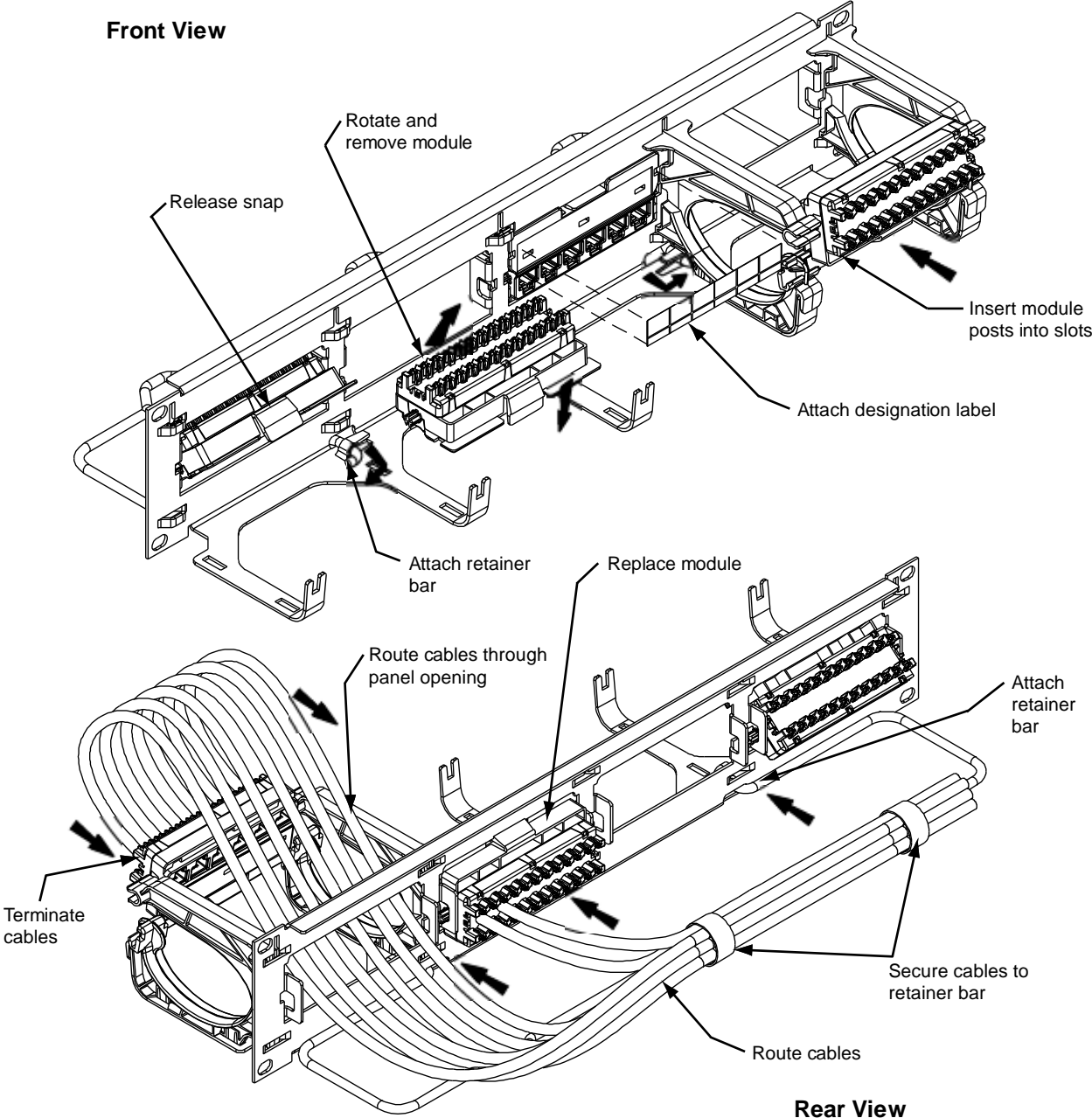
2. Install retainer bar to rear of panel.

Step 2 – Populate Panel with Distribution Modules (For Panel Kits Only)

Note: Distribution modules are ordered separately.

1. From the front side of the panel, insert the module into the desired panel opening.
2. Rotate the top of the module down so that the trunions fully engage with the panel cutouts.
3. Press on the top of the module so that it rotates up and locks in place.

Step 3 – Cable Modules



- Call outs above correspond to items listed on next page.

