M32CPP/100 HCP Consolidation Point Box Installation Instructions

General

The M32CPP/100 HCP consolidation point box (700188923) is a zone-wiring box that provides distribution of data and telecommunications signals throughout the work area environment. The M32CPP/100 HCP consolidation point (plenum box) has 32 positions for M-series (copper and/or fiber) connectors and a 110 punch down block. It is intended to mount above ceilings or below floors in open office buildings to save rewiring cost when the modular offices are rearranged. The horizontal cable from the telecommunication room comes to the M32CPP/100 HCP data/communication consolidation point and is connected inside. This is a *consolidation point* as defined by TIA/EIA TSB75. The work area outlets of the modular offices are then plugged into the connectors inside the M32CPP/100 HCP. When these offices are rearranged, this much of the horizontal cable run does not need to be rewired. The box measures 13.08 inches (332 mm) wide by 14.00 inches (355 mm) deep by 4.25 inches (108 mm) tall. The consolidation point boxes should be installed at approximately 25-foot (7.58 m) centers (15 to 35 foot [4.55 m to 10.61 m]) in the zone office areas. The internal mounting ports support up to 32 information outlets, duplex SC fiber adapters, or duplex LC fiber adapters, and should serve as many as twelve work areas.

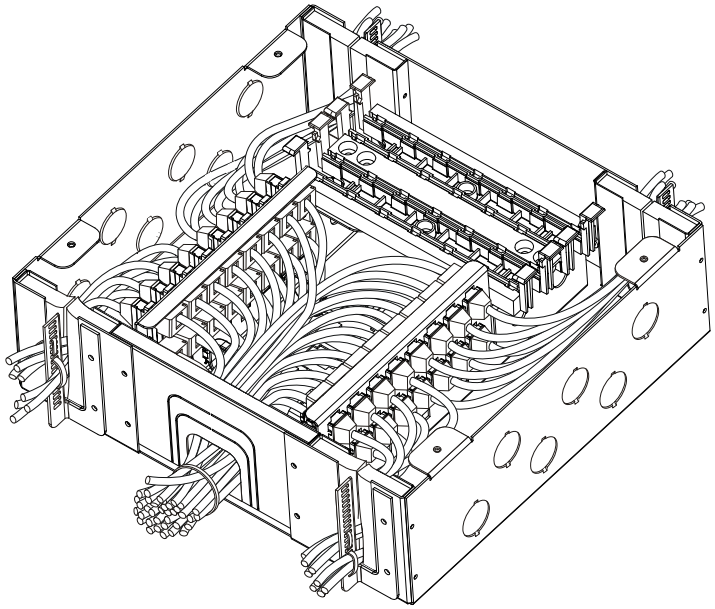

Figure 1 — M32CPP Consolidation Point Box With Modules and Cables

How to Contact Us

- To find out more about **CommScope**® solutions, visit us on the web at http://www.commscope.com/
- For customer support regarding **CommScope** products, contact your local account representative or call 1-800-544-1948 or (828) 459-5000.

Parts List

Verify parts from the parts list below:

Quantity	Description
1	M32CPP/100 HCP consolidation point box assembly
32	Retention clips
1	Plenum cover
1	Continuous grommet (optional to use)
10	Cable rings
1	Instruction sheet
1	Interconnection label
1	Laser hazard label (for fiber optic applications)
4	No. 8-32 by 15/32-inch (12 mm) pan-head screws
10	Plenum cable ties: Panduit PLT 3S-C702

Safety Considerations

There are limitations for where this plenum consolidation point box may be installed. The National Electrical Code (NFPA 70) does not allow locating consolidation point boxes in air handling ducts. It does allow locating them in other space used for environmental air, defined as the space above a removable suspended ceiling or below a removable raised floor. When this consolidation point box is located in a plenum, fire foam must be properly applied to block openings including the openings around cables coming in to and out of the consolidation point box.

Important Safety Instructions

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

Caution:

All cabling that connects to this equipment must meet applicable local and national building codes and network cabling standards for communications cable.

