



# Surge-Gap Multimedia Tap Installation and Operation Guide









# For Your Safety

## Explanation of Warning and Caution Icons

Avoid personal injury and product damage! Do not proceed beyond any symbol until you fully understand the indicated conditions.

The following warning and caution icons alert you to important information about the safe operation of this product:

-  You may find this symbol in the document that accompanies this product. This symbol indicates important operating or maintenance instructions.
-  You may find this symbol affixed to the product. This symbol indicates a live terminal where a dangerous voltage may be present; the tip of the flash points to the terminal device.
-  You may find this symbol affixed to the product. This symbol indicates a protective ground terminal.
-  You may find this symbol affixed to the product. This symbol indicates a chassis terminal (normally used for equipotential bonding).
-  You may find this symbol affixed to the product. This symbol warns of a potentially hot surface.
-  You may find this symbol affixed to the product and in this document. This symbol indicates an infrared laser that transmits intensity-modulated light and emits invisible laser radiation or an LED that transmits intensity-modulated light.

## Important

Please read this entire guide. If this guide provides installation or operation instructions, give particular attention to all safety statements included in this guide.

# Notices

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# Important Safety Instructions

## Read and Retain Instructions

Carefully read all safety and operating instructions before operating this equipment, and retain them for future reference.

## Follow Instructions and Heed Warnings

Follow all operating and use instructions. Pay attention to all warnings and cautions in the operating instructions, as well as those that are affixed to this equipment.

## Terminology

The terms defined below are used in this document. The definitions given are based on those found in safety standards.

**Service Personnel** - The term *service personnel* applies to trained and qualified individuals who are allowed to install, replace, or service electrical equipment. The service personnel are expected to use their experience and technical skills to avoid possible injury to themselves and others due to hazards that exist in service and restricted access areas.

**User and Operator** - The terms *user* and *operator* apply to persons other than service personnel.

**Ground(ing) and Earth(ing)** - The terms *ground(ing)* and *earth(ing)* are synonymous. This document uses *ground(ing)* for clarity, but it can be interpreted as having the same meaning as *earth(ing)*.

## Electric Shock Hazard

This equipment meets applicable safety standards.



**WARNING:**

**To reduce risk of electric shock, perform only the instructions that are included in the operating instructions. Refer all servicing to qualified service personnel only.**

Electric shock can cause personal injury or even death. Avoid direct contact with dangerous voltages at all times.

Know the following safety warnings and guidelines:

- Only qualified service personnel are allowed to perform equipment installation or replacement.

## Important Safety Instructions

- Only qualified service personnel are allowed to remove chassis covers and access any of the components inside the chassis.

## Equipment Placement



### WARNING:

**Avoid personal injury and damage to this equipment. An unstable mounting surface may cause this equipment to fall.**

To protect against equipment damage or injury to personnel, comply with the following:

- Install this equipment in a restricted access location (access restricted to service personnel).
- Make sure the mounting surface or rack is stable and can support the size and weight of this equipment.

## Strand (Aerial) Installation



### CAUTION:

**Be aware of the size and weight of strand-mounted equipment during the installation operation.**

**Ensure that the strand can safely support the equipment's weight.**

## Pedestal, Service Closet, Equipment Room or Underground Vault Installation



### WARNING:

**Avoid the possibility of personal injury. Ensure proper handling/lifting techniques are employed when working in confined spaces with heavy equipment.**

- Ensure this equipment is securely fastened to the mounting surface or rack where necessary to protect against damage due to any disturbance and subsequent fall.
- Ensure the mounting surface or rack is appropriately anchored according to manufacturer's specifications.
- Ensure the installation site meets the ventilation requirements given in the equipment's data sheet to avoid the possibility of equipment overheating.
- Ensure the installation site and operating environment is compatible with the equipment's International Protection (IP) rating specified in the equipment's data sheet.



## Connecting to Utility AC Power

**Important:** If this equipment is a Class I equipment, it must be grounded.

- If this equipment plugs into an outlet, the outlet must be near this equipment, and must be easily accessible.
- Connect this equipment only to the power sources that are identified on the equipment-rating label, which is normally located close to the power inlet connector(s).
- This equipment may have two power sources. Be sure to disconnect all power sources before working on this equipment.
- If this equipment **does not** have a main power switch, the power cord connector serves as the disconnect device.
- Always pull on the plug or the connector to disconnect a cable. Never pull on the cable itself.

## Connection to Network Power Sources

Refer to this equipment's specific installation instructions in this manual or in companion manuals in this series for connection to network ferro-resonant AC power sources.

## AC Power Shunts

AC power shunts may be provided with this equipment.

**Important:** The power shunts (where provided) must be removed before installing modules into a powered housing. With the shunts removed, power surge to the components and RF-connectors is reduced.



**CAUTION:**

RF connectors and housing seizure assemblies can be damaged if shunts are not removed from the equipment before installing or removing modules from the housing.

## Grounding (Utility AC Powered Equipment in Pedestals, Service Closets, etc.)

This section provides instructions for verifying that the equipment is properly grounded.

### Safety Plugs (USA Only)

This equipment is equipped with either a 3-terminal (grounding-type) safety plug or a 2-terminal (polarized) safety plug. The wide blade or the third terminal is provided for safety. Do not defeat the safety purpose of the grounding-type or polarized safety plug.

## Important Safety Instructions

To properly ground this equipment, follow these safety guidelines:

- **Grounding-Type Plug** - For a 3-terminal plug (one terminal on this plug is a protective grounding pin), insert the plug into a grounded mains, 3-terminal outlet.

**Note:** This plug fits only one way. If this plug cannot be fully inserted into the outlet, contact an electrician to replace the obsolete 3-terminal outlet.

- **Polarized Plug** - For a 2-terminal plug (a polarized plug with one wide blade and one narrow blade), insert the plug into a polarized mains, 2-terminal outlet in which one socket is wider than the other.

**Note:** If this plug cannot be fully inserted into the outlet, try reversing the plug. If the plug still fails to fit, contact an electrician to replace the obsolete 2-terminal outlet.

### Grounding Terminal

If this equipment is equipped with an external grounding terminal, attach one end of an 18-gauge wire (or larger) to the grounding terminal; then, attach the other end of the wire to a ground, such as a grounded equipment rack.

### Safety Plugs (European Union)


- **Class I Mains Powered Equipment** - Provided with a 3-terminal AC inlet and requires connection to a 3-terminal mains supply outlet via a 3-terminal power cord for proper connection to the protective ground.

**Note:** The equipotential bonding terminal provided on some equipment is not designed to function as a protective ground connection.

- **Class II Mains Powered Equipment** - Provided with a 2-terminal AC inlet that may be connected by a 2-terminal power cord to the mains supply outlet. No connection to the protective ground is required as this class of equipment is provided with double or reinforced and/or supplementary insulation in addition to the basic insulation provided in Class I equipment.

**Note:** Class II equipment, which is subject to EN 50083-1, is provided with a chassis mounted equipotential bonding terminal. See the section titled **Equipotential Bonding** for connection instructions.

## Equipotential Bonding

If this equipment is equipped with an external chassis terminal marked with the IEC 60417-5020 chassis icon () , the installer should refer to CENELEC standard EN 50083-1 or IEC standard IEC 60728-11 for correct equipotential bonding connection instructions.

## General Servicing Precautions

**WARNING:**

Avoid electric shock! Opening or removing this equipment's cover may expose you to dangerous voltages.

**CAUTION:**

These servicing precautions are for the guidance of qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

Be aware of the following general precautions and guidelines:

- **Servicing** - Servicing is required when this equipment has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into this equipment, this equipment has been exposed to rain or moisture, does not operate normally, or has been dropped.
- **Wristwatch and Jewelry** - For personal safety and to avoid damage of this equipment during service and repair, do not wear electrically conducting objects such as a wristwatch or jewelry.
- **Lightning** - Do not work on this equipment, or connect or disconnect cables, during periods of lightning.
- **Labels** - Do not remove any warning labels. Replace damaged or illegible warning labels with new ones.
- **Covers** - Do not open the cover of this equipment and attempt service unless instructed to do so in the instructions. Refer all servicing to qualified service personnel only.
- **Moisture** - Do not allow moisture to enter this equipment.
- **Cleaning** - Use a damp cloth for cleaning.
- **Safety Checks** - After service, assemble this equipment and perform safety checks to ensure it is safe to use before putting it back into operation.

## Electrostatic Discharge

Electrostatic discharge (ESD) results from the static electricity buildup on the human body and other objects. This static discharge can degrade components and cause failures.

Take the following precautions against electrostatic discharge:

- Use an anti-static bench mat and a wrist strap or ankle strap designed to safely ground ESD potentials through a resistive element.
- Keep components in their anti-static packaging until installed.

## Important Safety Instructions

- Avoid touching electronic components when installing a module.

## Fuse Replacement

To replace a fuse, comply with the following:

- Disconnect the power before changing fuses.
- Identify and clear the condition that caused the original fuse failure.
- Always use a fuse of the correct type and rating. The correct type and rating are indicated on this equipment.

## Batteries

This product may contain batteries. Special instructions apply regarding the safe use and disposal of batteries:

### Safety

- Insert batteries correctly. There may be a risk of explosion if the batteries are incorrectly inserted.
- Do not attempt to recharge 'disposable' or 'non-reusable' batteries.
- Please follow instructions provided for charging 'rechargeable' batteries.
- Replace batteries with the same or equivalent type recommended by manufacturer.
- Do not expose batteries to temperatures above 100°C (212°F).

### Disposal

- The batteries may contain substances that could be harmful to the environment
- Recycle or dispose of batteries in accordance with the battery manufacturer's instructions and local/national disposal and recycling regulations.



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- The batteries may contain perchlorate, a known hazardous substance, so special handling and disposal of this product might be necessary. For more information about perchlorate and best management practices for perchlorate-containing substance, see [www.dtsc.ca.gov/hazardouswaste/perchlorate](http://www.dtsc.ca.gov/hazardouswaste/perchlorate).

## Modifications

This equipment has been designed and tested to comply with applicable safety, laser safety, and EMC regulations, codes, and standards to ensure safe operation in its intended environment. Refer to this equipment's data sheet for details about regulatory compliance approvals.

Do not make modifications to this equipment. Any changes or modifications could void the user's authority to operate this equipment.

Modifications have the potential to degrade the level of protection built into this equipment, putting people and property at risk of injury or damage. Those persons making any modifications expose themselves to the penalties arising from proven non-compliance with regulatory requirements and to civil litigation for compensation in respect of consequential damages or injury.

## Accessories

Use only attachments or accessories specified by the manufacturer.

## Electromagnetic Compatibility Regulatory Requirements

This equipment meets applicable electromagnetic compatibility (EMC) regulatory requirements. Refer to this equipment's data sheet for details about regulatory compliance approvals. EMC performance is dependent upon the use of correctly shielded cables of good quality for all external connections, except the power source, when installing this equipment.

- Ensure compliance with cable/connector specifications and associated installation instructions where given elsewhere in this manual.

## EMC Compliance Statements

Where this equipment is subject to USA FCC and/or Industry Canada rules, the following statements apply:

### FCC Statement for Class A Equipment

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when this equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case users will be required to correct the interference at their own expense.

## **Important Safety Instructions**

### **Industry Canada - Industrie Canadiene Statement**

This apparatus complies with Canadian ICES-003.  
Cet appareil est conforme à la norme NMB-003 du Canada.

