CORNING

Evolv™ Terminals
with Pushlok™ Technology
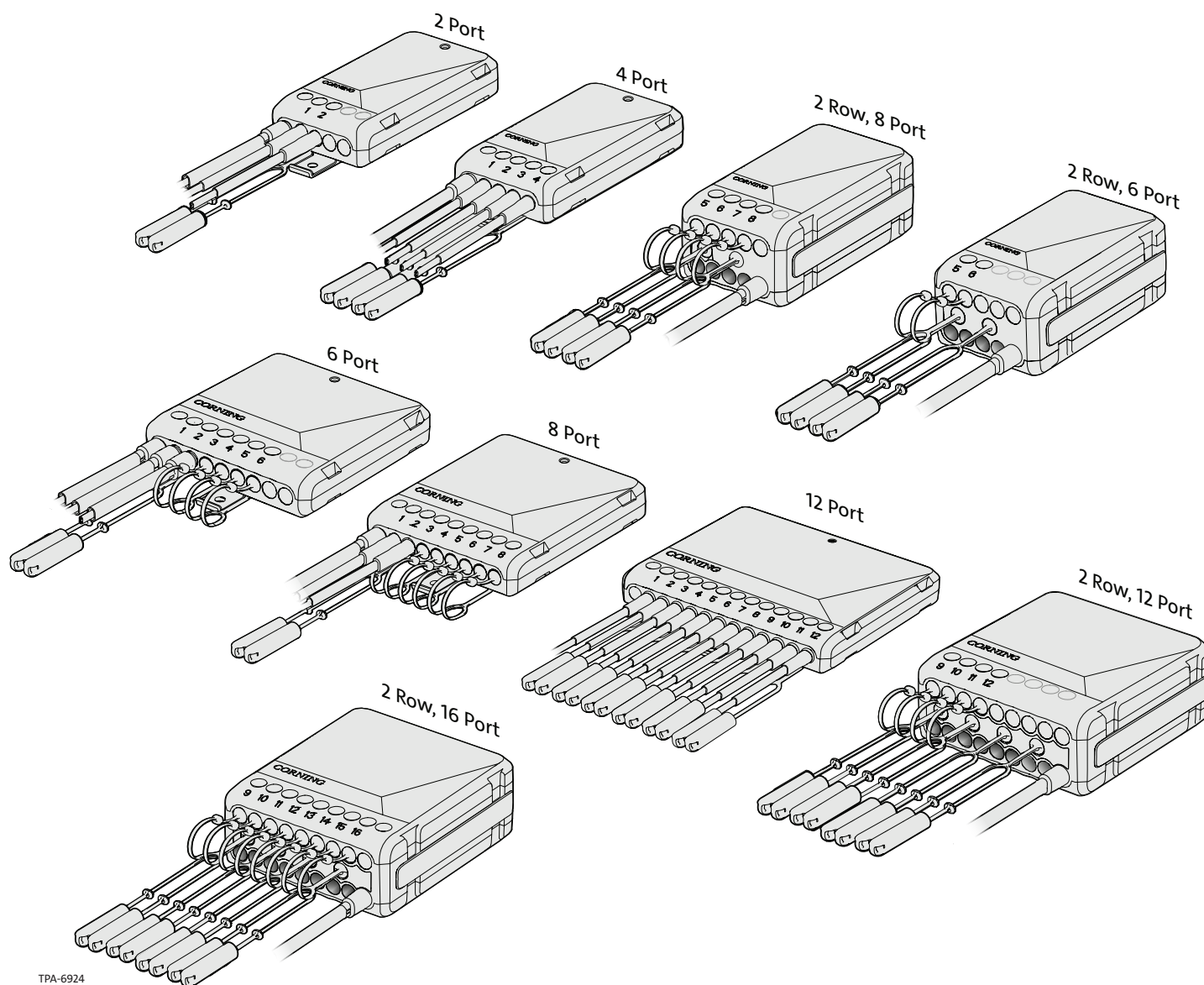
P/N 009-235-AEN, Issue 5

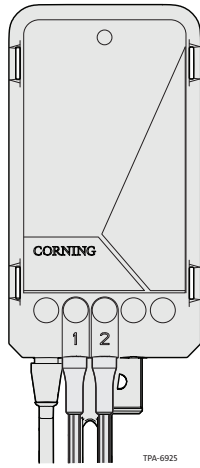| related literature | Search www.corning.com/opcomm. Click on "Resources/Standard Recommended Procedures."	
009-237-AEN	Evolv™ Port Cleaner (with Pushlok™ technology)
009-236-AEN	Evolv™ Drop Assemblies with Pushlok™ Technology

Evolv™ Terminal Configurations
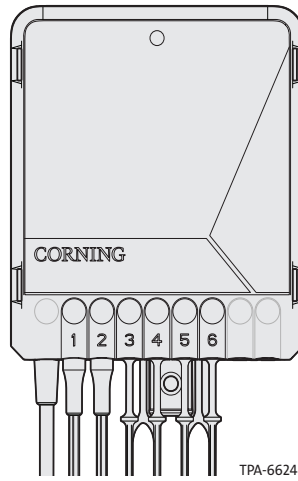

TPA-6924

1.   Carton Contents

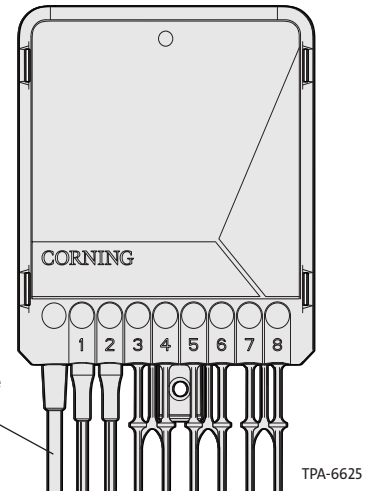- One 2-, 4-, 6-, 8-, 12-, or 16-port Terminal (Figure 1)

2-Port Terminal

6-Port Terminal

8-Port Terminal

Terminal cable stub

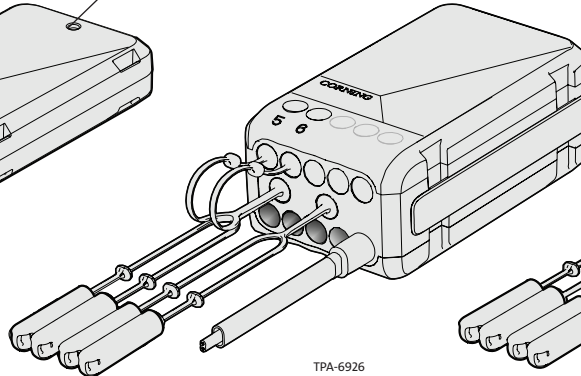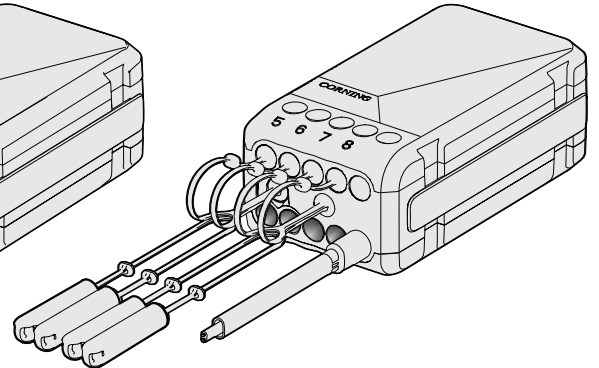TPA-6925