Important:

A laser hazard safety label has been included pursuant to ANSI Z136.2 and IEC 825 Part 2, based upon actual operating conditions, the installer must affix this laser hazard safety label to a visible surface on the front of the box.

- Read and understand all instructions and warnings prior to installation. Install this unit according to the enclosed instructions only using recommended mounting hardware.
- Never install this product during a lightening storm. There is a remote risk of electrical shock from lightening.
- Install only approved devices in this unit.
- Never install cable, connectors, or jacks in a wet location unless they are specifically designed for that purpose.

- Never touch uninsulated, live communication wires or terminals. They should be disconnected first.
- This unit cannot support the weight of long cables. Additional cable support is required.
- Do not look directly into the end of a fiber optic cable or connector without it being disconnected from a light source. Serious eye damage can occur.
- Exercise caution in terminating fiber optic cable. Fibers are sharp and can penetrate skin or eyes. Wear proper eye and skin protection and safely dispose of any fiber pieces in a hard-sided, sealed container.
- After assembly, make sure the plenum box cover is securely fastened to the plenum box with the four No. 8-32 screws provided.

Save These Instructions

Equipment Specifications

The operating characteristics of this device is listed in Table A.

Table A – General Operating Specifications

Parameter	Value
Temperature	32°F to 122°F (0°C to 50°C) (Operating)
Pressure	Sea level to 6500 ft (2000 m)
Relative Humidity	5% to 95%, non-condensing

Cabling Options

This consolidation point box (see Figure 1) has one fire foam entrance and four fire foam exit areas for plenum cable. It also has twelve 3/4-inch (19 mm) knockouts for conduit, six on each long side. A 3/4-inch (19 mm) conduit will accommodate up to four 4-pair copper size or one 25-pair copper cable. This consolidation point box also has one 3.35-inch (85 mm) by 2.56-inch (65 mm) rectangular bottom knockout. The rectangular knockout hole can also be positioned over a standard **dual** wall box to bring the cables in from a wall.

NOTE: The four rectangular knockouts in the center of the box are also tools that can be used to remove outlets once they have been installed.

Modular Connector and Cabling Options

Because of ***UL*** testing requirements, only approved **CommScope** connectors and cabling are permitted within the M32CPP/100 HCP consolidation point box.

Important:

Be sure to use plenum-rated cables and extension cords in spaces used for environmental air. The LC duplex adapter must have collar option (107782641).

Important:

110 Wiring Block Kit: A 110 wiring block kit can be ordered separately (760006395). This kit includes a 110DW2-100 wiring block and plastic rivets. These blocks are used in conjunction with the 110C connecting blocks, which are ordered separately.

Mounting

The M32CPP/100 HCP consolidation point box can be mounted on a permanent post, wall, under the floor, above in the ceiling, or over an electrical wiring box. The box is designed for indoor use only. Determine where the box is to be mounted and use the following instructions to properly mount the box.

Post, Wall, Floor, or Ceiling Mounting

Loosen the four screws holding the box cover down enough so that the cover can be slid aside and removed. Leave the four cover screws in place for closing the cover after making all appropriate internal connections.

Mount the consolidation point box to a post, wall, floor, or ceiling. Mount it facing out from a wall or post, or in a floor or ceiling installation. For wall or floor mounting, use four No. 8 screws (not supplied) through holes A, B, C, and D (see Figure 2). For wall mounting, use a level to properly level the box before marking locations for the mounting holes.

For ceiling mounting, mount the box facing up supported by a trapeze mounting arrangement. Use holes A and B to fasten to a cross bracket and holes C and D to fasten to a second cross bracket. These cross brackets are then held to the ceiling by four 3/8-inch threaded rods. Allow at least 18 inches (457 mm) of headroom above the consolidation point box for working in this up facing ceiling arrangement.

Dual-Gang Electrical Box

The following steps are used to mount a consolidation point box over an electrical box.