### **CENELEC/CISPR Statement with Respect to Class A Information Technology Equipment**

This is a Class A equipment. In a domestic environment this equipment may cause radio interference in which case the user may be required to take adequate measures.

# 1

## Introducing the Surge-Gap Multimedia Tap System with PDU

### Introduction

This guide provides the procedures for installing a Surge-Gap™ Multimedia Tap with a Power Distribution Unit (PDU).

### Who Should Use This Guide

This guide is intended for authorized personnel who have experience working with similar equipment. The personnel should have appropriate background and knowledge to complete the procedures described in this guide. Cisco service engineers who help system operators manage their systems will also find the contents of this guide useful.

### Qualified Personnel

Only appropriately qualified and skilled personnel should attempt to install, operate, maintain, and service this product.



**WARNING:**

**Allow only qualified and skilled personnel to install, operate, maintain, and service this product. Otherwise, personal injury or equipment damage may occur.**

## In This Chapter

■ Description of the Surge-Gap Multimedia Tap System .....	3
■ 2/4-way Surge-Gap Multimedia Tap Standard Housing .....	5
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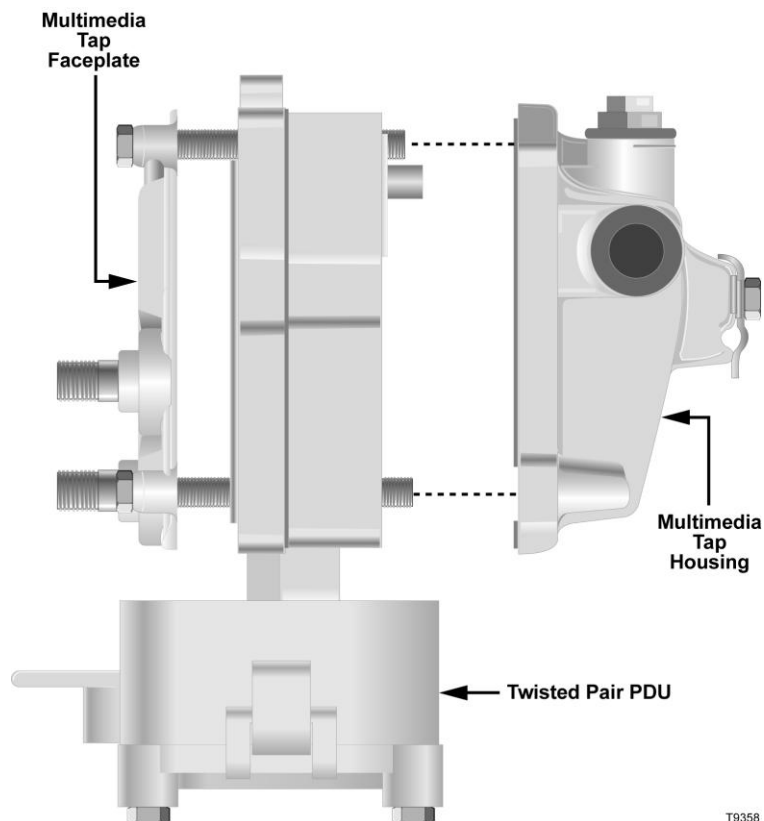
## Description of the Surge-Gap Multimedia Tap System

The Surge-Gap Multimedia Tap System provides the subscriber with drop powering capability that is required to support broadband telephony in hybrid fiber/coax (HFC) networks.

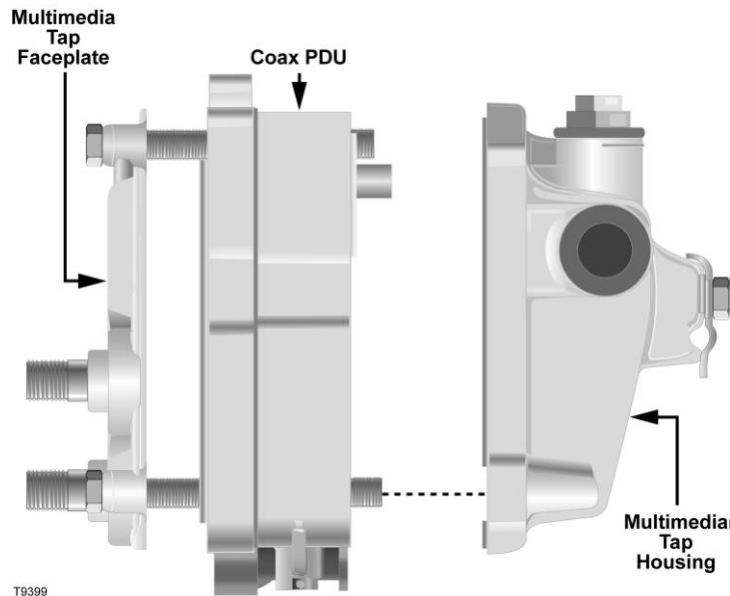
In addition, the Surge-Gap Multimedia Tap System provides enhanced reliability features that are essential to successful video and telephony service delivery.

### Surge-Gap Multimedia Tap System Diagrams

The Surge-Gap Multimedia Tap System consists of the Surge-Gap Multimedia Tap (faceplate and housing) and the Power Distribution Unit (PDU). There are two types of PDUs: coax power and twisted pair power. Refer to *Power Distribution Unit* (on page 13) for a full description of the PDU. The complete Surge-Gap Multimedia Tap System for each PDU is shown in the following illustrations.



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## Features of the Surge-Gap Multimedia Tap

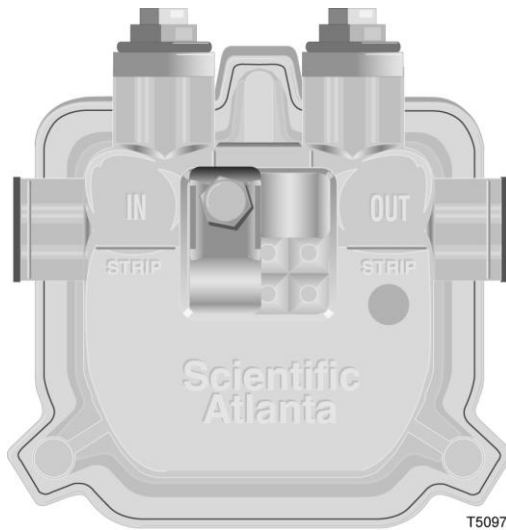
The Surge-Gap Multimedia Tap faceplate and housing is similar in form, fit, and function to traditional taps. However, the Surge-Gap Multimedia Tap offers a variety of enhanced features essential to the successful delivery of telephony and other advanced services.

The following are features of the Surge-Gap Multimedia Tap.

- Connection Beam AC/RF bypass switch
- 12 amperes through current rating
- Power injection posts
- Economical two-step upgrade to customer drop power passing capability
- AC blocking capacitors on each port

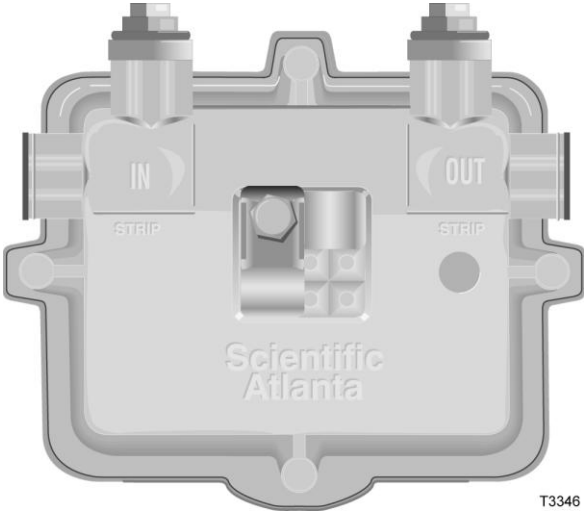
## 2/4-way Surge-Gap Multimedia Tap Standard Housing

The following illustration shows the 2/4-way Surge-Gap Multimedia Tap standard housing.



# 2/4/8-way Surge-Gap Multimedia Tap Full Profile Housing

The following illustration shows the 2/4/8-way Surge-Gap Multimedia Tap full profile housing.



## 2/4-way Surge-Gap Multimedia Tap Standard Faceplate

The following illustration shows the 4-way Surge-Gap Multimedia Tap standard faceplate installed on the housing.

**Note:** The 2-way version is identical except that F-ports 3 and 4 are not installed.



## 2/4/8-way Surge-Gap Multimedia Tap Full Profile Faceplate

The following illustration shows the 8-way Surge-Gap Multimedia Tap full profile faceplate installed on the housing.

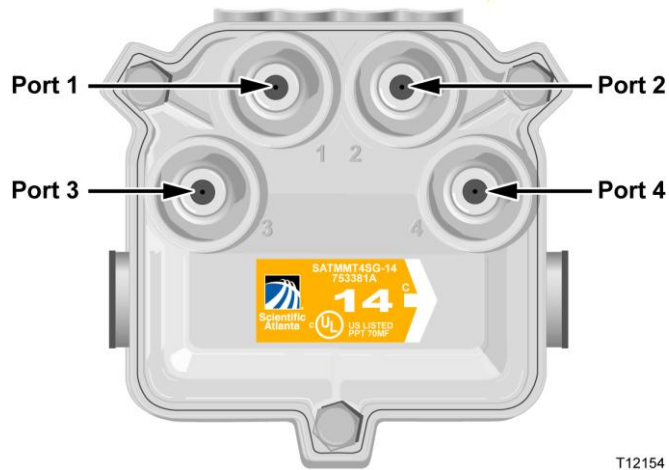
**Note:** The 2-way version is identical except that F-ports 1, 2, 5, 6, 7, and 8 are not installed. The 4-way version is identical except that F-ports 1, 6, 7, and 8 are not installed.



## 2/4-way Surge-Gap Multimedia Standard Tap with Coax PDU

The following illustration shows the full view of the 4-way Surge-Gap Multimedia Standard Tap with a Coax PDU.

**Note:** The 2-way version is identical except that F-ports 3 and 4 are not installed.

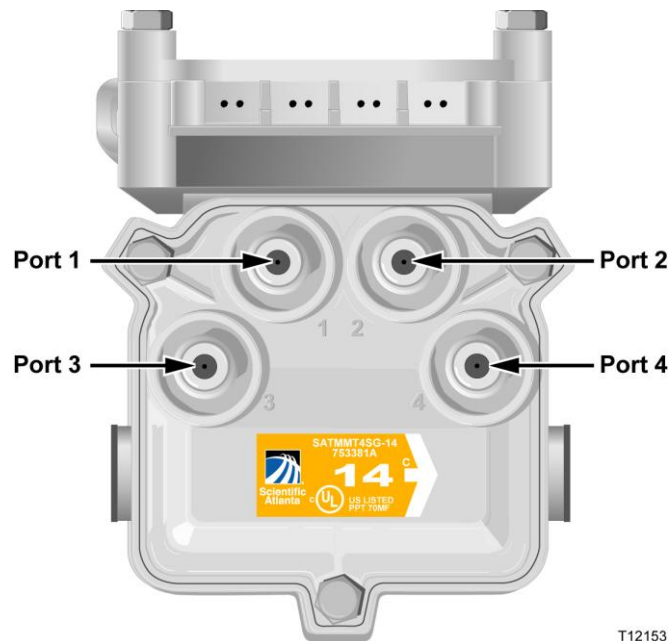


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## 2/4-way Surge-Gap Multimedia Standard Tap with Twisted Pair PDU

The following illustration shows the full view of the 4-way Surge-Gap Multimedia Standard Tap with a Twisted Pair PDU.