TPA-6624

TPA-6625
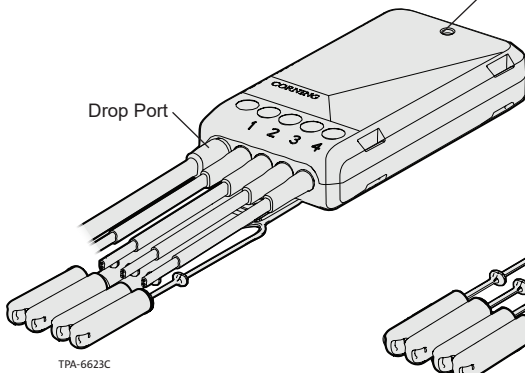
4-Port Terminal

Mounting hole for pole or wall applications

2 Row, 6-Port Terminal

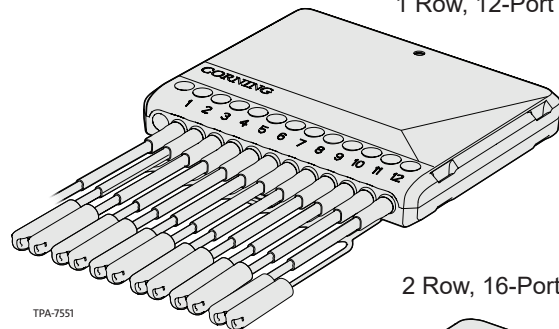2 Row, 8-Port Terminal

Drop Port

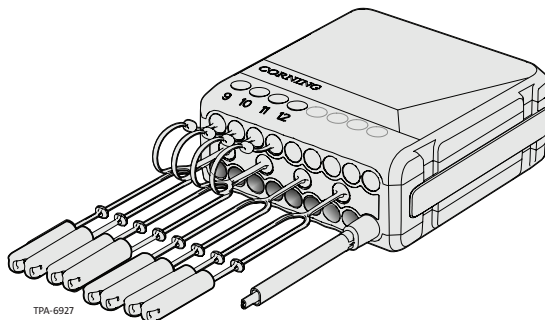TPA-6623C

TPA-6926

1 Row, 6-Port Terminal
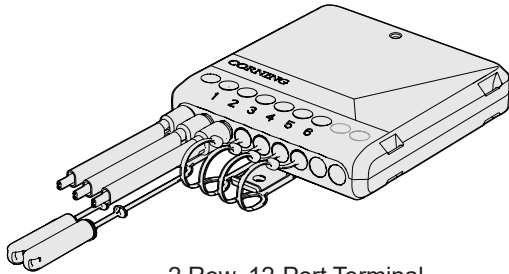
1 Row, 12-Port Terminal

TPA-6927

TPA-7551
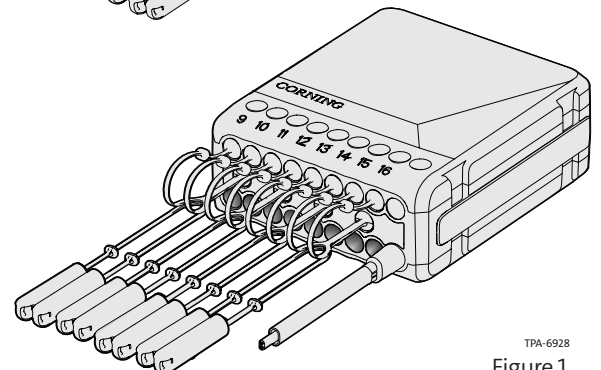
2 Row, 12-Port Terminal

2 Row, 16-Port Terminal

TPA-6928

Figure 1

2.   Materials and Tools Required

2.1   Materials
The following materials are required to install the terminal in all applications described in this instruction:

- Requires cable straps, bands, cable spacers, or lag bolts or screws for mounting terminals or brackets (not provided)
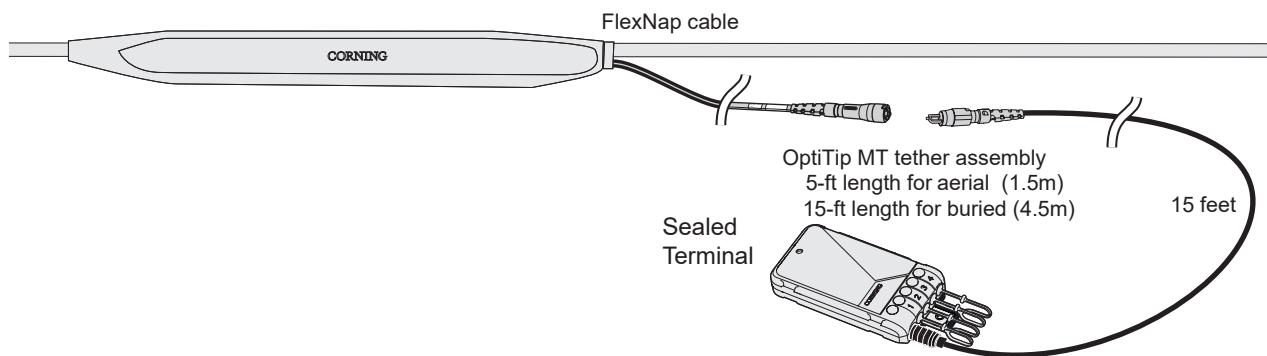- Preconnectorized drop cable

2.2   Tools
The following tools are required:

- Corning's connector cleaning kit (CLEANER-PUSHLOK) (purchased separately)
- Corning's OptiTip® cleaning kit (TKT-OTMT-CLN-001) (purchased separately), if installing the terminal onto a FlexNAP™ system cable tether
- Tools appropriate for the wall or wooden pole fasteners

3.   Planning
Figure 2 describes installation of the 2-, 4-, 6-, 8-, and 12- and 16-port sealed terminals. The terminal has a fiber optic cable factory-installed into one end of the terminal. The terminal can be ordered in several configurations:

- Unconnectorized for splicing to distribution cable,
- Connectorized with an OptiTip connector for mating with a FlexNAP cable or with an OptiTip connector on another terminal or cable.

FlexNap cable

OptiTip MT tether assembly
5-ft length for aerial (1.5m)
15-ft length for buried (4.5m)

15 feet

Sealed Terminal

TPA-6627

Figure 2

4.   Mounting the Terminal

⚠	**WARNING: Never look directly into the end of a fiber that may be carrying laser light.** Laser light can be invisible and can damage your eyes. Viewing it directly does not cause pain. The iris of the eye will not close involuntarily as when viewing a bright light. Consequently, serious damage to the retina of the eye is possible. Should accidental eye exposure to laser light be suspected, arrange for an eye examination immediately.
⚠	**WARNING:** This product is designed to meet specifications for Class 3 lasers only and should not be used with optical fiber transmission systems containing lasers of classes for which they have not been certified. DO NOT use magnifiers in the presence of laser radiation. Diffused laser light can cause eye damage if focused with optical instruments. Should accidental eye exposure be suspected, arrange for an eye examination immediately.
⚠	**WARNING:** Do not install telecommunications equipment or work with telephone wiring during a lightning storm. Telephone lines can carry high voltages from lightning causing electrical shock resulting in severe injury or death.

Step 1:   Following your engineering plan, determine the location where the terminal will be installed.

Step 2:   Install the terminal as described below for your installation location (Figure 3).

4.1   In an Aerial Application

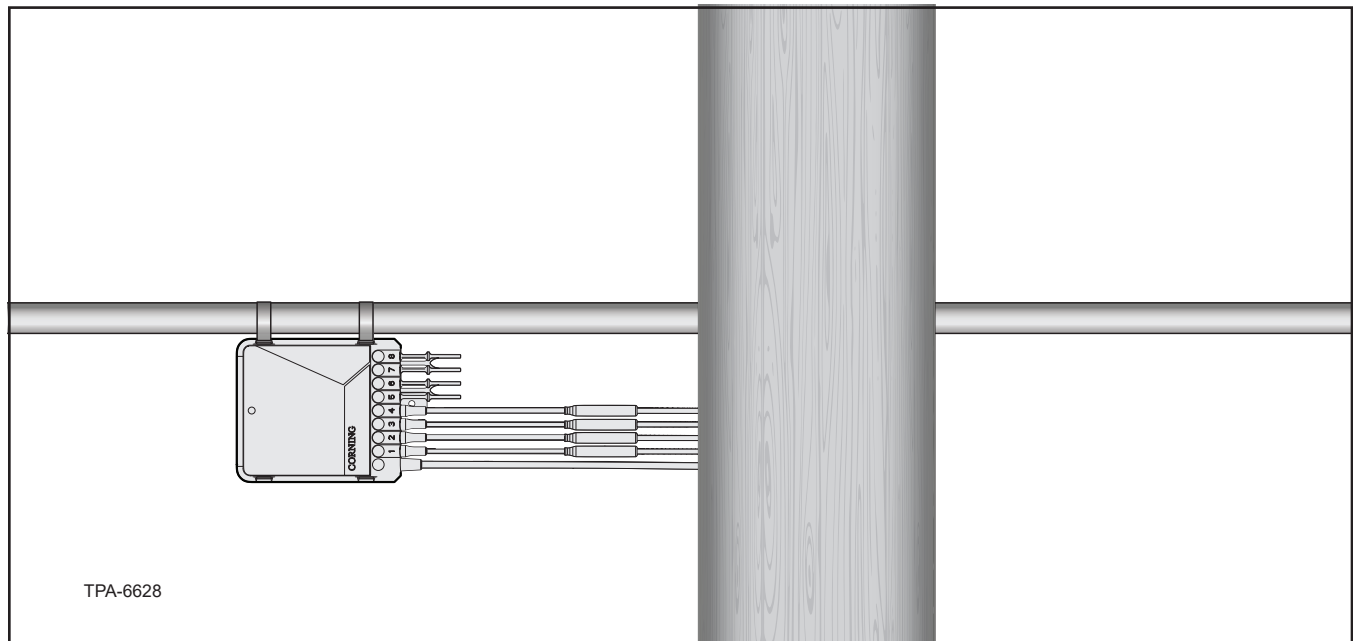## 4.1.1   All Terminals (using strapping)