Important:

Adequate clearances should be allowed for cable, wire, and/or fiber entrance and exit at base. Recommended clearance for cables and wires to enter and exit base is 12 inches (305 mm). **Do not exceed minimum bend radius for cable used.**

1. Using a hammer, knock out edge of middle section of center cutout only and remove as shown. Save the four metal tools removed from the center cutout to remove components after they are installed (labeled 1 through 4 in Figure 2).
2. Install the continuous grommet over the stamped edge to prevent damaging cables pulled through this opening.
3. Position the base over the electrical box and using two No. 6-32 by 1-1/4 inch (32 mm) screws (not supplied), temporarily secure base to box.
4. Base requires additional support besides being mounting to an electrical box. While holding base against flat surface, use a pencil or pen to mark four additional mounting points. The four corner mounting holes are recommended (oval shaped openings). Figure 2 shows the four screw holes used to mount the box onto the electrical box (E, F, G, and H).
5. No. 8 screws are recommended to secure the base. The type and length of screws used will be determined by the surface the base is being mounted to. Additional mounting hardware should be obtained locally.

6. If the surface the base is being mounted to requires plastic anchors, then the base will need to be removed before drilling mounting holes. If no anchors are required, then holes can be drilled with the base still secured to electrical box. Use an electric drill with an appropriate size bit to drill holes at the four marked locations.
7. Clean out any debris left in base from the drilling operation.
8. Secure the base to the electrical box by tightening the four screws.