**Note:** The 2-way version is identical except that F-ports 3 and 4 are not installed.



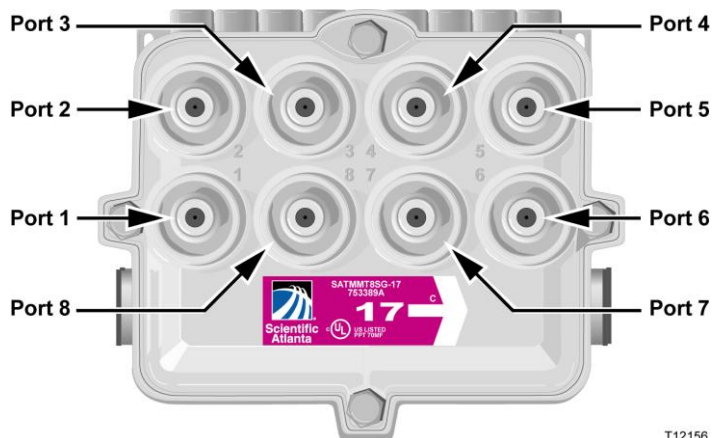
T12153



## 2/4/8-way Surge-Gap Multimedia Full Profile Tap with Coax PDU

The following illustration shows the full view of the 8-way Surge-Gap Multimedia Full Profile Tap with a Coax PDU.

**Note:** The 2-way version is identical except that F-ports 1, 2, 5, 6, 7, and 8 are not installed. The 4-way version is identical except that F-ports 1, 6, 7, and 8 are not installed.

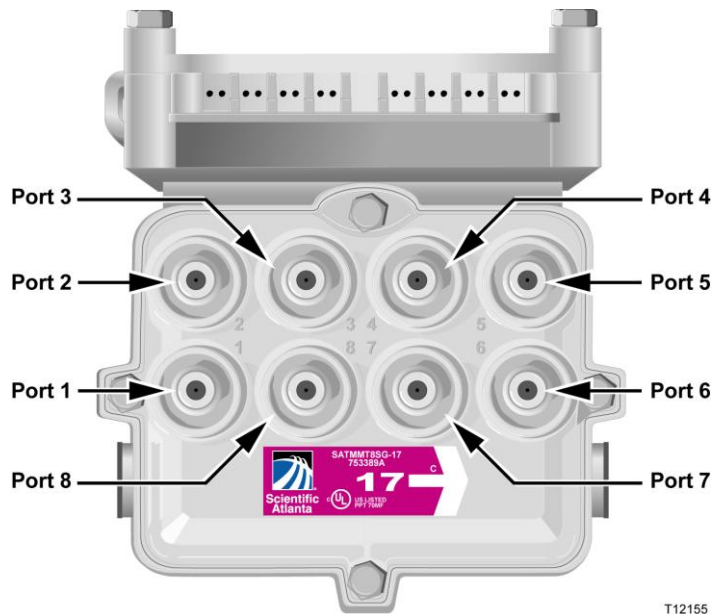


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## 2/4/8-way Surge-Gap Multimedia Full Profile Tap with Twisted Pair PDU

The following illustration shows the full view of the 8-way Surge-Gap Multimedia Full Profile Tap with a Twisted Pair PDU.

**Note:** The 2-way version is identical except that F-ports 1, 2, 5, 6, 7, and 8 are not installed. The 4-way version is identical except that F-ports 1, 6, 7, and 8 are not installed.



## Power Distribution Unit

The Power Distribution Unit (PDU) upgrades any Surge-Gap Multimedia Tap to allow subscriber drop powering capability. A PDU can be installed on a Surge-Gap Multimedia Tap housing mounted either on a strand or in a pedestal.

**Note:** A PDU cannot be used on an existing non-multimedia tap system. See your sales representative for further details.

### Types of PDUs

The following table lists the two types of PDUs and their descriptions.

PDU	Description
Coax power	Couples the AC power on to the coaxial subscriber drop cable
Twisted pair power	Requires a composite drop cable that contains a coaxial cable for the RF signal and a twisted pair for the AC power

**Note:** Both coax and twisted pair power versions are available in 2/4-way and 8-way versions.

### Features of the PDU

The following features of the PDU are available in 2/4-way and 2/4/8-way versions.

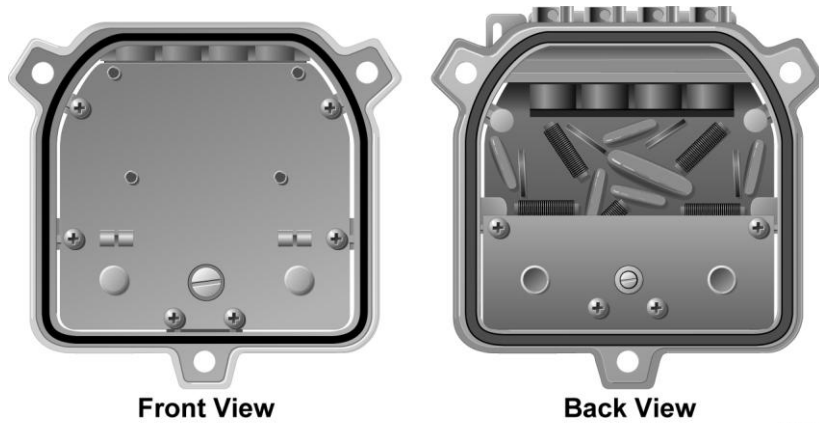
- Available in twisted pair and coaxial drop powering versions
- Compatible with Cisco's Surge-Gap Multimedia Tap
- Provides uninterrupted downstream subscriber service during tap faceplate removal
- Current limiting using a positive temperature coefficient resistor (PTC) on a per-port basis for maximum network reliability and subscriber safety \*
- Coaxial drop conveniently and easily activated by a patented mechanical switch
- Advanced gasketing technology ensures reliability in aerial, pedestal, and vault deployments
- Insulation Displacement Connector (IDC) for fast and reliable wire connection for twisted pair powering

\* For the twisted pair version, PTCs are sold separately or are permanently installed (PDU part numbers 750595 or 750596).

## 2/4-way Coax PDU

The following diagram shows the front and back view of the 2/4-way Coax PDU.

**Note:** The 2/4/8-way coax PDU is similar.

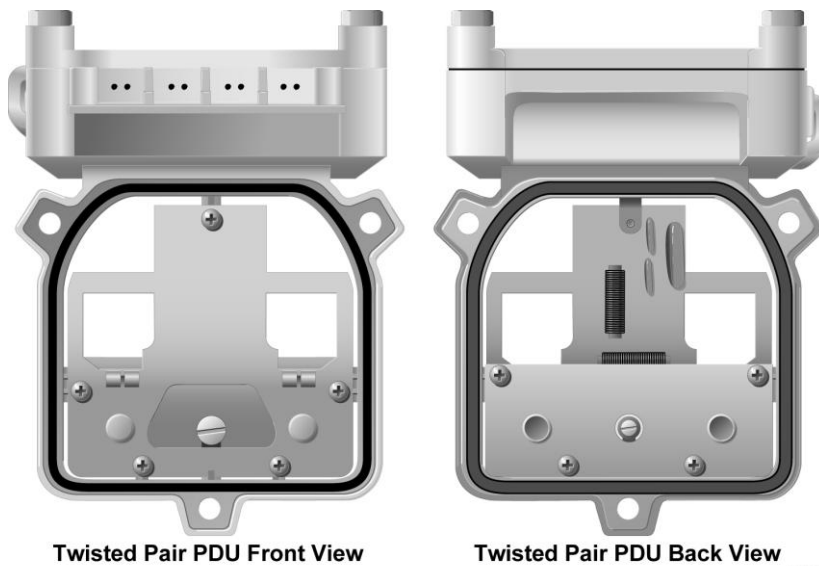


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## 2/4-way Twisted Pair PDU

The following diagram shows the front and back view of the 2/4-way Twisted Pair PDU.

**Note:** The 2/4/8-way twisted pair is similar.



T9362

# 2

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## Installing the Tap

This chapter gives step-by-step instructions for installing the tap in your cable system.

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## Tools and Torque Specifications

### Tools Required

Before you start, make sure you have the following tools.

Tools	Used to . .
Appropriate coaxial cable coring tool	Prepare feeder cable ends
3/8-in. hex wrench, or nut driver	Tighten strand clamp bolts and retainer bolts
1/2-in. or 3/8-in. wrench, or nut driver	Remove and replace cable end plugs
3/16-in. hex nut driver	Tighten seizure screws
Small flat-end screwdriver	Rotate seizure mechanism
Propane torch, or equivalent	Apply heat shrink
Wire cutters	Cut cable/center conductor
Sharp knife	Trim
Torque wrench in in-lb (0 in-lb to 250 in-lb minimum) (0 Nm to 28.2 Nm minimum)	Tighten seizure screws, connectors, and retainer bolts
7/16-in. wrench	Tighten house drop F-connector
15/16-in., 1-in., and 1 1/8-in. wrenches	Tighten connectors for feeder cable Sizes may vary depending on manufacturer and connector style.
Grounding wire assembly, part number 569533 (hot install only)	Prevent electric shock and equipment damage. Certain components can deliver an electrical shock
Room temperature vulcanizing (RTV) silicone	Seal connections

Installations involving a twisted-pair PDU also require a small, high-quality cable tie no more than 0.150 in. (3.8 mm) wide to secure the twisted-pair sheath to the bottom of the PDU.

### Torque Specifications

The following are recommended torque specifications for the tap.

Part	Torque Specification
Strand clamp bolt	30 in-lb to 40 in-lb (3.4 Nm to 4.5 Nm)

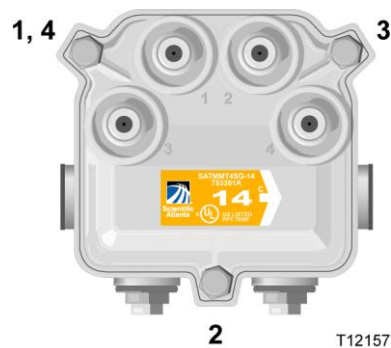
Part	Torque Specification
KS-connector	Tighten according to manufacturer's recommended torque specification, typically 15 ft-lb to 25 ft-lb (20.3 Nm to 33.9 Nm), but not to exceed 60 ft-lb (81.3 Nm)
Port end plug	50 in-lb to 60 in-lb (5.6 Nm to 6.8 Nm)
Seizure screw	15 in-lb to 20 in-lb (1.7 Nm to 2.3 Nm)
Faceplate bolt	50 in-lb to 60 in-lb (5.6 Nm to 6.8 Nm)
F-connector (drop cable) RG-6 or RG-59	Tighten to manufacturer's recommended torque specification

Installations involving a twisted-pair PDU also require tightening the PDU cover screw to 50 to 60 in-lb (5.6 to 6.8 Nm).

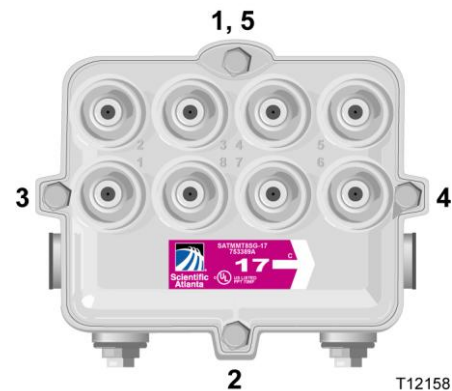
## Torque Sequence

The following diagrams show the proper torque sequence for closing the housing.