TPA-6628

Figure 3

Step 1:   Thread straps through spacer and slots in base of terminal. With strand between strap, insert locking head onto strap and tighten onto the strand (Figure 4).
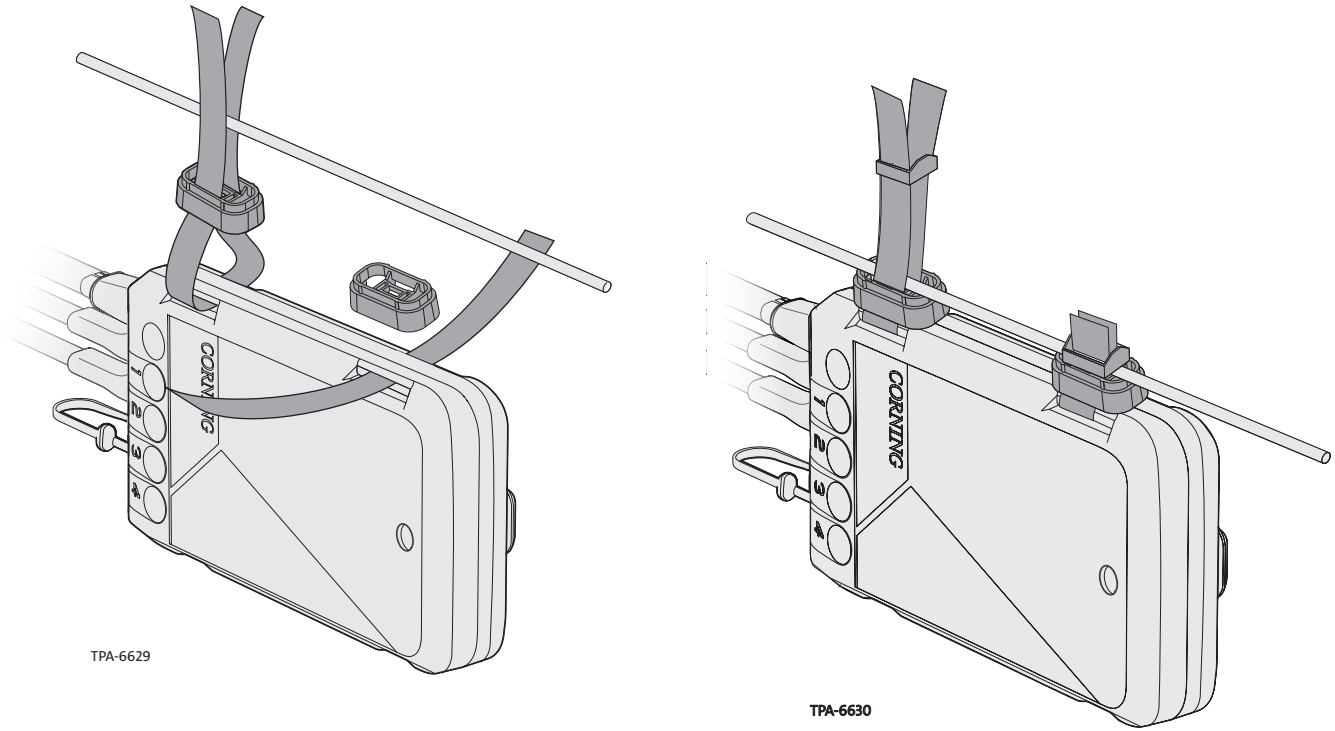

TPA-6629

TPA-6630

Figure 4

4.1.2   All Terminals (using optional brackets)

Step 1:   Slide main bracket into side slots on terminal, from the rear (Figure 5).

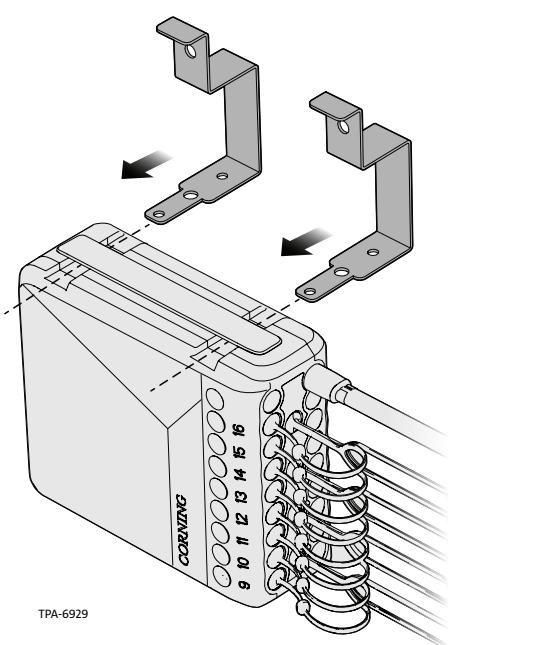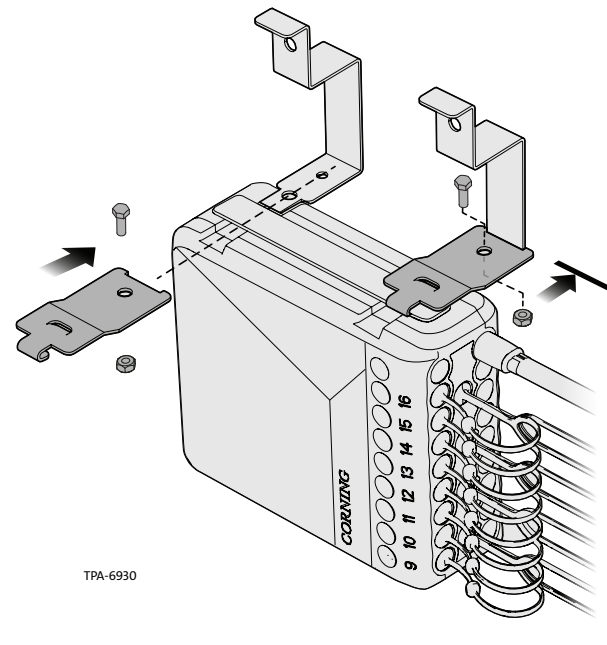**Step 2:**   Slide retaining clip into side slots on terminal, from the front (Figure 6).

TPA-6929

Figure 5

TPA-6930

Figure 6

Step 3: Secure retaining clip to main bracket using the supplied bolt (Figure 7).