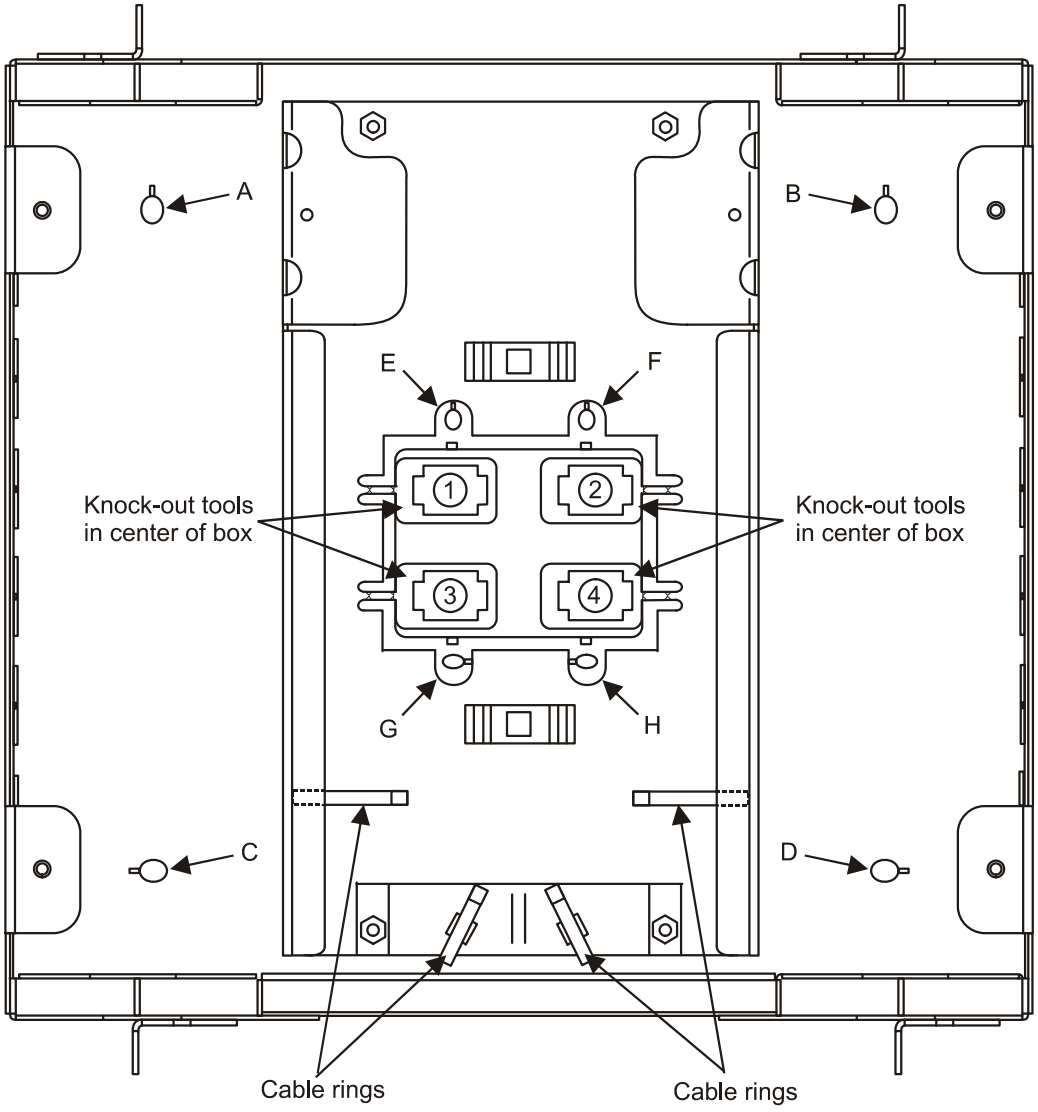

Figure 2 — Mounting Hole Locations

Fire Foam Gaskets

All fire foam gaskets ***must*** close off their openings when no cable is passing through them and ***must*** be positioned to seal around all the cables that go through them. Strain relief for these cables is provided by plenum cable ties (shipped loose) around all the cables coming through each fire foam area to tie them securely to the metal tabs extending outward through the middle of the fire foam. ***Do not cinch so tightly that the cables are crunched which would deform the inner twist and increase cross talk between pairs.***

Important:

If the number of cables inside the box is being reduced, a new end panel needs to be installed so that the fire foam fits snugly around the cables. This may be purchased separately as end panel replacement kit (700 188 956).

Interconnection Label

The provided interconnection label (see Figure 3) should be filled out per TIA/EIA 606 labeling requirements and attached to the outside of the top cover. (Optionally: The label can go inside the cover.)

Box No. _____ CommScope

Outlet Information

1	25
2	26
3	27
4	28
5	29
6	30
7	31
8	32
9	33
10	34
11	35
12	36
13	37
14	38
15	39
16	40
17	41
18	42
19	43
20	44
21	45
22	46
23	47
24	48

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Consolidation Point Box

AM02OH1214
Issue 4

Figure 3 — Interconnection Label

Use Simple Tool to Remove Components

The simple tool removed from the center of the consolidation box are used to remove components (for example, 8 conductor information outlets, dual **LC** and dual SC connectors). Use the following steps to remove an installed connector from the consolidation box.

1. Place the simple tool over the jack and press flat to the panel.
2. Place your thumb over the jack and apply pressure. Wiggling the jack and/or pushing the jack forward help to remove the jack.

Important:

The tool is not necessary with F connectors and single SC connectors since they have release levers on the rear.

Cable Installation

The following steps are for copper 4-pair twisted (UTP) cable or fiber optic cable installation (see Figure 4).

After mounting the consolidation point box (consolidation point) to the desired mounting point using appropriate No. 8 screws:

Note: Install all fiber cables before copper cables.