**2/4-Way Standard Tap**



**8-Way Full Profile Tap**



## Preparing for Installation

Complete the following tasks before installing the tap housing.

- Prepare connectors
- Remove the faceplate

**Important:** The installer should review and install this product per EN 50083-1/A2:1998.

### To Prepare the Connectors

The tap requires KS-connectors for input and output connections. You must trim pins to the correct length before inserting them into the housing. Follow these steps to prepare the connector.



**WARNING:**

**Avoid electrical shock and damage to this product. If AC is present on the cable, take care to avoid electrocution or short circuits when cutting the cable.**

- 1 Cut the cable to allow proper entry into the port while also allowing for expansion hoops in strand installations.
- 2 Prepare the cable ends per the cable manufacturer's recommended method.
- 3 Place the connector above the entry port so that it lines up with its installed position.
- 4 If the pin extends past the stripline on the housing, use wire cutters to trim the pin flush to the stripline. See the diagram below for a visual guide.



**WARNING:**

**Avoid electrical shock and damage to this product. If AC is present on the cable, take care to avoid electrocution or short circuits when cutting the cable.**

**Important:** If the pin does not reach the stripline on the housing, inadequate electrical connection to the tap may occur, causing loss of signal to all downstream subscribers.

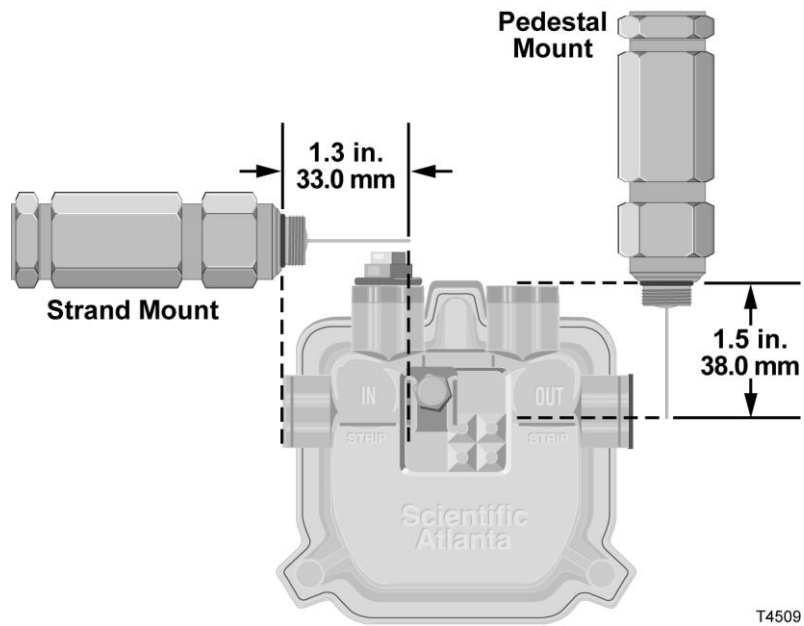


**CAUTION:**

**Always ensure that the length of the center conductor pin is accurate. Excessive length could damage the connection beam housing and cause performance problems in the unit.**



## Preparing for Installation



## Removing the Faceplate

The complete Surge-Gap Multimedia Tap assembly consists of a housing and a faceplate. The faceplate must be removed from the housing so the PDU can be attached to the tap housing.



**WARNING:**

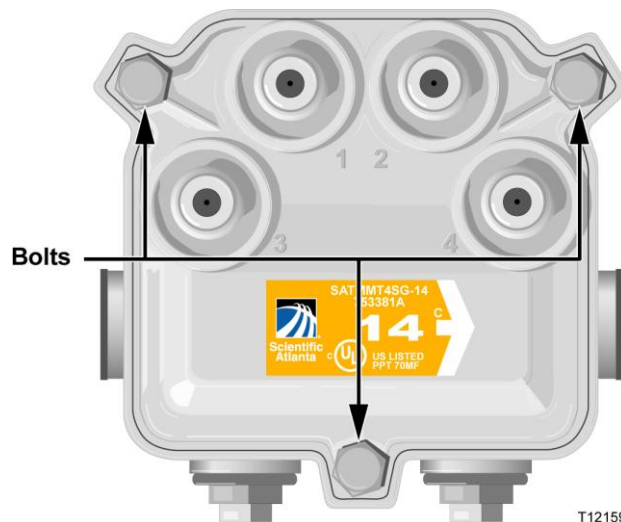
When removing the faceplate with the feeder cables attached, take care to protect yourself from electrical shock and your equipment from damage. Certain components can deliver an electrical shock.

If the faceplate needs to be removed with the feeder cables connected, refer to the procedure *To Remove a Faceplate with Feeder Cables Connected (Hot Install)* (on page 21).

### To Remove the Faceplate

Follow these steps to remove the tap faceplate from the housing.

- 1 Using a 3/8-in wrench, loosen all faceplate bolts as shown in the 4-way tap diagram below.



- 2 Pull the faceplate straight out from the housing. You need to use a small amount of force to pull the faceplate out.



**CAUTION:**

Handle the faceplate with care to avoid damage to the circuitry mounted to the rear of the faceplate.

- 3 Place the faceplate in a small box or on a block of foam to protect the tap circuitry. Set the faceplate in a secure place.
- 4 Proceed to *Installing the Tap Housing on a Strand* (on page 23) or *Installing the Tap Housing in a Pedestal* (on page 25).

## To Remove a Faceplate with Feeder Cables Connected (Hot Install)

Follow these steps to remove a faceplate with feeder cables already connected to the housing.

- 1 Remove all coax drop cables from the drop port F-connectors.
- 2 Using a 3/8-in. wrench, loosen all faceplate bolts.
- 3 If the housing is installed on a strand, go to step 4.

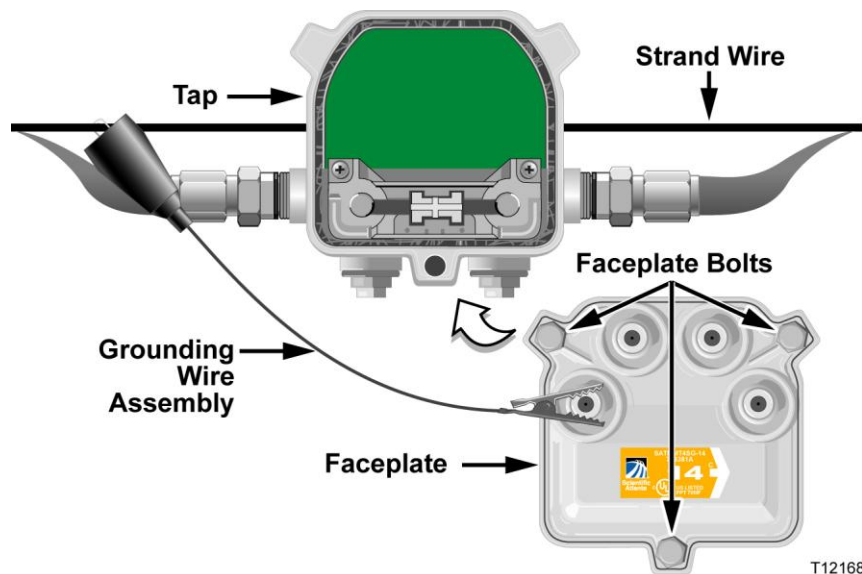
If the housing is installed on a pedestal, go to step 5.



### WARNING:

Protect yourself from electric shock and your equipment from damage. Certain components can deliver an electrical shock.

- 4 Attach a grounding wire assembly to the strand wire and a drop port F-connector.

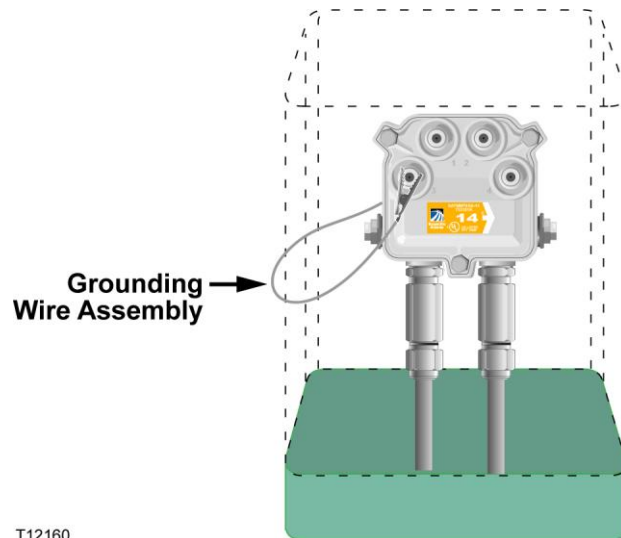


Proceed to step 6.

- 5 Attach a grounding wire assembly to the strand clamp bolt on the pedestal and a drop port F-connector.

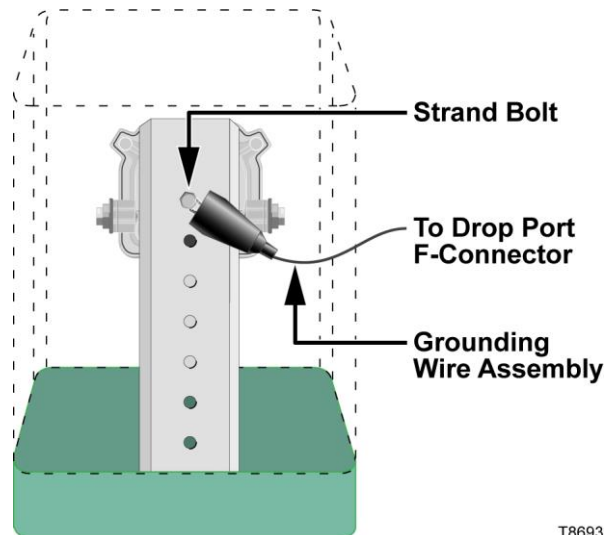
## Chapter 2 Installing the Tap

Front View:



T12160

Back View:



T8693

Proceed to step 6.

- 6 Pull the faceplate straight out from the housing. You need to use a small amount of force to pull the faceplate out.



### CAUTION:

Handle the faceplate with care to avoid damage to the circuitry mounted to the rear of the faceplate.

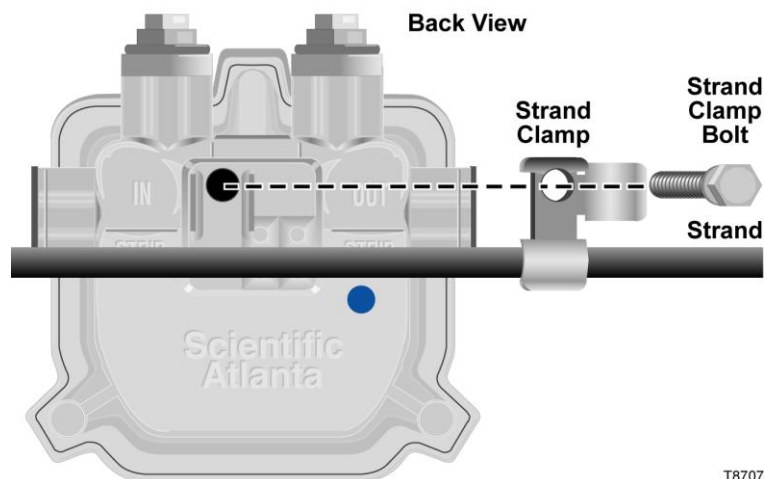
## Installing the Tap Housing on a Strand

The strand-mounted configuration has the feeder cable entering one side of the unit and exiting the other side. The unit has one strand clamp with a strand clamp bolt and uses a standard cable strand for mounting.