Front Punch-Down Procedure

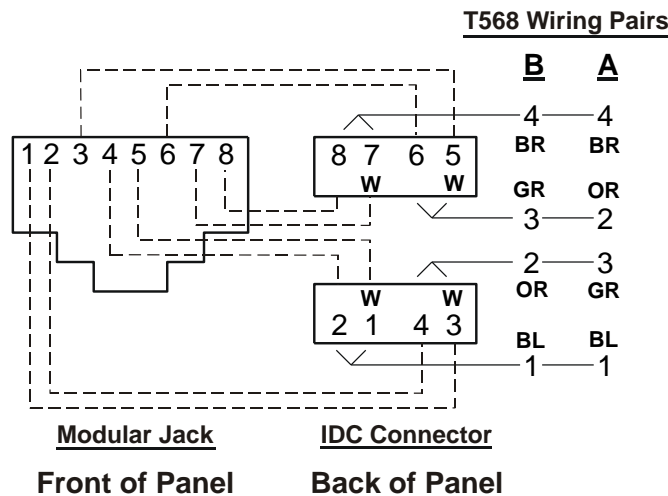
1. Release snap to disengage module from panel.
2. Rotate module downward and remove from panel.
3. Route an adequate length of cable through the module openings as shown.
4. Insert module posts into panel mounting slots and snap module into position.

Note: The module comes with a T568B wiring designation label installed. If T568A wiring is desired, first remove the "B" type label and then place the "A" type label. **Do not place the "A" type label on top of the "B" type label.**

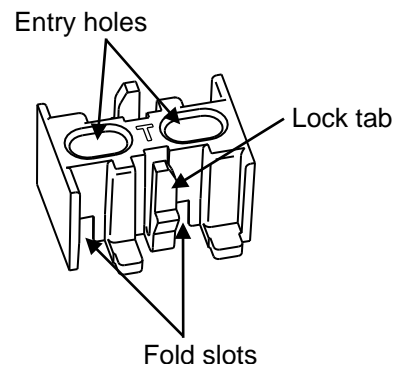
5. Prepare cable for IDC termination. Terminate conductors on the IDC terminals per the wiring diagram shown below and utilizing the termination manager. Use only single wire punch down tools. Correct procedure for using the termination manager is provided in the next section of this instruction.
6. Unsnap module, rotate and replace into original panel opening.
7. Attach rear retainer bar, ensuring that hooks fully engage into proper mounting features on the panel.
8. Route cables as shown.
9. Secure cables to retainer bar with supplied hook-and-loop strips ensuring there is adequate slack for front removal of module.
10. Attach designation labels provided on front of panel.

Rear Punch-Down Procedure

1. Do not remove module from panel opening.
2. Disregard steps 1 thru 4 of Front Punch-Down Procedure, and follow procedure for using termination manager (next section) to complete the termination.



Wiring Diagram



Termination Manager

Termination Manager Instructions

The termination managers provide pair positioning, control, and strain relief features to the rear termination area of the panel. See Figure 1. Instructions for using the termination manager are listed below.

Feed Pairs into Termination Manager (Figure 2)

1. Trim jacket back at least 3 inches (76mm) to expose twisted pairs.
2. Without rearrangement out of the jacket, position pairs in-line per pair colors below:

T568B Wiring Application (Shown)

Blue, Brown, Orange, Green

T568A Wiring Application

Blue, Brown, Green, Orange

3. Insert held pairs through holes on top surface of termination manager, two pairs per hole as shown. (The TOP surface is identified with a "T", which can be oriented **either** right side up or upside down).
4. Continue to feed pairs through termination manager until resistance is encountered at the jacket. This will usually be about 1/4 inch (6mm) from the jacket.

Fold Pairs Back into Slots (Figure 3)

5. Fold each pair over into adjoining slots on bottom end of termination manager. To ease item 8, it is recommended that conductor colors be viewed in the slots as listed below:

T568B Wiring Application (Shown)

BL/OR Pairs – Blue/Orange conductors on top

BR/GR Pairs – both white conductors on top

T568A Wiring Application

BL/GR Pairs – Blue/Green conductors on top

BR/OR Pairs – both white conductors on top

6. Ensure that pairs are in slots completely without being pinched over bottom end surface. **It may be necessary to add twist to align pairs with slots.**