1. If fiber is installed, 3.28 feet (1 m) of excess fiber should be available in the box for future use.
2. The 3.28 feet (1 m) of fiber should be looped around a minimum of four cable rings (10 included) installed at different locations around the box. The plastic cable rings are pushed into appropriate square punched holes located at various positions around the aluminum panel. See Figure 2 for an example.
3. Punch down the eight conductors of the cable onto the information outlet by following the outlet installation instructions. Clip a retention clip (32 included) near the jack opening such that the triangular cuts and the rectangular cuts in the plastic clip align with the proper features on the module. This clip helps prevent the modules from rotating in their openings. Figure 5 shows the location of a retention clip on a module.
4. Snap the selected interconnect modules into the 32 ports in the box arranged as needed. The jack opening should be towards the outside of the box.
5. Route the horizontal supply cables coming from the telecommunication room into the center area of the box and connect them to the appropriate modules using the instructions provided with them. For copper, be careful to keep the outer jacket as far up the cables as possible. Observe the 3/4-inch (19 mm) maximum unwrapping for the twisted pairs and the 4 times the cable diameter for copper and 10 times for fiber minimum bend radii. For fiber optic cable, be careful to maintain the 3/4-inch (19 mm) minimum bend radius for the buffered fibers.
6. Plug modularized plenum extension cables into the modules or fiber adapters and route the cables out of the box observing the above minimum radius rules.
7. For installing cables on the 110 block, see instruction sheet 847 265 295 as a reference.
8. Check that there are no slivers of loose wire or fiber left in the box and that all cabling is neatly arranged, meeting all the minimum radii requirements.
9. Cinch the cable ties provided around the cables coming out of the box against the metal strain reliefs on the exterior of the box. ***Do not crunch tight enough to distort the inner conductors***.

10. Depending on the amount of cables entering the end panel, cut the metal tie bars at an appropriate level and trim off the excess foam. Reposition the fire foam gaskets to close off the openings around the cables providing a tight seal.
11. Replace the top cover by aligning the cover over the keyholes and sliding it back over the screws and tightening the four No. 8-32 by 15/32-inch (12 mm) long screws in place.