### To Install the Tap Housing on a Strand

Follow these steps to install a tap housing on a strand.

- 1 Begin this procedure with the faceplate removed. Refer to *To Remove the Faceplate* (on page 20).
- 2 Using a 3/8-in. wrench, loosen the strand clamp bolt.
- 3 Attach the housing to the strand making sure that the strand enters the strand clamp.

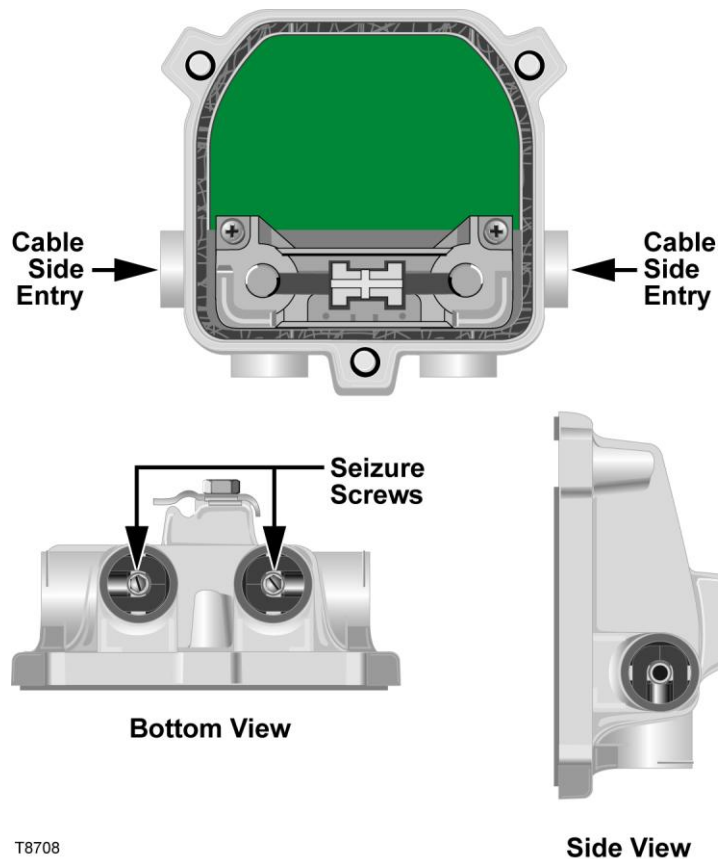


T8707

- 4 Secure the strand clamp to the strand by tightening the strand clamp bolt with a 3/8-in. wrench from 30 in-lb to 40 in-lb (3.4 Nm to 4.5 Nm).

## Chapter 2 Installing the Tap

- Using a 3/16-in. hex-head driver or 3/16-in. straight blade screwdriver, loosen the two seizure screws inside the housing.



- Thread the prepared KS-connectors into the housing at the cable side entry port locations as shown in the figure above. Make sure to tighten the connector according to the manufacturer's recommended torque specification, typically 15 ft-lb to 25 ft-lb (20.3 Nm to 33.9 Nm), but not to exceed 60 ft-lb (81.3 Nm).
- Using a 3/16-in. hex-head driver or 3/16-in. straight blade screwdriver, tighten the two seizure screws from 15 in-lb to 20 in-lb (1.7 Nm to 2.3 Nm). See the diagram in step 5 for the location of the two seizure screws.
- Replace the end plugs on the unused entry ports and torque with a 3/8-in. hex wrench from 50 in-lb to 60 in-lb (5.6 Nm to 6.8 Nm).
- Attach the faceplate to the housing. Refer to *To Mount the Faceplate* (on page 27).
- Attach the drop cable (RG-6 or RG-59) to the tap faceplate.

**Important:** For any drop cables that will have AC power activated, be sure that power blocking device(s) are installed at the home to prevent AC from passing to subscriber televisions, set-top converters, or FM receivers. AC power must only be allowed to pass to the telephony equipment requiring it.

**Note:** Be sure to provide strain relief for the coax drop cable per manufacturer's recommendation, and terminate all unused F-ports with 75  $\Omega$  terminators.

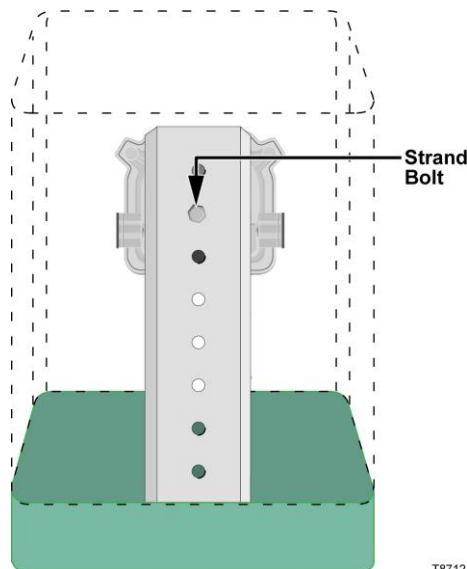
## Installing the Tap Housing in a Pedestal

The pedestal-mounted configuration has the feeder cable entering and exiting the unit from the bottom. The tap without traps or filters fits in a 6-in. round or square pedestal. A larger pedestal is needed if traps or filters are installed.

### To Install the Tap Housing in a Pedestal

Follow these steps to install a tap housing in a pedestal.

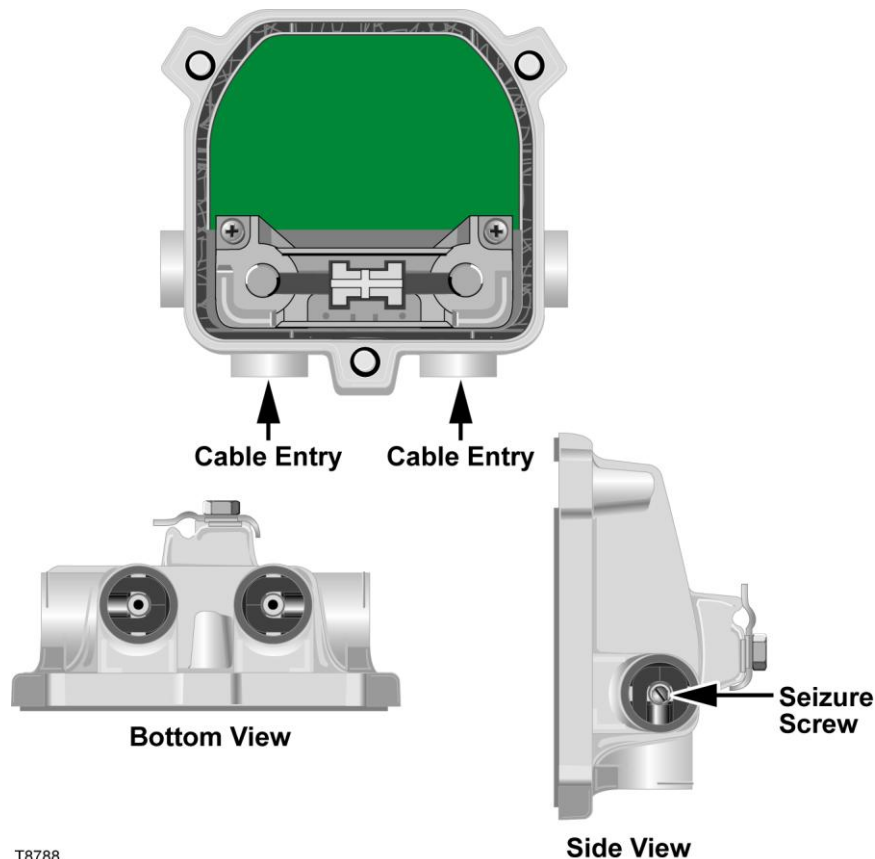
- 1 Begin this procedure with the faceplate removed. Refer to *To Remove the Faceplate* (on page 20).
- 2 Using a 3/8-in. wrench, remove the strand bolt and strand clamp from the housing.
- 3 Mount the housing to the pedestal-mounting bracket using the strand bolt. Use the strand clamp as a spacer, if necessary.



- 4 Using a 3/8-in. wrench, tighten the strand bolt from 30 in-lb to 40 in-lb (3.4 Nm to 4.5 Nm).

## Chapter 2 Installing the Tap

- Using a 3/16-in. hex-head driver or 3/16-in. straight blade screwdriver, loosen the two seizure screws inside the housing.



T8788

- Thread the prepared KS-connectors into the housing at the cable side entry port locations as shown in the figure above. Make sure to tighten the connector according to the manufacturer's recommended torque specification, typically 15 ft-lb to 25 ft-lb (20.3 Nm to 33.9 Nm), but not to exceed 60 ft-lb (81.3 Nm).
- Using a 3/16-in. hex-head driver or 3/16-in. straight blade screwdriver, tighten the two seizure screws from 15 in-lb to 20 in-lb (1.7 Nm to 2.3 Nm). See the diagram in step 5 for the location of the two seizure screws.
- Replace the end plugs on the unused entry ports and torque with a 3/8-in. hex wrench from 50 in-lb to 60 in-lb (5.6 Nm to 6.8 Nm).
- Attach the faceplate to the housing. Refer to *To Mount the Faceplate* (on page 27).
- Attach the drop cable (RG-6 or RG-59) to the tap faceplate.

**Important:** For any drop cables that will have AC power activated, be sure that power blocking device(s) are installed at the home to prevent AC from passing to subscriber televisions, set-top converters, or FM receivers. AC power must only be allowed to pass to the telephony equipment requiring it.

**Note:** Be sure to provide strain relief for the coax drop cable per manufacturer's recommendation, and terminate all unused F-ports with 75  $\Omega$  terminators.



## Mounting the Faceplate

After mounting the housing and connecting the feeder cables, you are ready to install the faceplate in the tap housing.

### To Mount the Faceplate

Follow these steps to attach the faceplate to the housing.

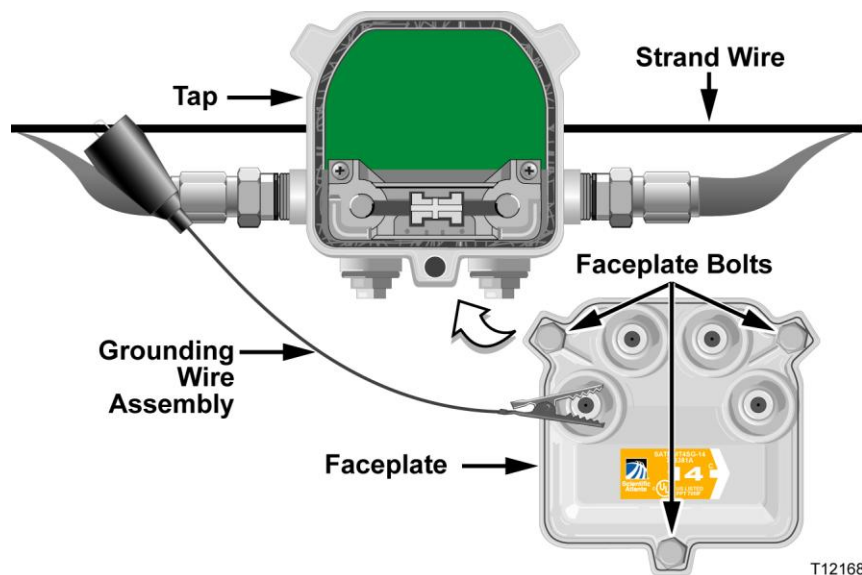
- 1 If the housing is installed on a strand, go to step 2.  
If the housing is installed in a pedestal, go to step 3.