Step 4: Secure the strand clamp to the bracket, install over the messenger and tighten (Figure 8).
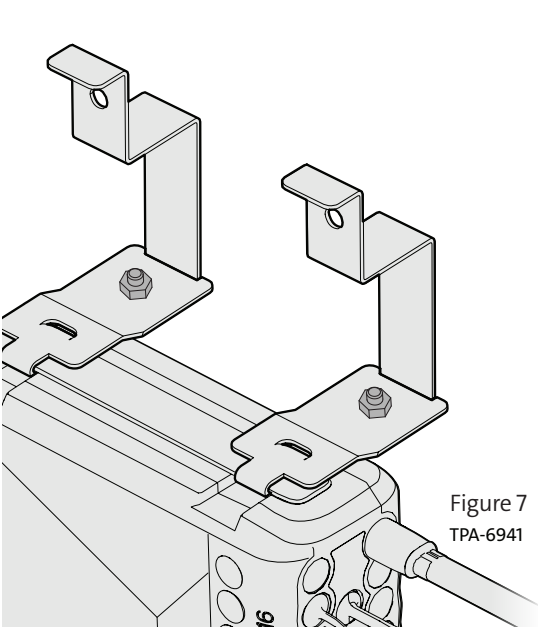
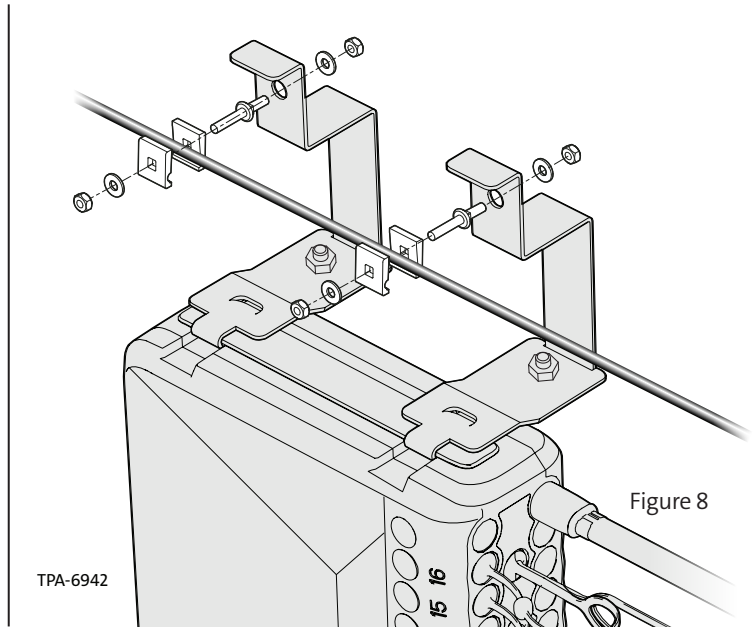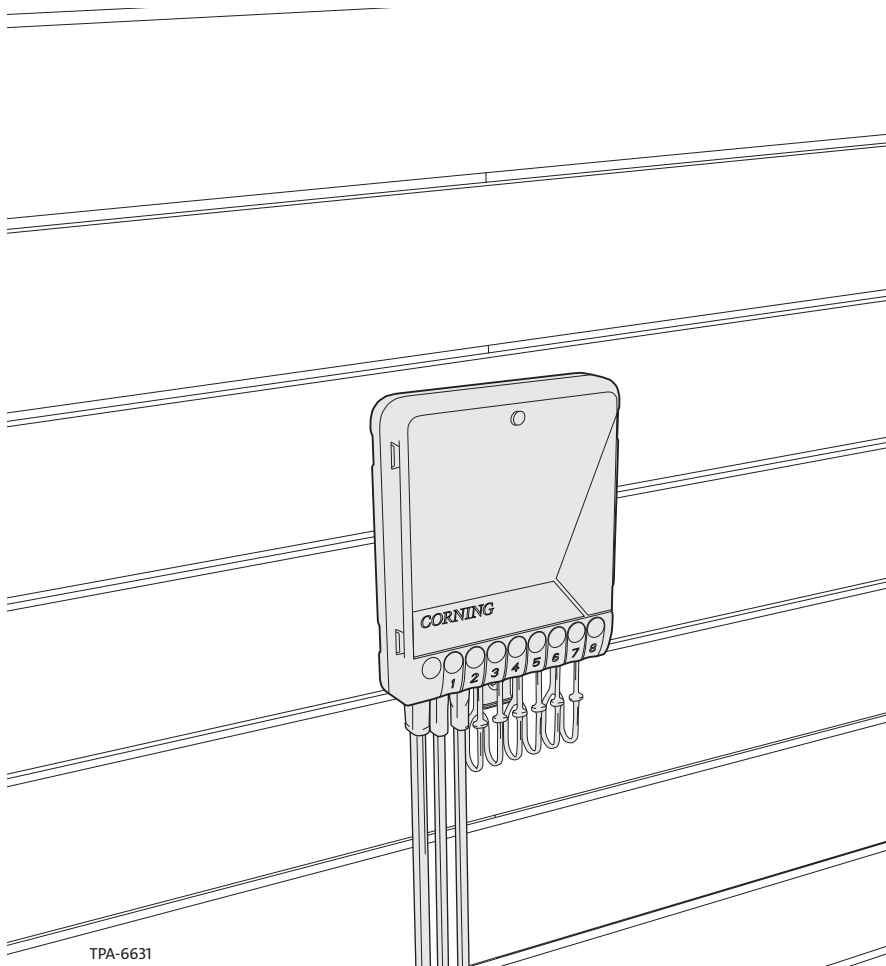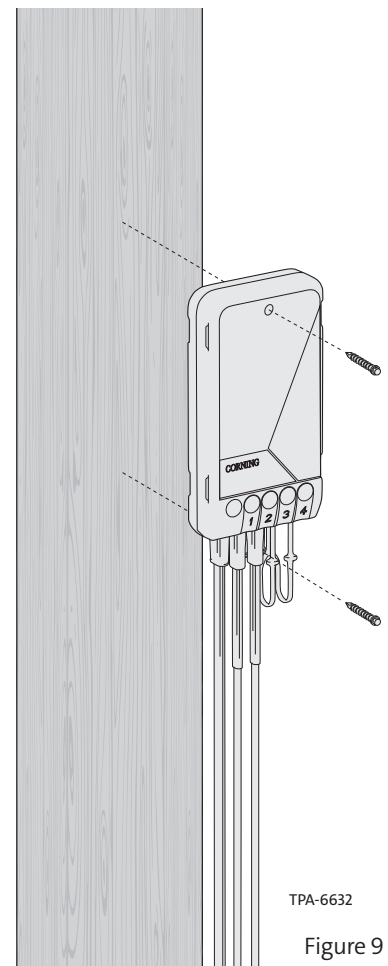Figure 7
TPA-6941

Figure 8
TPA-6942

4.2   On a Wall or Wooden Pole

4.2.1   Single Row Terminals

Step 1: Use 1/4-in (6 mm) threaded fasteners to secure the top and bottom to the wall or pole (Figure 9).

TPA-6631

TPA-6632

Figure 9

4.2.2 Double Row Terminals

Note: *Use wall/pole mounting brackets to secure the termInal to the pole or wall.*

Step 1: Outwardly adjust and secure the terminal hooks to the side slots of the terminal (Figure 10).
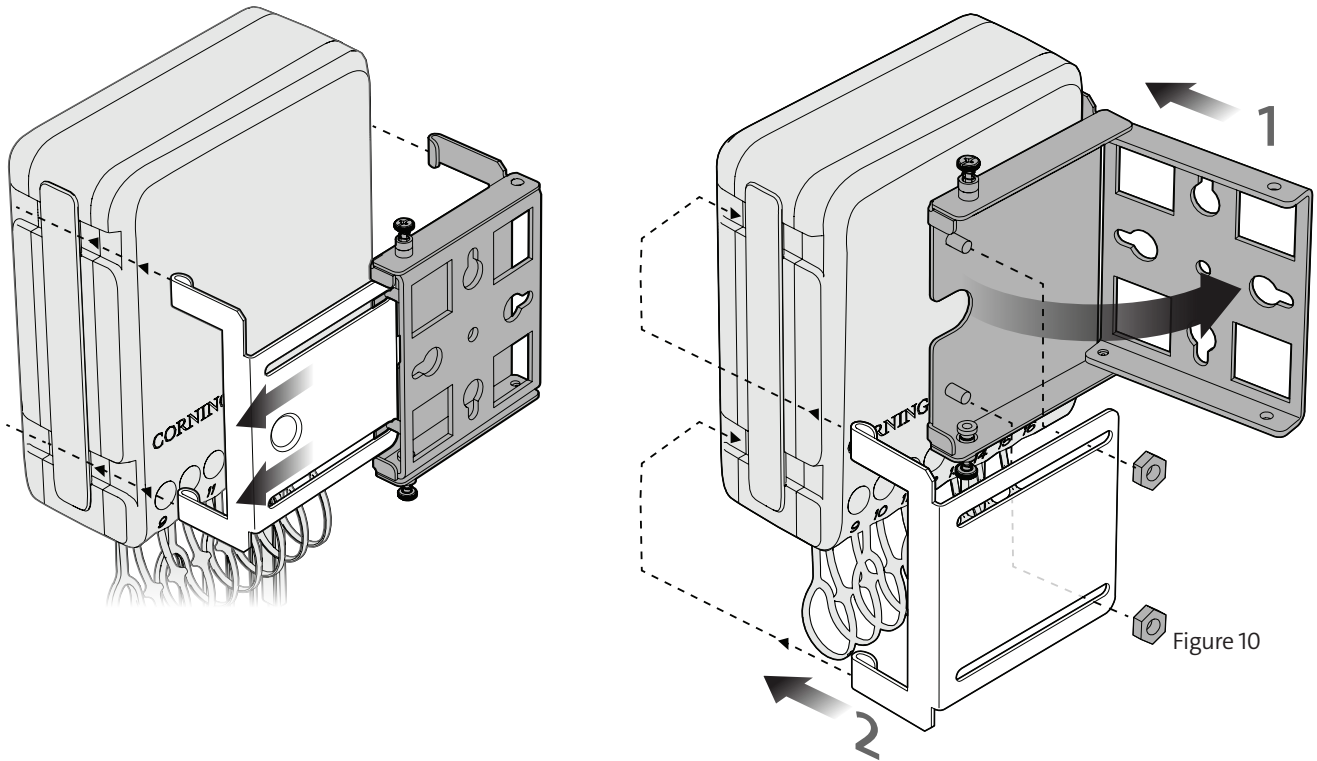
Figure 10