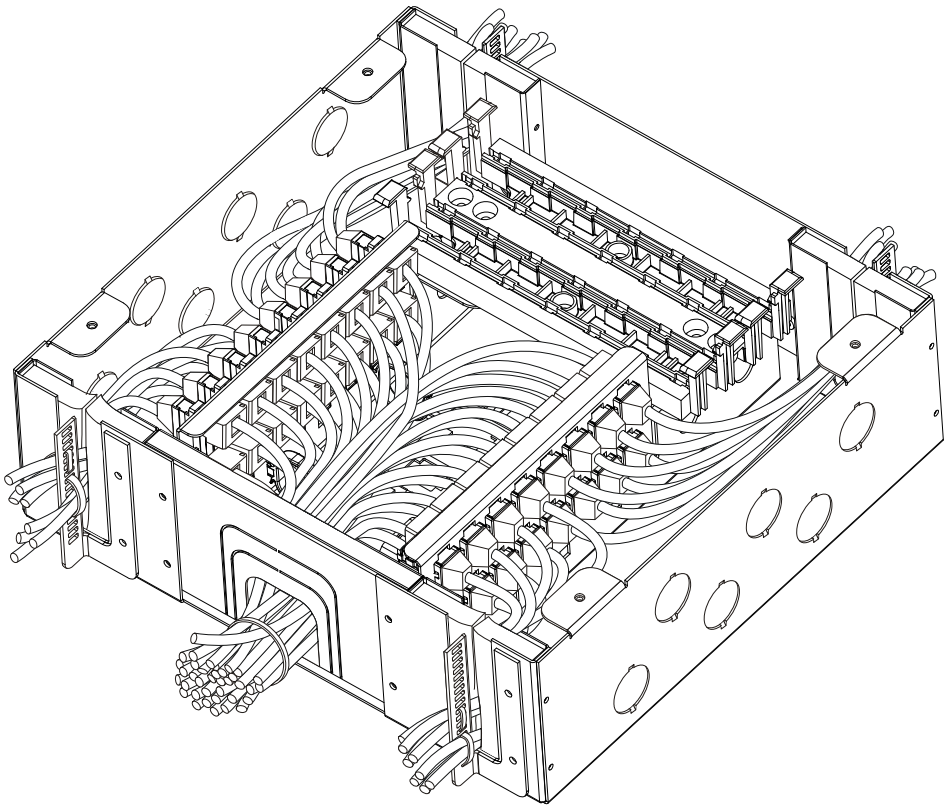


Figure 4 — M32CPP Consolidation Point Box With Modules and Cables

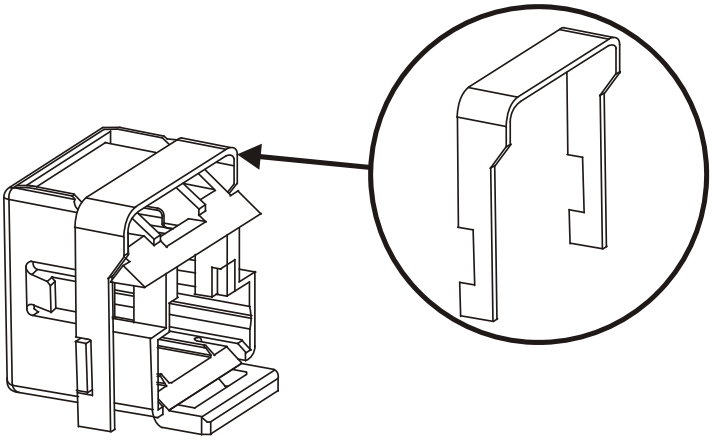


Figure 5 — Retention Clip Shown on Module

110 Block Installation

The M32CPP/100 HCP panel, shown in Figure 6, is installed in the M32CPP/100 HCP consolidation point box. Here, the 110 wiring block is installed at the top of the panel using two plastic rivets. Refer to Figure 7 for 110 wiring panel installation.