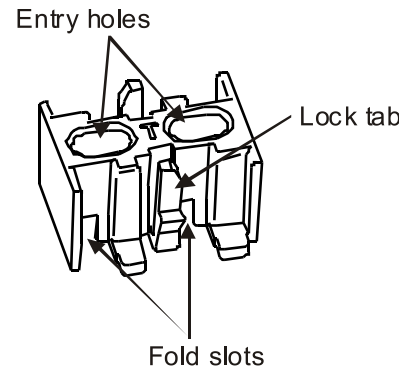


Figure 1. Termination Manager

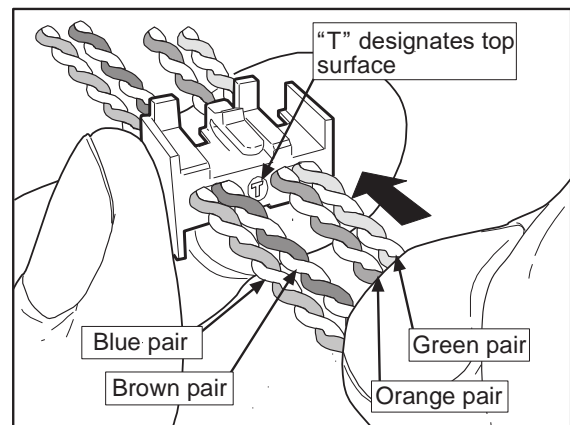


Figure 2. Feed Pairs into Termination Manager

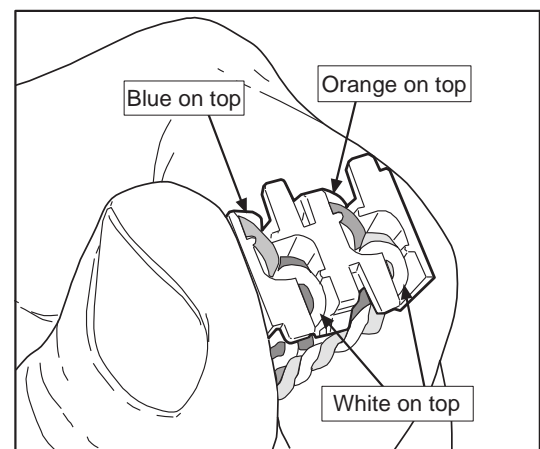


Figure 3. Fold Pairs Back into Slots

Snap Termination Manager onto Rear Housing (Figure 4)

7. Snap assembled termination manager onto rear housing with pair colors in proper position. Push on using the termination manager, not by pushing with the cable. (Ensure that both snaps on manager fully seat into rear housing.)
8. After termination manager is snapped onto rear housing, untwist individual pairs fully and line up correct color conductor with the label on the rear housing. (The white conductor is always on the right.)

Seat Wires into IDC Terminal Slots (Figure 5)

9. Grasping each untwisted pair, push the conductors down into IDC terminal slots to seat them before punching down. Seat down into slots as far as possible. (It may be easier to use needle nose pliers to perform this task.)
10. Using the D-914 punch tool with M110 blade, punch down conductors making sure the tool is straight and that conductors fully engage in the IDC terminals. Stagger the punch-down tool up and down, so that it stays in alignment with the staggered terminal slots.

Recommendations to Aid Assembly

1. Remove up to 5 inches (127mm) of cable jacket to aid in seating conductors into IDC slots.
2. The termination manager should be snapped onto the rear housing immediately after the pairs have been fed and folded over into the slots. All termination managers should be installed on the panel before proceeding to seat and punch down conductors.
3. Flex cables down for easier access, then seat and punch down the entire top row of the panel.
4. Flex cables up for easier access, then seat and punch down the entire bottom row.

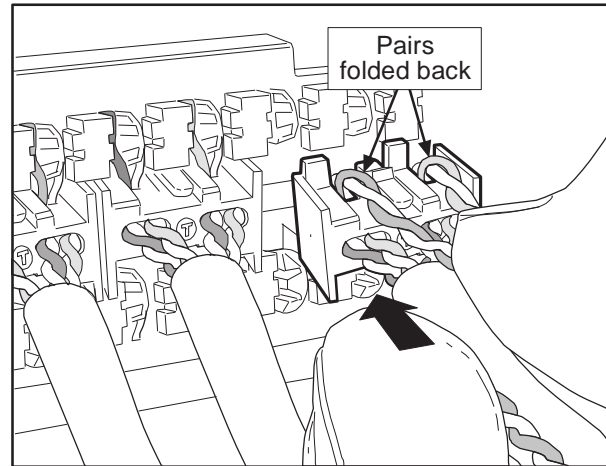


Figure 4. Snap Termination Manager onto Rear Housing

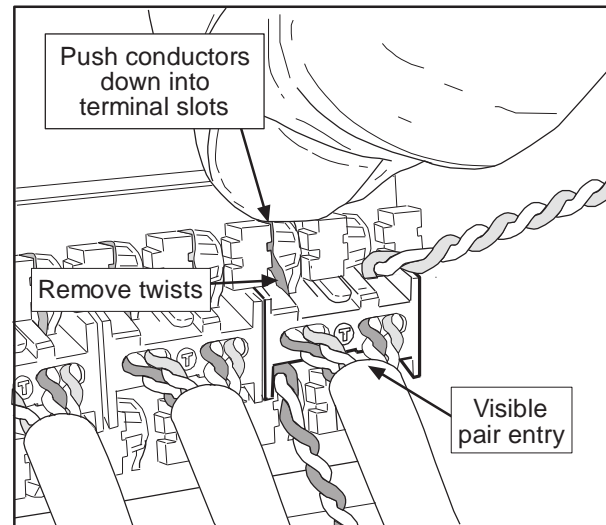


Figure 5. Seat Untwisted Pairs into IDC Terminal Slots