Step 2: Secure the halves together using the supplied 10/32 nuts. Secure the bracket to the pole or wall with two screws in the top and bottom slotted holes (Figure 11).
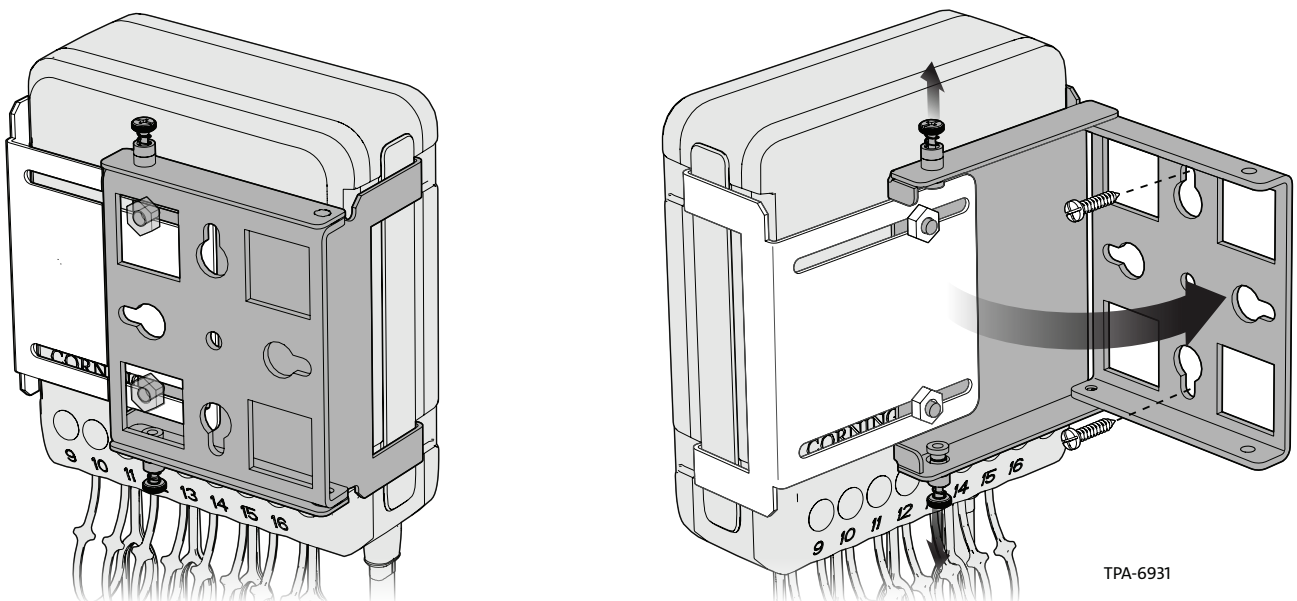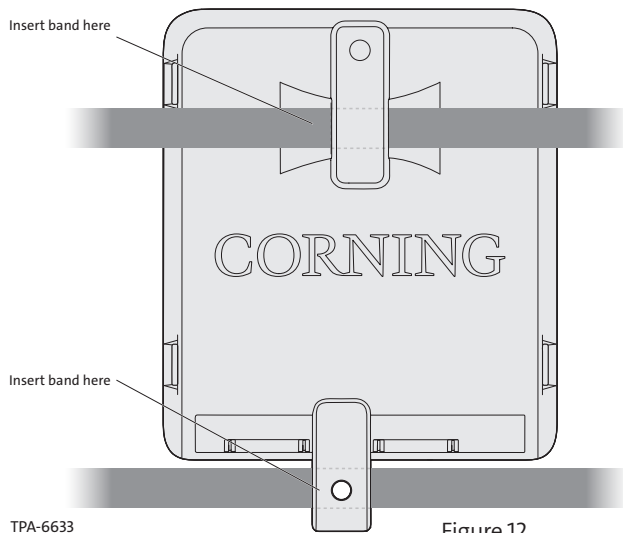

TPA-6931

Figure 11

4.3　Single Row on a Metal or Concrete Pole

Step 1:　Run cable strap through mounting slot in the back of the terminal (Figure 12).

Step 2:　Run cable strap around the mounting tab on the bottom of the terminal.

Step 3:　Secure the straps to the pole using a Band-It-type tool.

Insert band here

Insert band here

CORNING
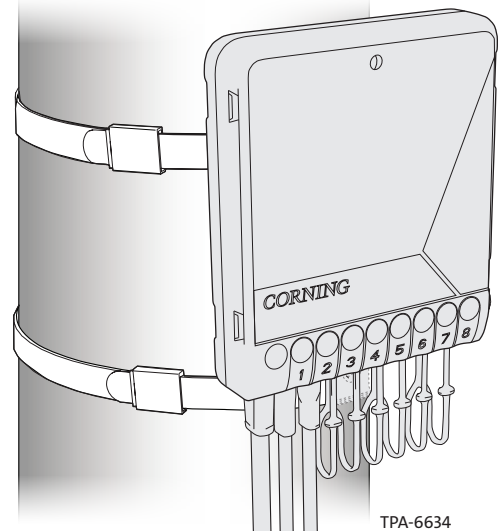
TPA-6633

Figure 12

TPA-6634

4.4　Double Row on a Metal or Concrete Pole

Step 1:　Follow steps 1 and 2 in Section 4.2.2 on previous page. Close outer bracket and lock pins.

Step 2:　Run cable strap/band through the square slots of the bracket (Figure 13).

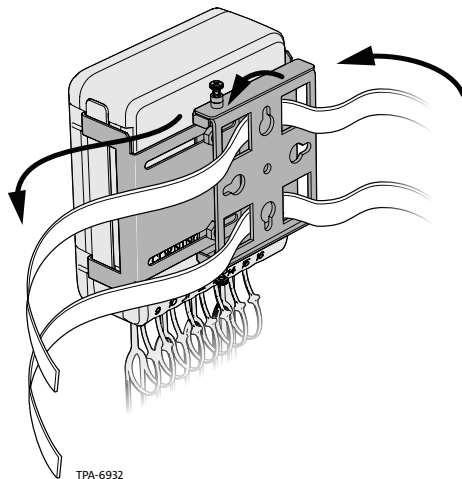**Step 3:**　Secure the straps to the pole using a Band-It-type tool (Figure 14).

Figure 13

TPA-6932

CORNING
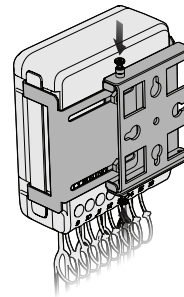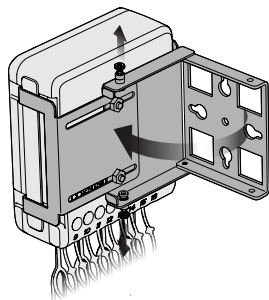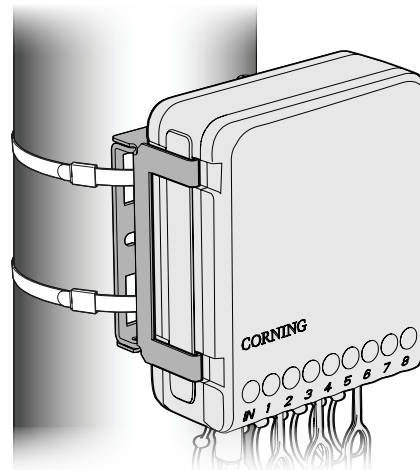
Figure 14

4.5 In a Handhole or Pedestal

4.5.1 Single Row Terminals

Step 1: Position the terminal in the handhole or pedestal with the mounting hole at the top and bottom of the terminal against the vertical mounting channel or wall (Figure 15) and attach the terminal with a cable tie or ¼-in (6 mm) bolt/screw (Figure 15).

TPA-6635
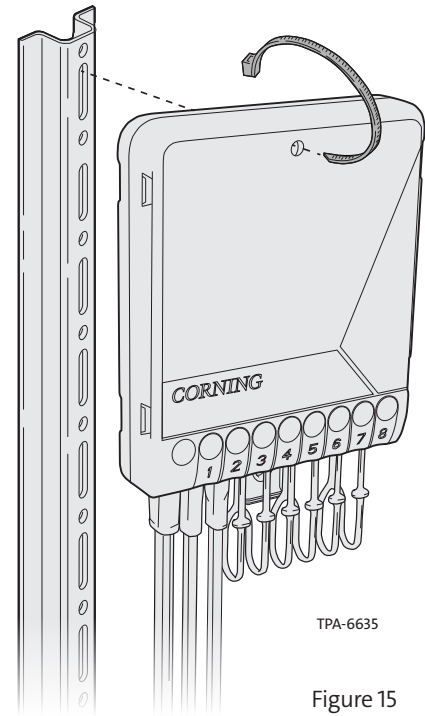
Figure 15

4.5.2 All Terminals using Handhole or Pedestal Bracket

Step 1: Secure the bracket to the wall/pedestal using cable straps or 1/4-in (6mm) screws/bolts (Figure 16).
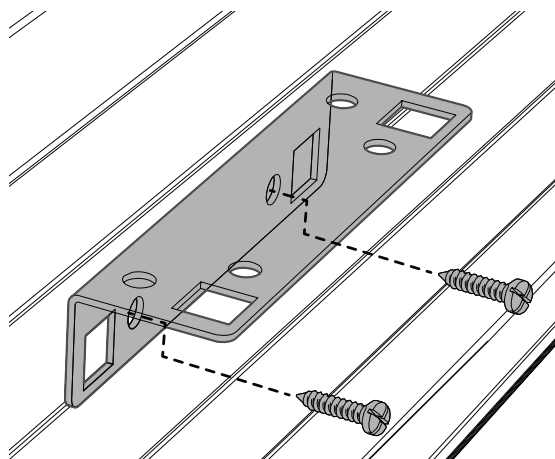
TPA-6933
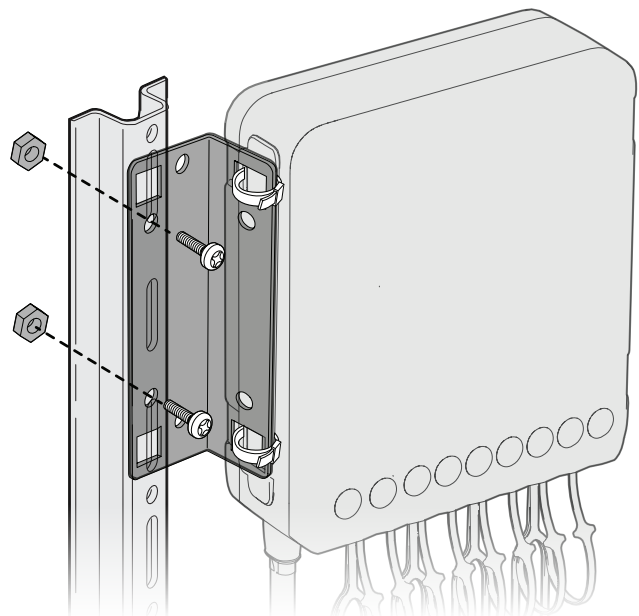
Figure 16

4.5.3 All Terminals using Handhole Bracket

Step 1: Secure the bracket to the container wall using cable straps or 1/4-in (6mm) screws/bolts (Figure 17).