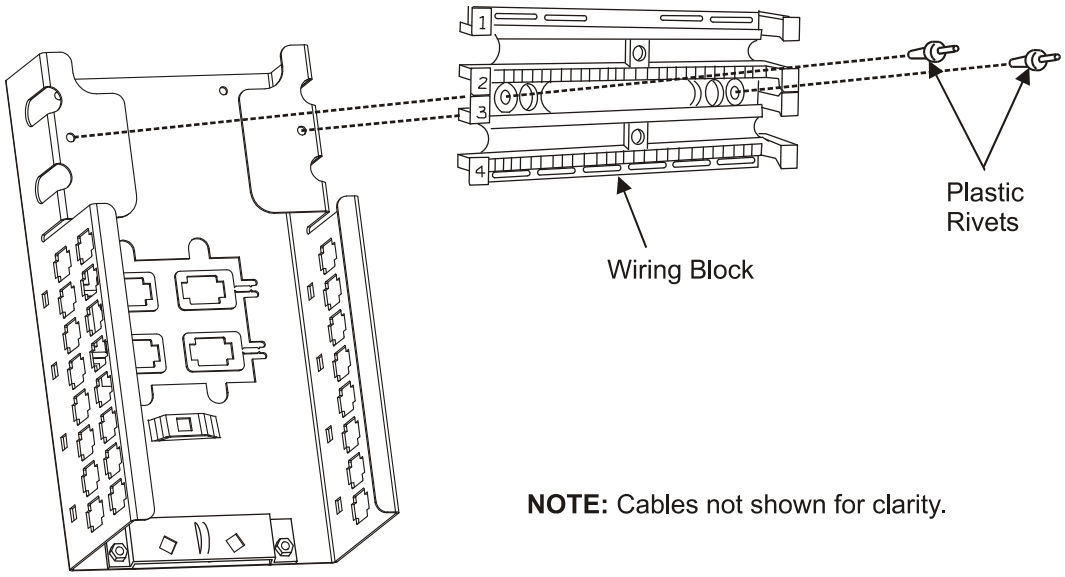


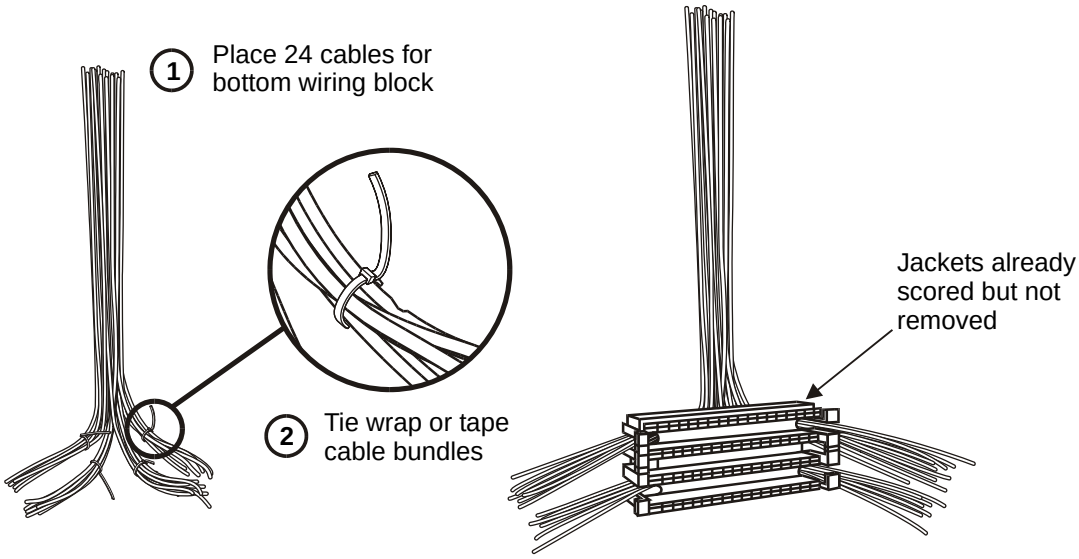
Figure 6 — 110 Wiring Block Installation

110 Cable Wiring

Figure 7 shows the steps used to route cable bundles to the 110 wiring block.

Important:

Tie wraps should be applied loosely to cable bundles to avoid deforming the sheath. Cable ties should be able to move freely across cable bundles when applied properly.



NOTE: M32CPP Consolidation Box not shown so cable routing can be seen.

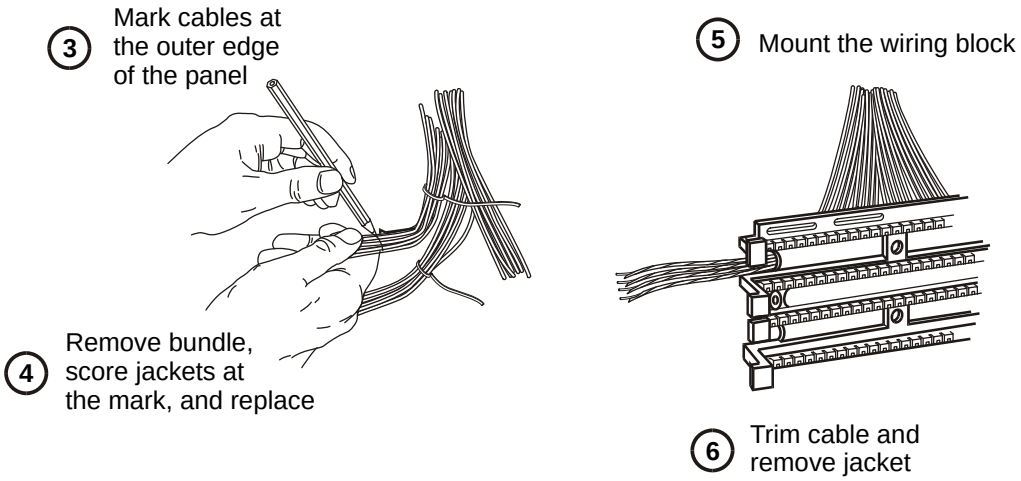


Figure 7 — 110 Patch Panel Installation and Cable Routing

Figure 8 shows the steps used to terminate cables on the 110 wiring block. For cable wiring clarity, M32CPP/100 HCP consolidation box is not shown in Figure 8. Figure 9 shows an M32CPP/ 100 HCP consolidation point box fully wired.

Important:

Cable routing should be split with six cables coming in from each side of the 110 block. Avoid pair wrapping and separation of pairs. Maintain tight pair twist up to point of termination.