#### WARNING:

Protect yourself from electric shock and your equipment from damage. Certain components can deliver an electrical shock.

- 2 Attach a grounding wire assembly to the strand wire and a drop port F-connector.

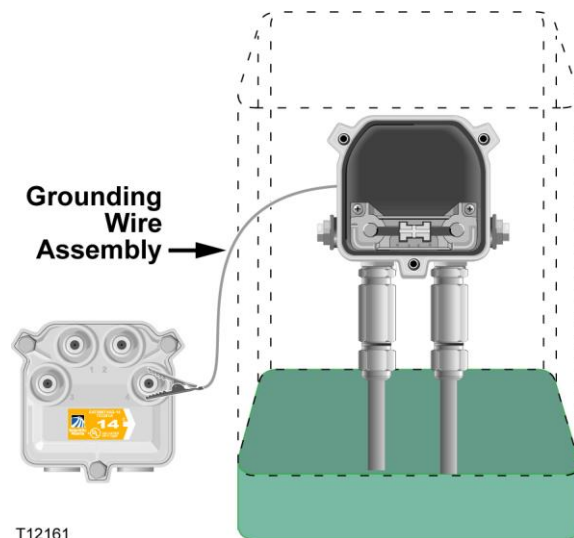


Proceed to step 4.

- 3 Attach a grounding wire assembly to the strand clamp bolt on the pedestal and a drop port F-connector.

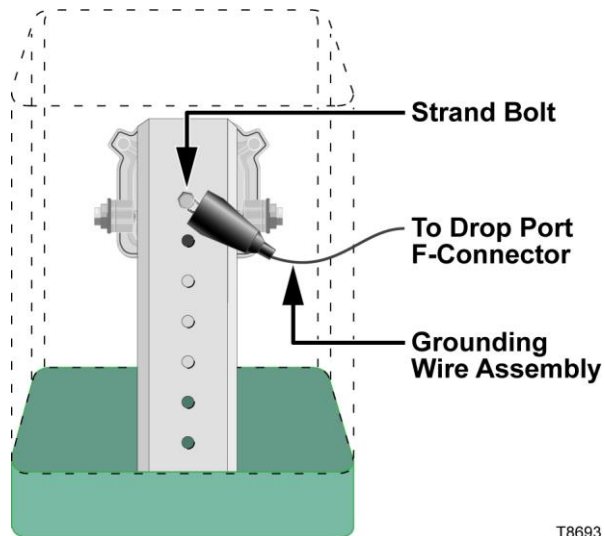
## Chapter 2 Installing the Tap

Front View:



T12161

Back View:



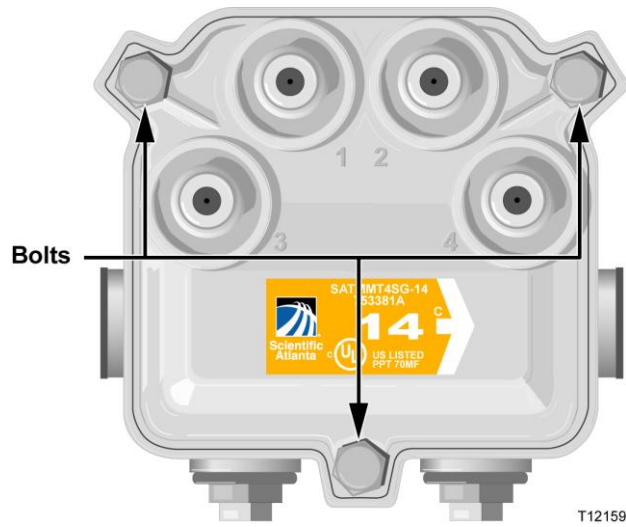
T8693

Proceed to step 4.

- 4 Inspect the housing gasket and all mating surfaces. Wipe off any dirt, moisture, or debris.
- 5 Place the faceplate on the tap housing. Push firmly on the faceplate to seat it in the housing.
- 6 Remove the grounding wire assembly.

## Mounting the Faceplate

- 7 Using a 3/8 in. wrench, tighten the faceplate bolts from 50 in-lb to 60 in-lb (5.6 Nm to 6.8 Nm).

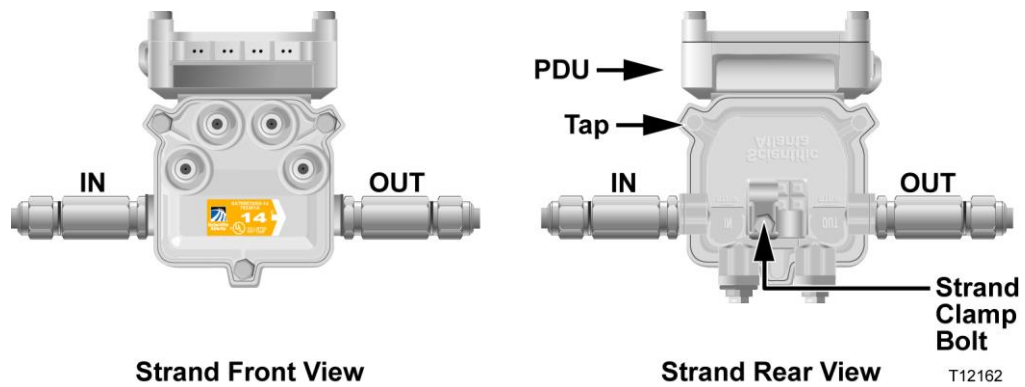


## Installing the PDU

The Power Distribution Unit (PDU) upgrades any Surge-Gap Multimedia Tap to allow subscriber drop powering capability. The tap may be mounted on a strand or in a pedestal, and the drop may be either coax or twisted pair.

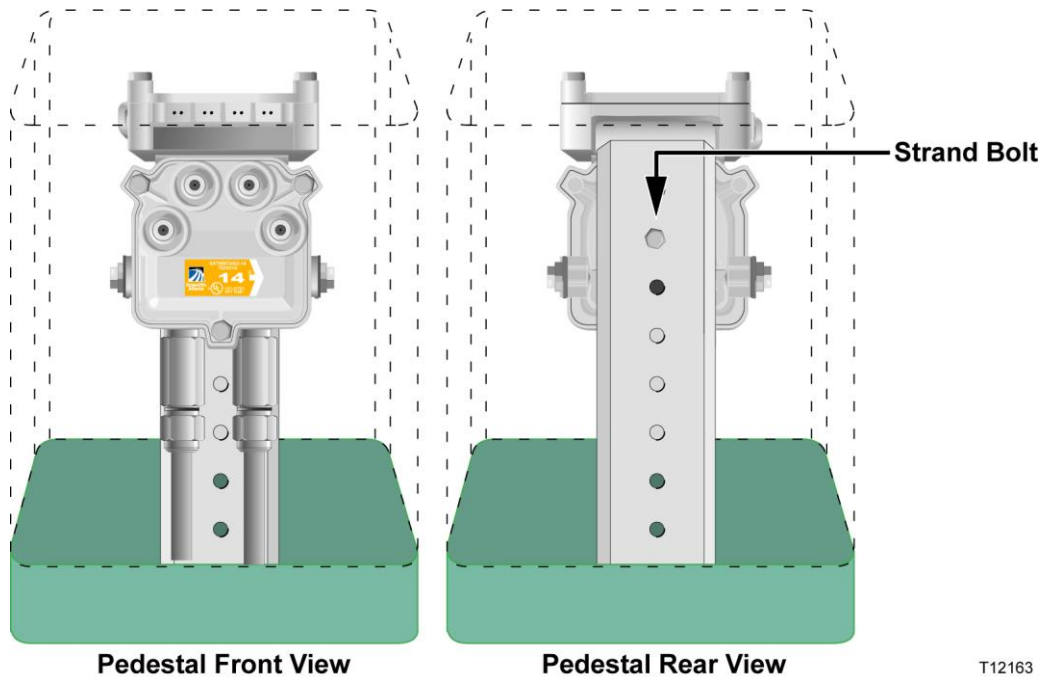
### Strand Mounting Configuration

The Multimedia Tap with a PDU can be mounted in a strand (aerial) position. Refer to the following diagrams for strand mounting configuration.



## Pedestal Mounting Configuration

The Multimedia Tap with a PDU can be mounted on a pedestal. Refer to the following diagram of a Multimedia Tap with a PDU for the recommended pedestal-mounting configuration.



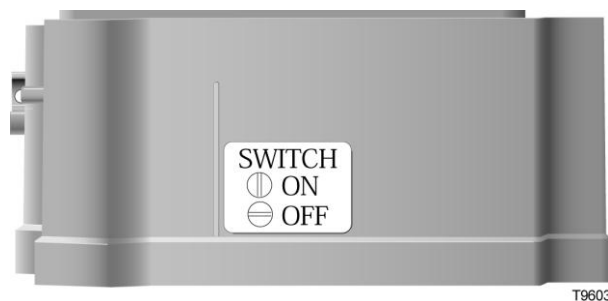
T12163

## Installing the Coax PDU

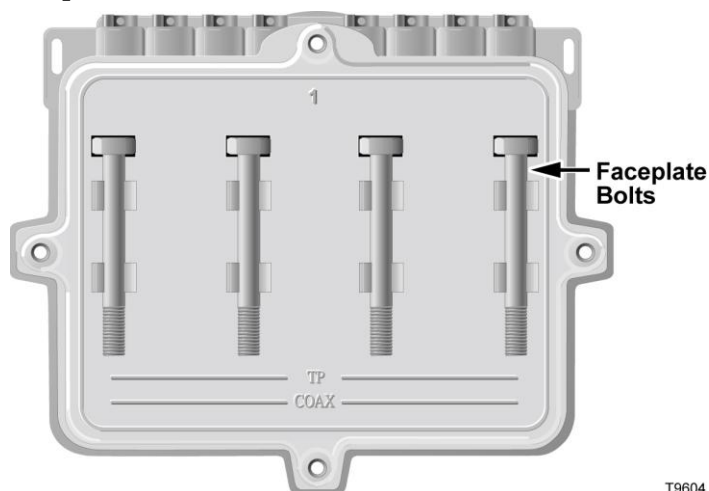
Follow these steps to install the Coax PDU.

- 1 Ensure that the PDU AC power switches are in the “OFF” position. If the PDU is “ON,” use a flat-bladed screwdriver to turn the switch off. Refer to the illustration below for location of the “ON” and “OFF” positions of the AC power switches in the 8-way PDU.

**Important:** It is important to perform this step now in order to prevent unwanted AC power transmission on a subscriber drop during installation.



- 2 Using a 3/8 in. wrench, remove the faceplate from the existing tap by loosening the 3/8-in. faceplate bolts. See *Removing the Faceplate* (on page 20).
- 3 Remove the longer faceplate bolts attached to the plastic protective cover of the PDU. Replace the shorter bolts removed from the faceplate with the existing faceplate bolts.