Figure 17

TPA-6934
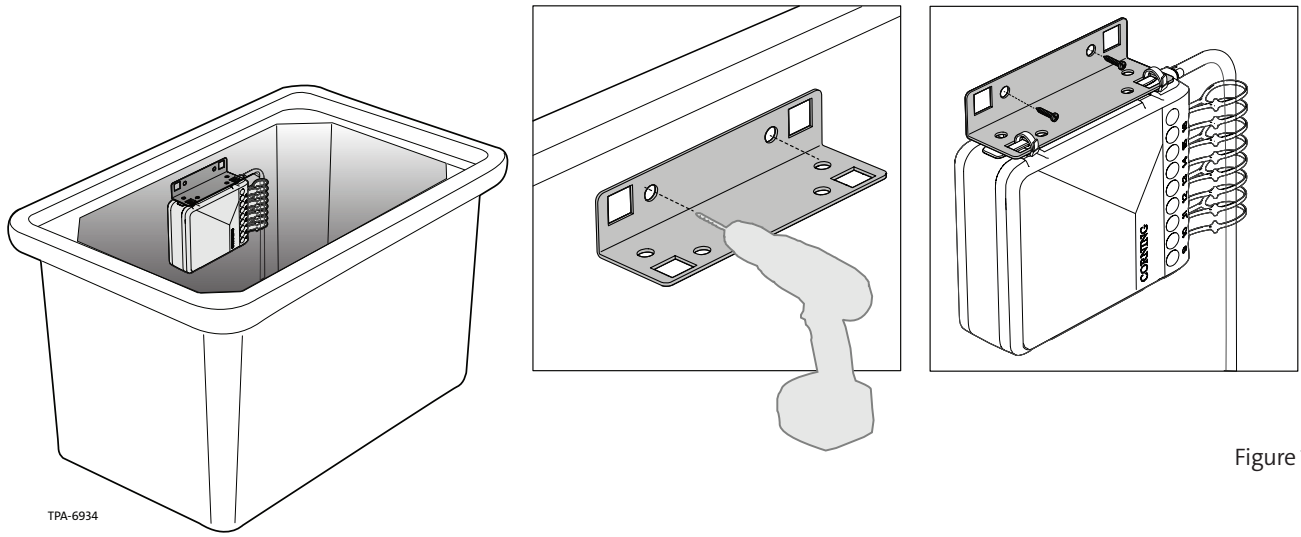
Step 2: Secure the bracket to the terminal using cable ties. The terminal can hang from the bracket or sit on top of the bracket.

NOTE: *This bracket has sides that are different depths. The deeper bracket is designed to be used with the double- row terminals, and shallower bracket to be used with the single-row terminals.*

TPA-6935

5.   Determining Type of Terminal Stub

5.1   Unconnectorized Terminal Stub

If terminal stub is unconnectorized, splice raw end to the feeder cable per standard company practices and skip to Section 7 to install drop cables. Refer to table below.

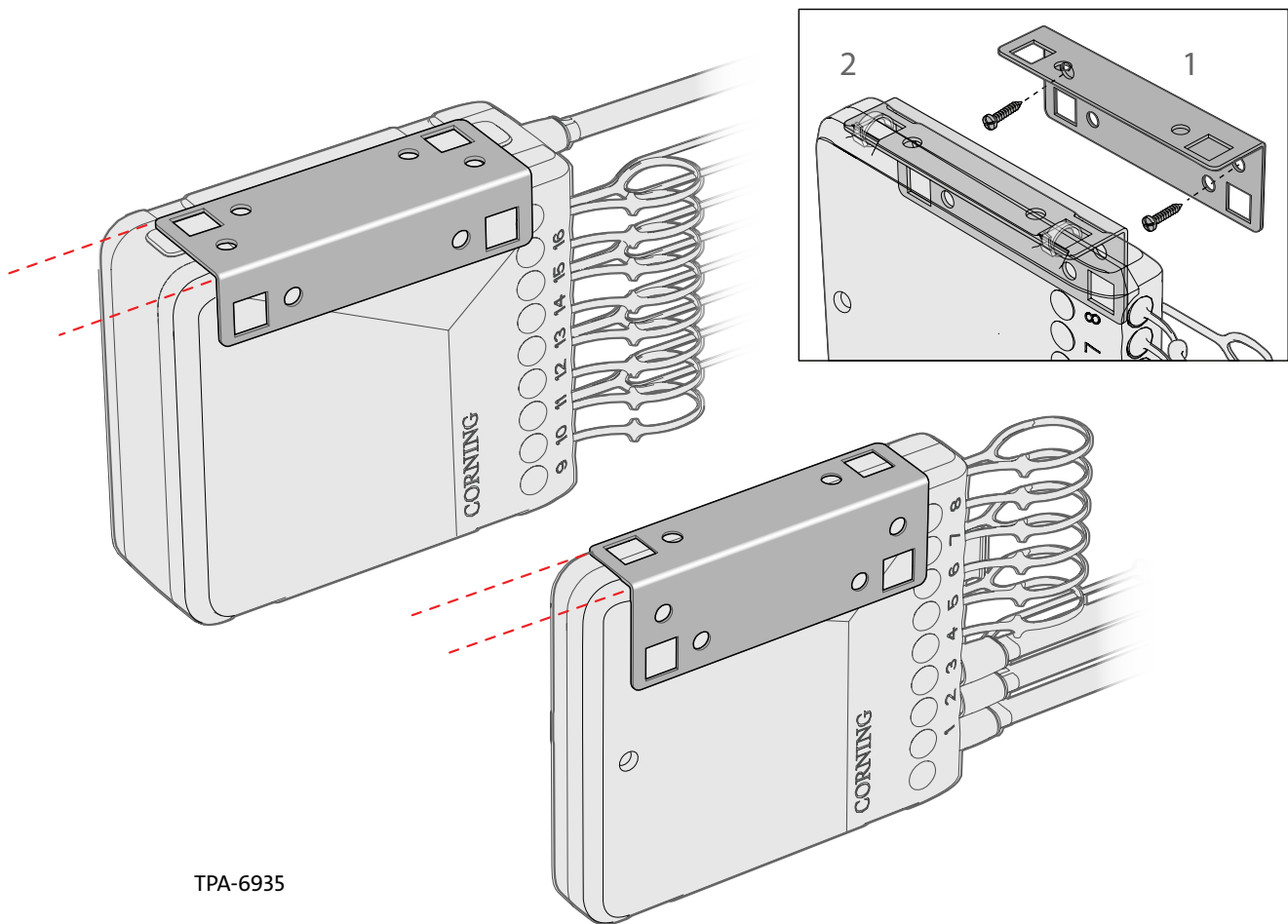| Cable Type	Installation Methods	Max Tensile Load Short-Term	Minimum Bend Radius-Loaded	Minimum Bend Radius-Installed
SST-Drop	Self-Support Lashed, Duct, Direct Bury	1350 N (300 lbf)	80 mm (3.15 in)	80 mm (3.15 in)
MiniXtend®	Duct (pushed)	890 N (200 lbf)	108 mm (4.3 in)	82 mm (3.2 in)
SST-Drop Long Span	Self-Support Lashed, Duct, Direct Bury	1350 N (300 lbf)	135 mm (5.3 in)	135 mm (5.3 in)

TPA-6936

5.2   Connectorized Terminal Stub
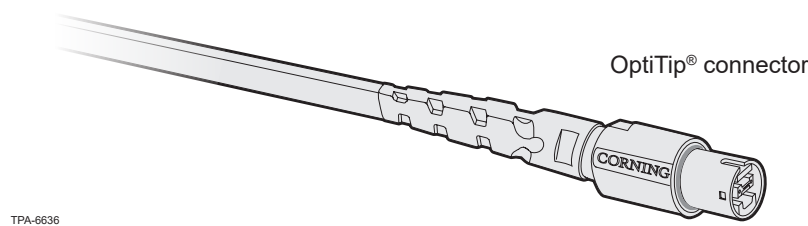
OptiTip® connector

TPA-6636

■ If terminal stub is connectorized with an OptiTip connector, proceed to Section 6.