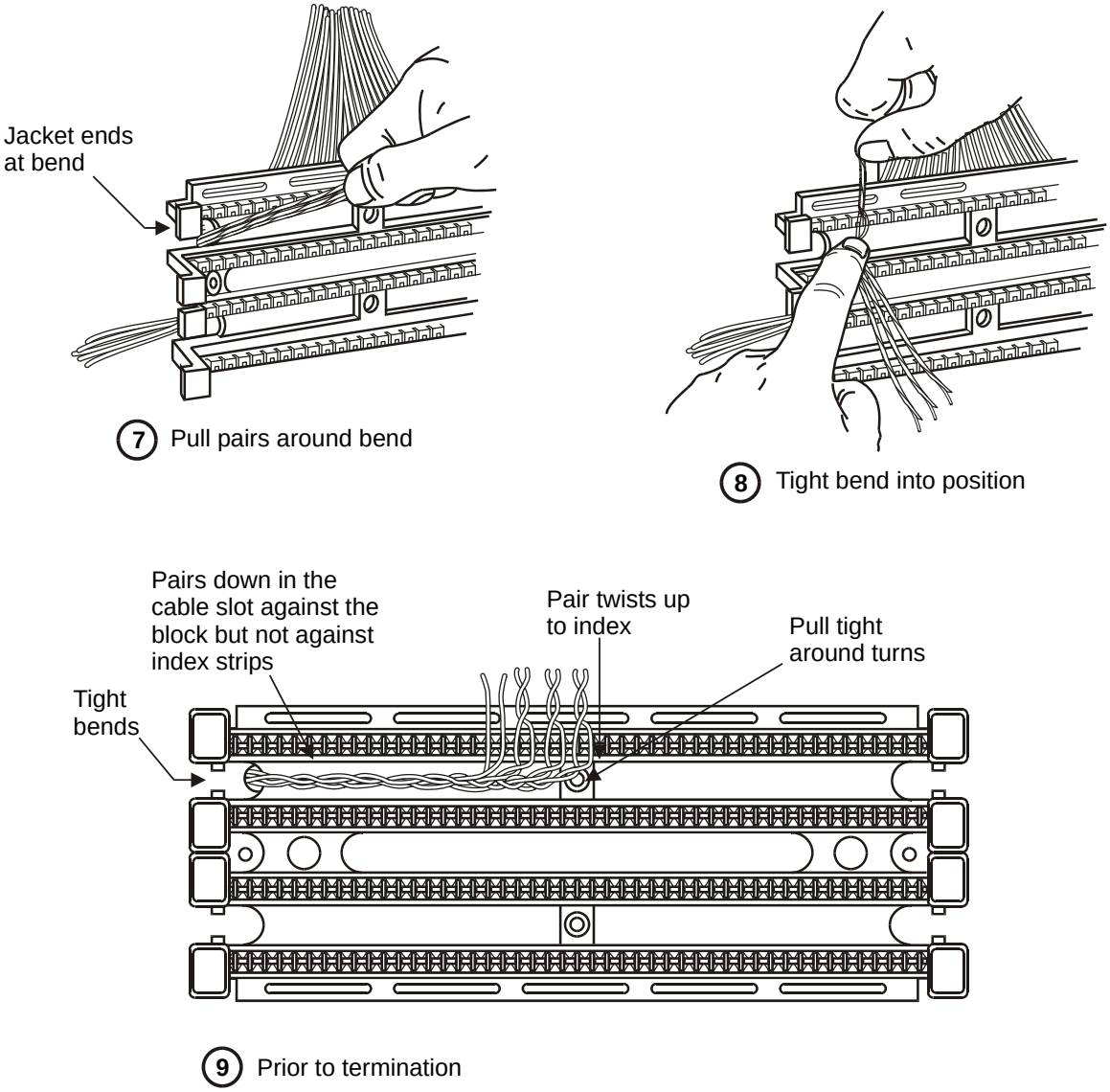


Figure 8 — 110 Wiring Block Termination