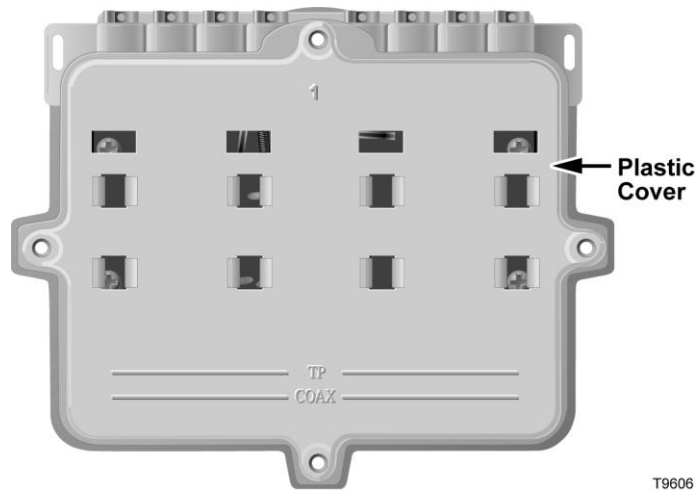
- 4 Remove the plastic protective cover from the Multimedia Tap faceplate.



**CAUTION:**

Be careful not to disturb or damage electrical components.

- Remove the plastic protective cover from the Coax PDU.



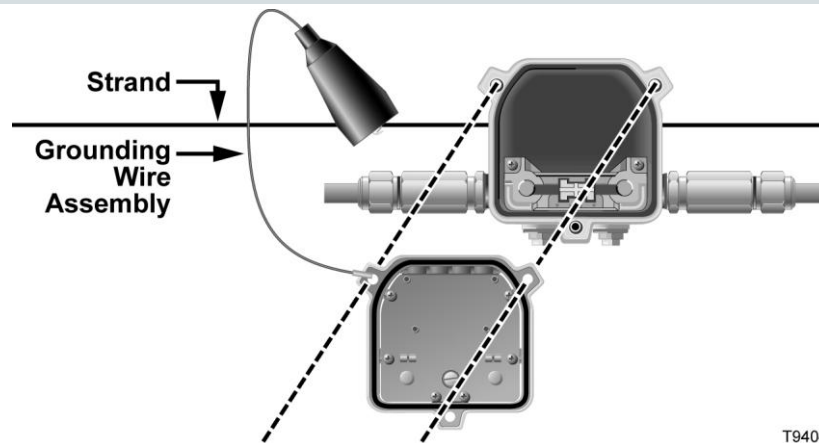
- Proceed to *To Install the Coax PDU on a Strand-Mounted Surge-Gap Multimedia Tap* (on page 33) or *To Install the Coax PDU on a Pedestal-Mounted Surge-Gap Multimedia Tap* (on page 34) to complete your installation.

## To Install the Coax PDU on a Strand-Mounted Surge-Gap Multimedia Tap

Follow these steps to install the Coax PDU on a strand-mounted tap.

- Attach the grounding wire assembly to the strand wire and the nearest PDU bolt clearance hole. Refer to the following diagrams in this step for the location of the grounding wire assembly.

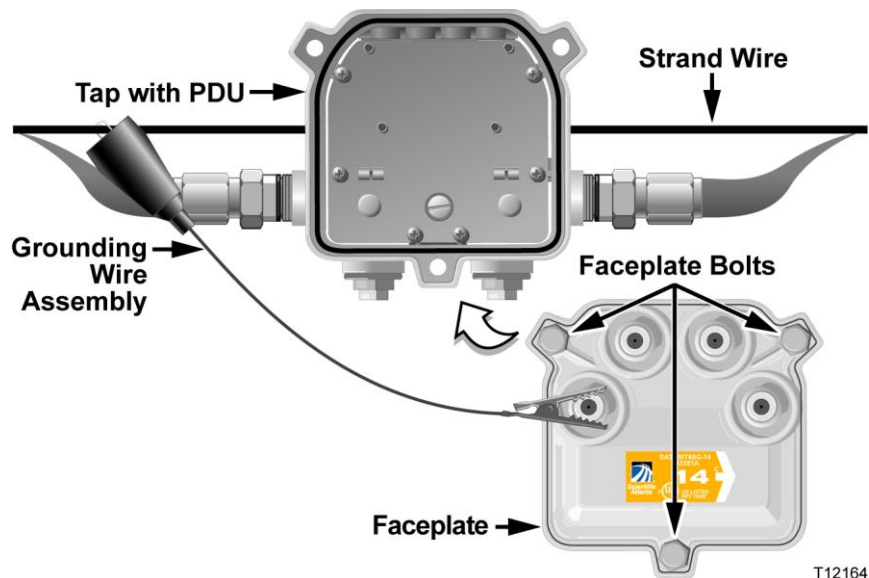
**⚠ WARNING:**  
Protect yourself from electric shock and your equipment from damage. Certain components can deliver an electrical shock.



- Press the PDU onto the back housing of the tap. Refer to the illustration in step 3.

## Chapter 2 Installing the Tap

- 3 Remove the grounding wire assembly from the PDU bolt clearance hole and attach this end to the faceplate drop port F-connector.



- 4 Proceed to *To Attach the Faceplate to the Housing* (on page 35).

### To Install the Coax PDU on a Pedestal-Mounted Surge-Gap Multimedia Tap

Follow these steps to install the Coax PDU on a pedestal-mounted tap.

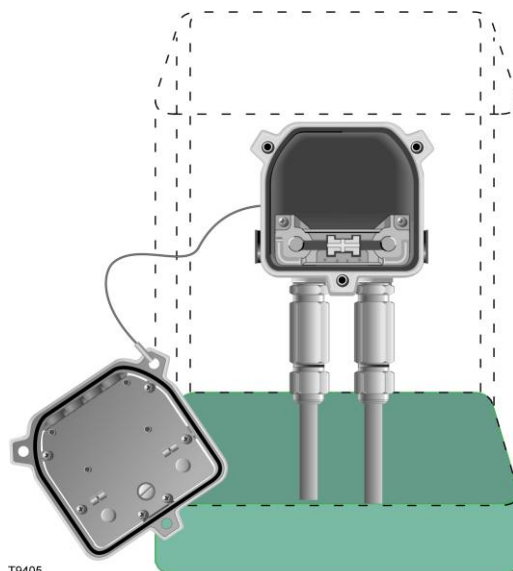
- 1 Attach the grounding wire assembly to the strand clamp bolt and the nearest PDU bolt clearance hole. Refer to the following diagrams.



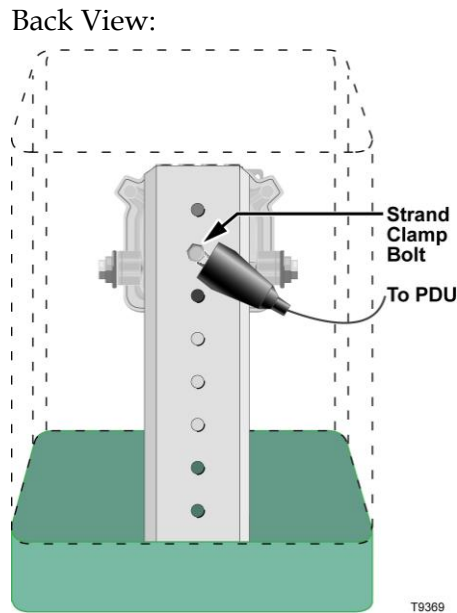
#### WARNING:

Protect yourself from electric shock and your equipment from damage. Certain components can deliver an electrical shock.

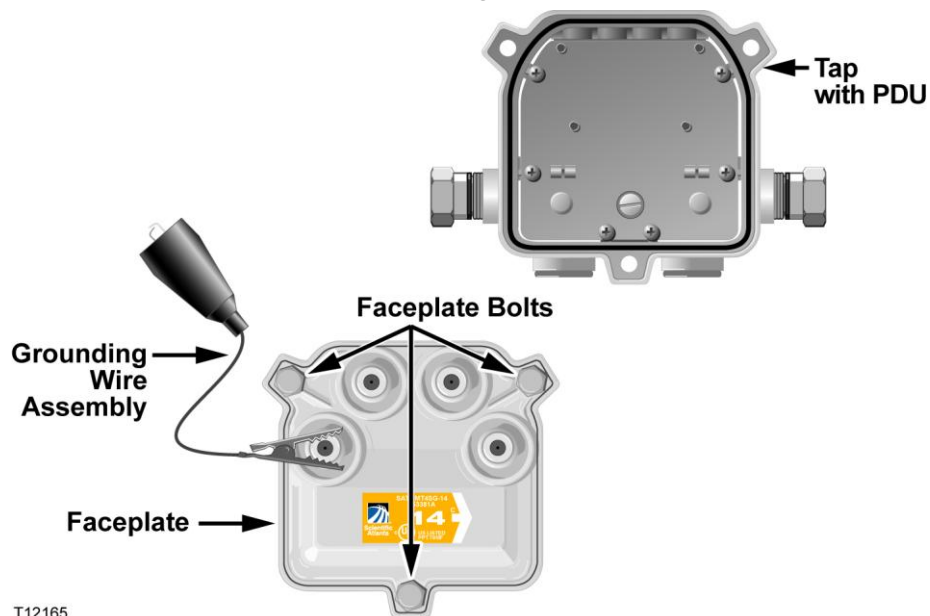
Front view:







- 2 Press the PDU onto the back housing of the tap.



- 3 Remove the grounding wire assembly from the PDU bolt clearance hole and attach this end to the faceplate drop port F- connector.
- 4 Proceed to *To Attach the Faceplate to the Housing* (on page 35).

## To Attach the Faceplate to the Housing

Follow these steps to install the faceplate to the housing.

- 1 Carefully install the tap faceplate to the front of the PDU. Using the longer faceplate bolts, tighten the 3/8-in. faceplate bolts from 50 in-lb to 60 in-lb (5.6 Nm to 6.8 Nm).

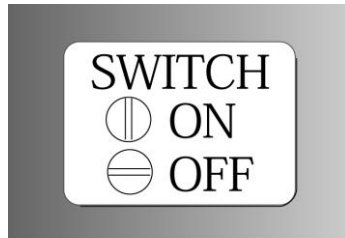
## Chapter 2 Installing the Tap

- 2 Remove the grounding wire assembly.
- 3 On the desired port, turn the switch from the "OFF" to "ON" position using a flat-bladed screwdriver. The switches are marked with the port numbers.



**WARNING:**

Please use extreme caution when turning the switch "ON" and "OFF" to prevent unwanted AC power transmission on a subscriber loop.



T9403

## Installing the Twisted Pair PDU

Follow these steps to install the Twisted Pair PDU.

**Note:** Several manufacturers make coextruded cable with coax, twisted pair, and messenger wire in one common jacket. It is necessary to use this type of wire for proper strand (aerial) installation. For underground installations, it is acceptable to use cable without the messenger wire.

**Important:** If you are installing the twisted pair version without PTCs installed, do not insert the PTCs before you begin your installation procedures. This will result in AC power transmission on the subscriber drop during installation.

- 1 Using a 3/8 in. wrench, remove the faceplate from the existing tap by loosening the 3/8-in. faceplate bolts. Refer to *To Remove the Faceplate* (on page 20).
- 2 Remove the longer faceplate bolts attached to the plastic protective cover of the PDU. Replace the shorter bolts removed from the faceplate with these faceplate bolts.