6.   Mating a Terminal with OptiTip Connector to an OptiTip Connector FlexNAP™ Distribution Cable, or to an OptiTip Connector on another Terminal

WARNING: Unrestrained cable ends may cause injury to your eyes or body and damage the cable, fitting, or fibers if suddenly released from a coil. Wear eye protection and use extreme care when handling a coiled cable assembly which uses flat-drop cable; gently release the energy stored in the cable coil to avoid possible personal injury or damage to the cable or fitting components.
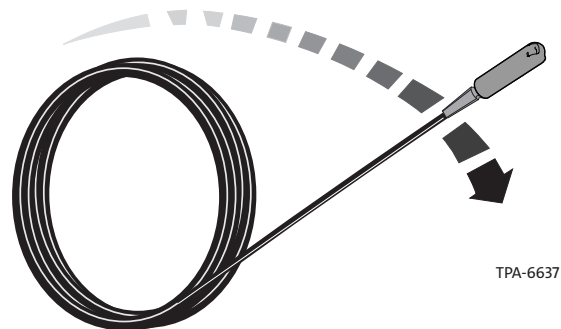
TPA-6637

Step 1:   Locate the FlexNAP distribution cable. On aerial applications, use scissors to carefully cut the cable ties which secure the tether to the cable.

Step 2: Remove the dust cap from the tether assembly by turning the cap counter-clockwise (Figure 18).

NOTE: *The terminal assembly's dust cap has a tamper-proof factory seal which verifies that the connector has been cleaned and tested prior to shipping. This seal will break during dust cap removal in Step 3; if the seal is already broken, visually examine the connector end-face inside to ensure that the end-face has not been exposed to dust or other contaminants. If necessary, clean the end faces with an OptiTip® cleaning tool (p/n TKTOTMTCLN-002) as described in the instruction provided with the tool.*
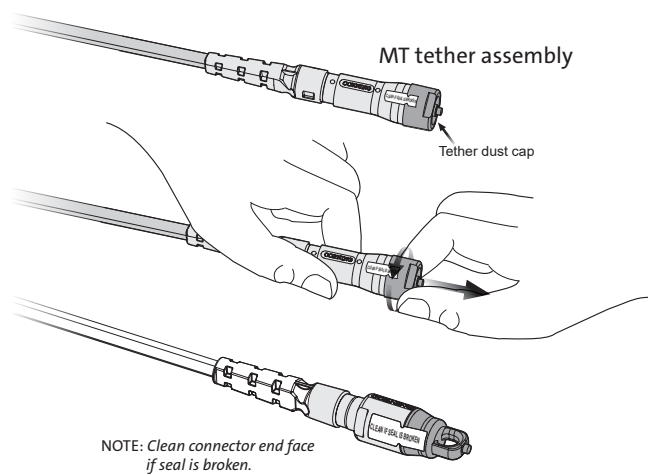
MT tether assembly

Tether dust cap

OptiTip® connector

Dust cap

Coupling nut

NOTE: *Clean connector end face if seal is broken.*

TPA-6937
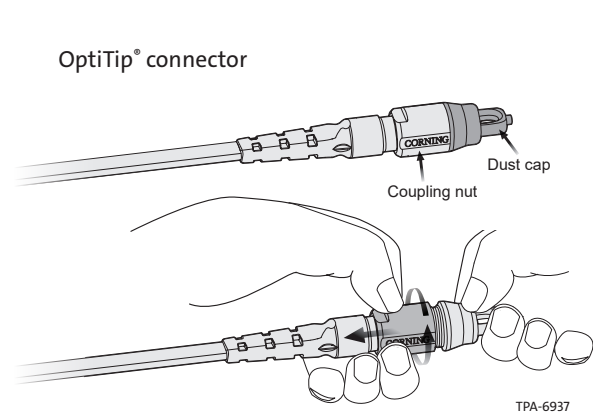
Figure 18

Figure 19

Step 3: To remove the terminal assembly's dust cap, hold the dust cap with one hand and back off the coupling nut as shown in Figure 19. Locate the reference keys on each assembly (see Figure 20 inset).

Step 4: Align the reference keys and gently turn the assembly coupling nut onto the tether assembly until the nut is hand tight (Figure 21).

Figure 20

Notch

Key

TPA-6639

Terminal assembly

Tether assembly

Coupling nut
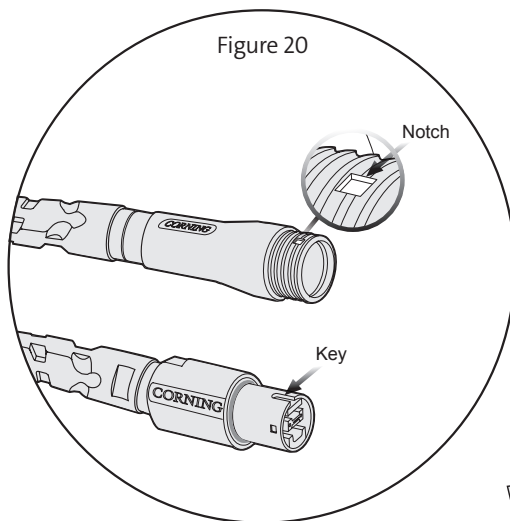
Figure 21

Step 5: Manage any cable slack per standard local practices.

Step 6: Proceed to Section 7 to install drop cables.

7.   Mating a Pushlok™ Connector to the Drop Port

7.1   Clean Pushlok Connector

Clean the connectors with the Optical Connector Cleaning Kit (p/n CLEANER-PUSHLOK) as described in the instructions provided with the kit.
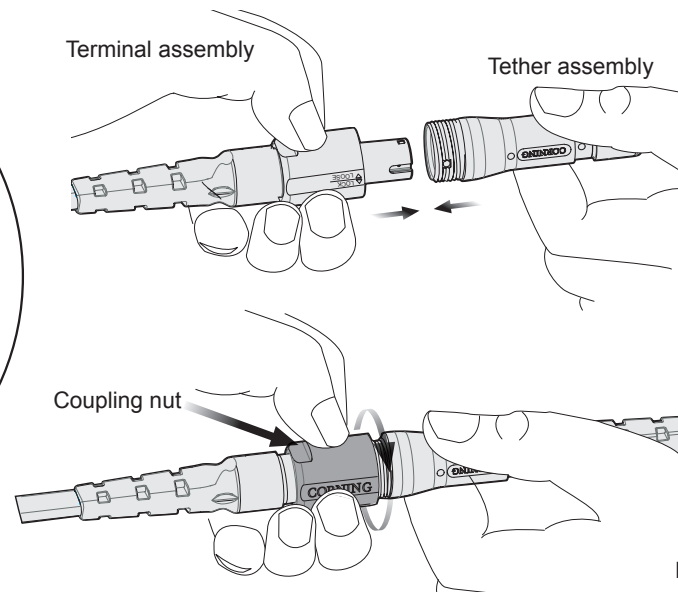
⚠	**WARNING: Never look directly into the end of a fiber that may be carrying laser light.** Laser light can be invisible and can damage your eyes. Viewing it directly does not cause pain. The iris of the eye will not close involuntarily as when viewing a bright light. Consequently, serious damage to the retina of the eye is possible. Should accidental eye exposure to laser light be suspected, arrange for an eye examination immediately.

7.2   Clean Pushlok Terminal ports

Step 1:   Remove the protective plug from the port where the connector will be mated (Figure 22).

Step 2:   Use the Optical Connector Cleaning Kit, as described in the instructions, to clean the connector inside the port.
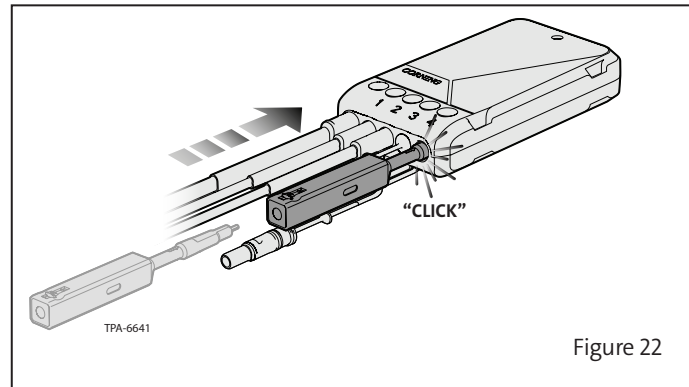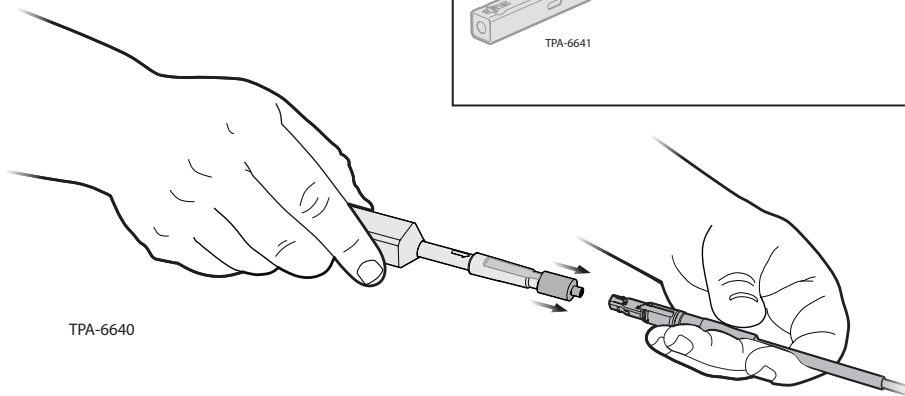

Figure 22

7.3   Mate Drop Cable Connectorized with Pushlok Connector

Step 1:   Depress the button for the port and pull out the dust plug. Remove the dust cap from the connector (Figure 23).
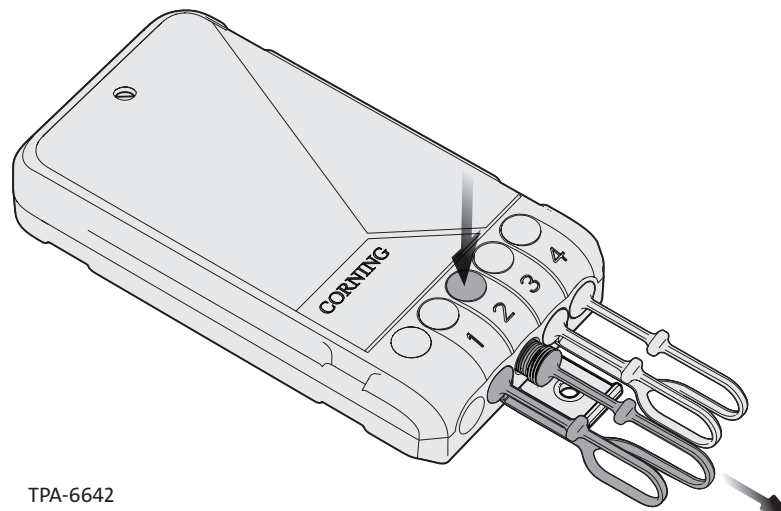
Figure 23

Step 2: Align the notch on top of the connector, with the port button on the terminal (Figure 24).

TPA-6643
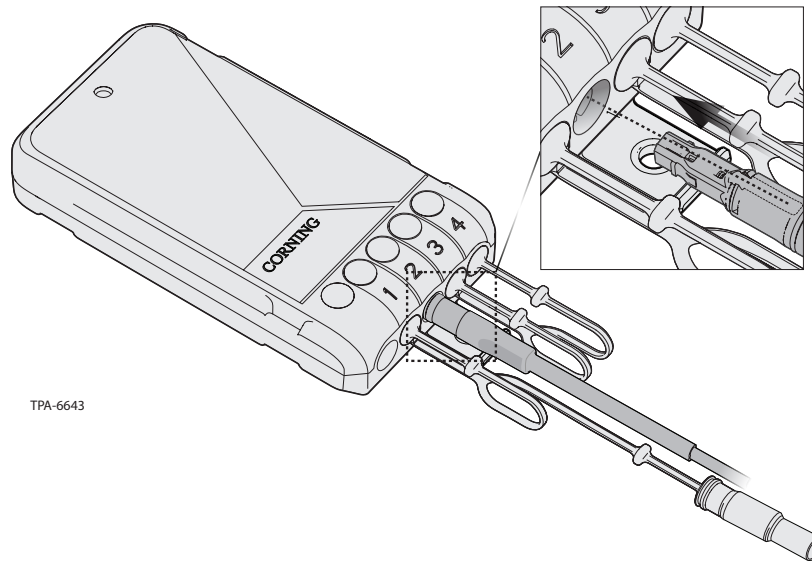
Figure 24

Step 3: Insert the drop connector into the terminal port, until the button clicks and the latch is engaged (Figure 25).

"CLICK"

TPA-6644

Figure 25

Step 4: Connect the terminal port dust plug with the connector dust cap (Figure 26).

Step 5: Repeat Section 7.3 for all connectorized drop cables.

TPA-6645
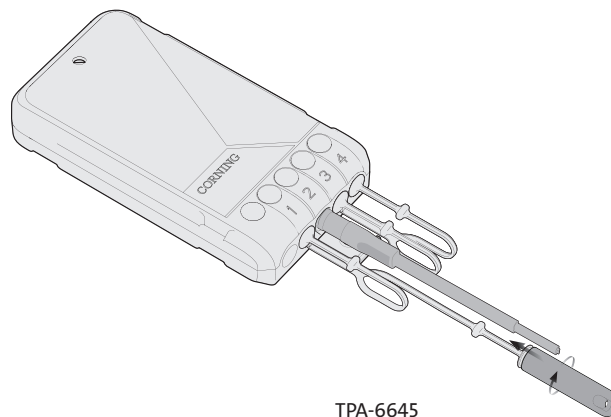
Figure 26

8. Mating Drop Cable to the Evolv™ Terminal with Pushlok™ Technology After Initial Installation

After the initial installation, the sealed terminal may become covered with mud and dirt due to normal ground water or flooding. Although these contaminants on the outside of the housing will not affect the performance of the unit, care must be taken when removing the drop port dust plugs for drop cable installation to prevent loose dirt particles from entering the adapter sleeve and contaminating a connector end-face.

NOTE: *Only use clean water to wash the outer housing. Do not use any type of solvent.*

Step 1: Remove any cable ties or hardware securing the terminal and stubbed cable.

Step 2: When handling the terminal, support the terminal and its cable stub to prevent kinking the cable stub at the entrance of the terminal.

Step 3: **For light dirt and dust**, soak a rag or towel with clean water and gently clean the housing. Wipe dry with a clean, dry rag or towel. **For heavy, caked-on mud and dirt**, spray the terminal with low-pressure water such as from a garden sprayer. A soft-bristled brush may also be used to lightly scrub the housing to loosen the mud and dirt. Remove any remaining dirt with a water-soaked rag or towel and wipe dry with a clean, dry rag or towel.

Step 4: If disconnecting a drop from an installed terminal, there may be dirt particles on the drop connector and around the terminal port. In this instance, use a dampened foam swab inserted shallowly into the port and swabbed to remove debris. For re-mating drops that may have debris accumulation on them, wipe with a dry cloth to remove any debris accumulated around the connector behind the O-ring.

Step 5: Although the unit should now be generally clean, there may still be dirt particles around the connector port plugs and lanyards. Therefore, before removing a plug, first turn the terminal so that the adapters face downward and then disconnect the selected plug. In this way, any stray dirt particles will fall to the ground instead of into the port.

Step 6: Use the Corning Optical Connector Cleaning Kit as described in Sections 7.1 and 7.2 to clean the Pushlok drop cable assembly and connector ports.

Step 7: Keep the ports facing down while inserting and connecting the drop cable assembly.

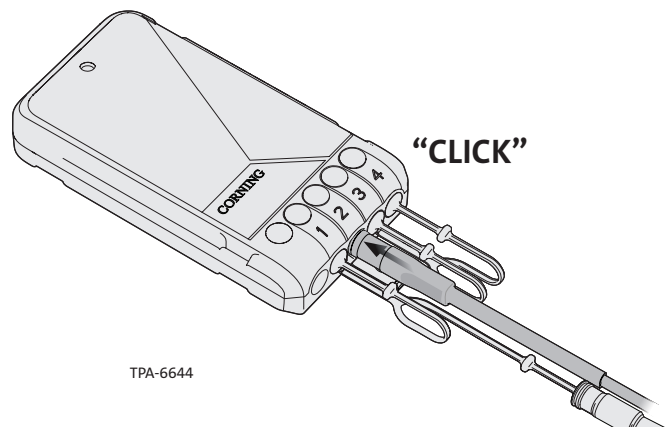**Step 8:** Insert the connectorized drop cable into the drop connector port. Orient the notch on the connector with the port button in the terminal (Figure 27).

Step 9: Repeat steps 1 through 8 for all connectorized drop cables.
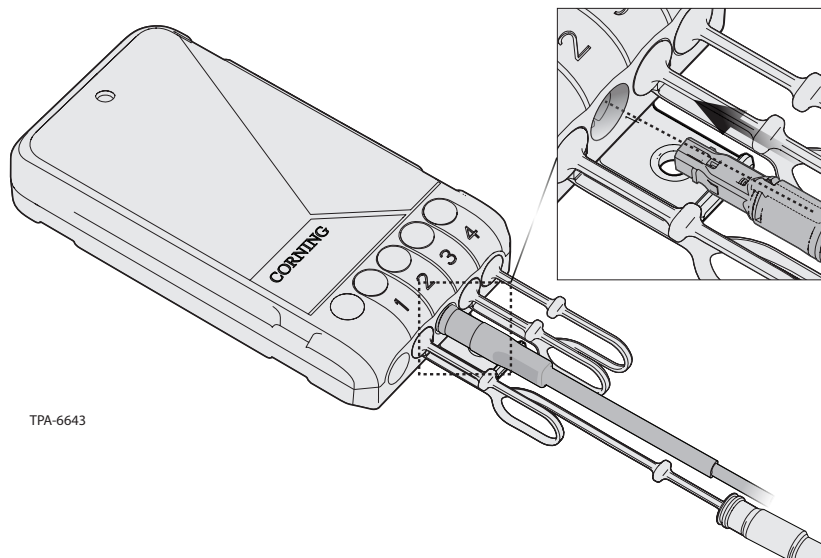

TPA-6643

Figure 27