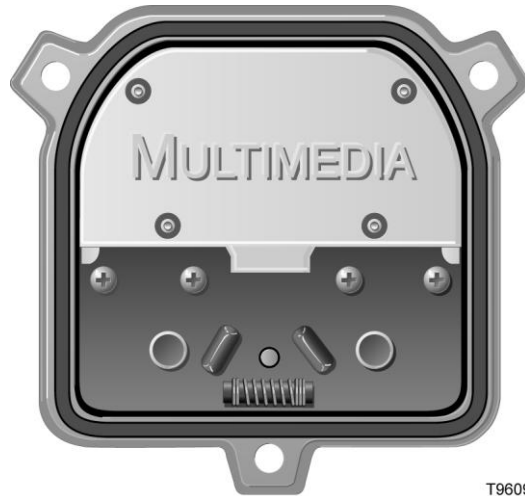


- 3 Remove the plastic protective cover from the Multimedia Tap faceplate.



**CAUTION:**

Be careful not to disturb or damage electrical components.




T9609

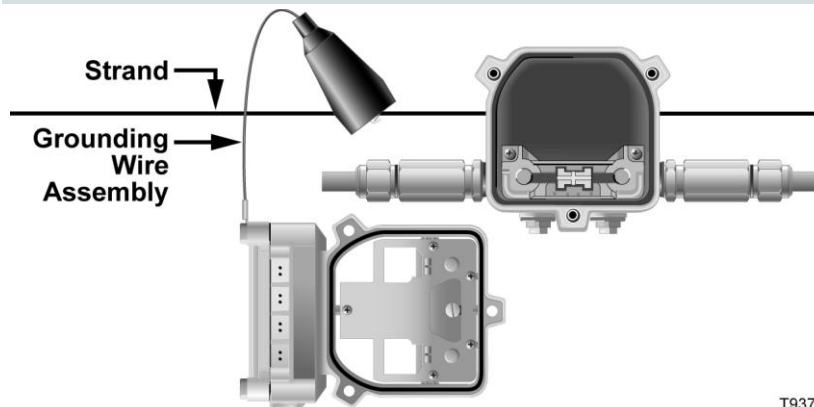
- 4 Remove the plastic protective cover from the Twisted Pair PDU.
- 5 Proceed to *To Install the Twisted Pair PDU on a Strand-Mounted Surge-Gap Multimedia Tap* (on page 38) or *To Install the Twisted Pair PDU on a Pedestal-Mounted Surge-Gap Multimedia Tap* (on page 39) to complete your installation.

## To Install the Twisted Pair PDU on a Strand-Mounted Surge-Gap Multimedia Tap

Follow these steps to install the Twisted Pair PDU on a strand-mounted tap.

- 1 Attach the grounding wire assembly to the strand wire and the nearest PDU access cover bolt. Refer to the following diagram for the location of the grounding wire assembly.

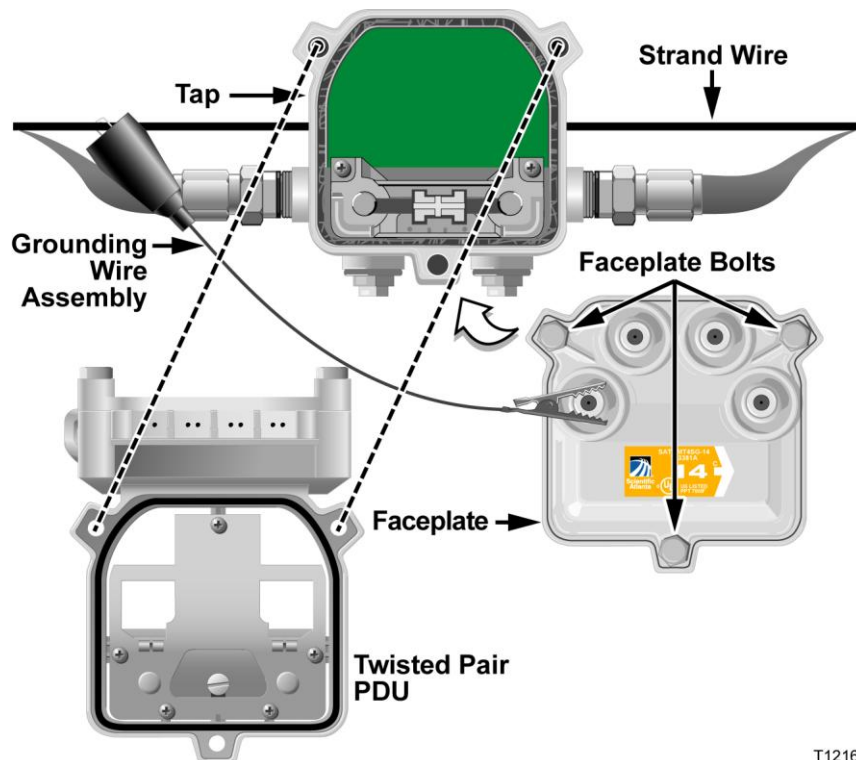
 **WARNING:**  
Protect yourself from electric shock and your equipment from damage!  
Certain components can deliver an electrical shock during hot installation.



T9373

- 2 Push the Twisted Pair PDU onto the back housing of the tap. Refer to the illustration in step 3.

- 3 Remove the grounding wire assembly from the PDU access cover bolts and attach this end to the faceplate drop port F-connector.



T12166

- 4 Proceed to *To Attach the Faceplate to the Housing* (on page 35).

## To Install the Twisted Pair PDU on a Pedestal-Mounted Surge-Gap Multimedia Tap

Follow these steps to install the Twisted Pair PDU on a pedestal-mounted tap.

- 1 Attach the grounding wire assembly to the strand clamp bolt and the nearest PDU access cover bolt. Refer to the following diagrams.

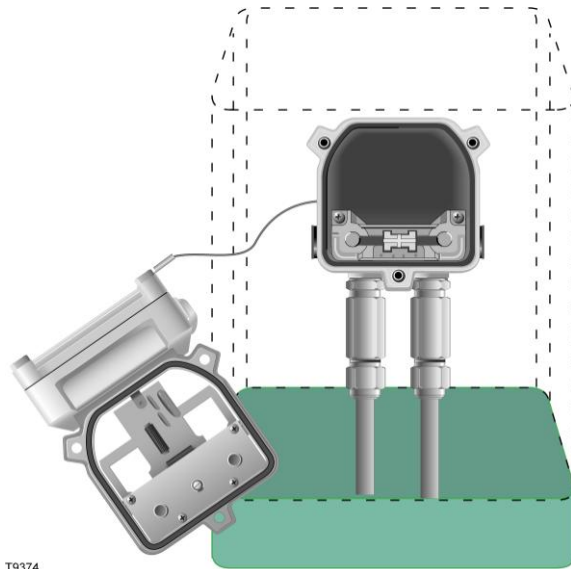


**WARNING:**

Protect yourself from electric shock and your equipment from damage!  
Certain components can deliver an electrical shock during hot installation.

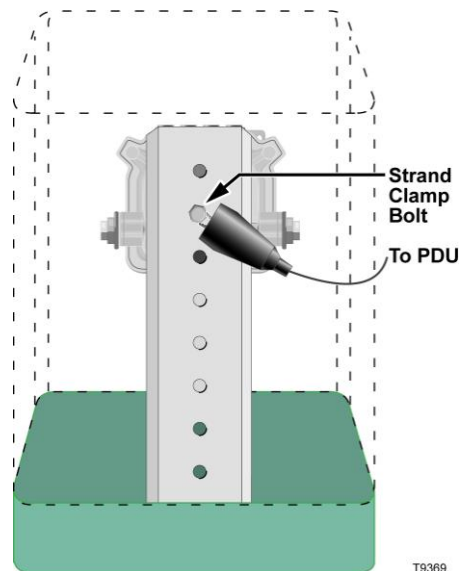
## Chapter 2 Installing the Tap

Front View:



T9374

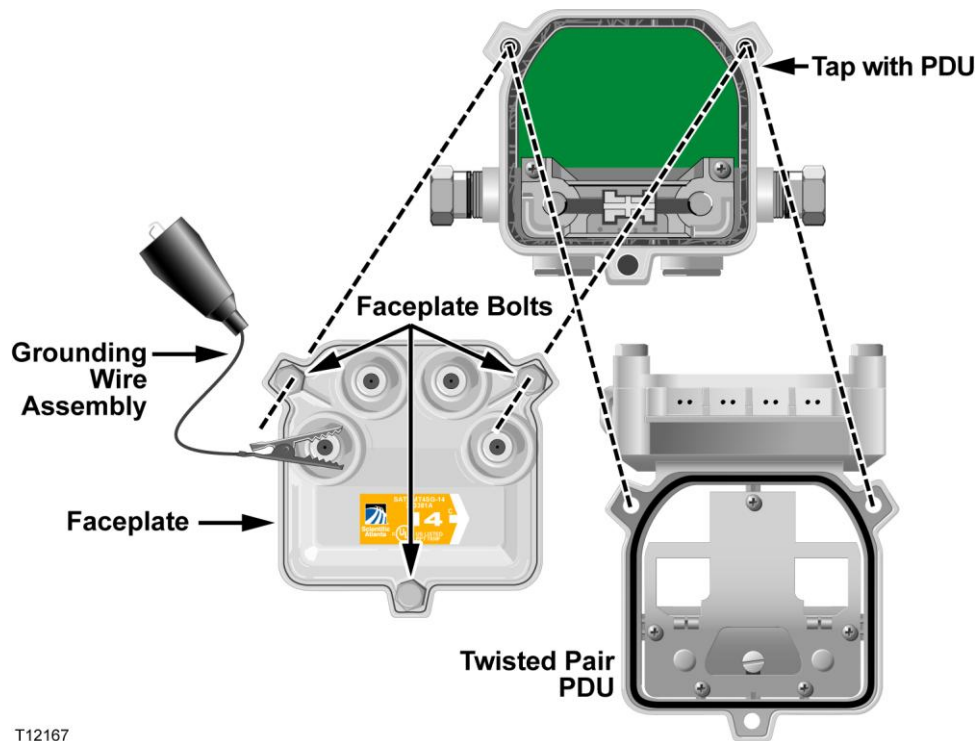
Back View:



T9369

- 2 Push the Twisted Pair PDU onto the back housing of the tap. Refer to the illustration in step 3.

- 3 Remove the grounding wire assembly from the PDU access cover bolts and attach this end to the faceplate drop port F-connector.



T12167

- 4 Proceed to *To Attach the Faceplate to the Housing* (on page 35).

## To Attach the Faceplate to the Housing

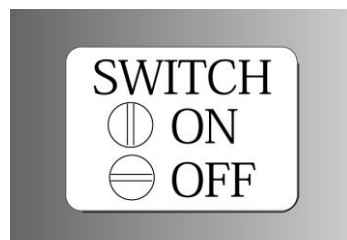
Follow these steps to install the faceplate to the housing.

- 1 Carefully install the tap faceplate to the front of the PDU. Using the longer faceplate bolts, tighten the 3/8-in. faceplate bolts from 50 in-lb to 60 in-lb (5.6 Nm to 6.8 Nm).
- 2 Remove the grounding wire assembly.
- 3 On the desired port, turn the switch from the "OFF" to "ON" position using a flat-bladed screwdriver. The switches are marked with the port numbers.



**WARNING:**

Please use extreme caution when turning the switch "ON" and "OFF" to prevent unwanted AC power transmission on a subscriber loop.



T9403

## To Attach the Twisted Pair Cable

Follow these steps to attach the Twisted Pair cable.

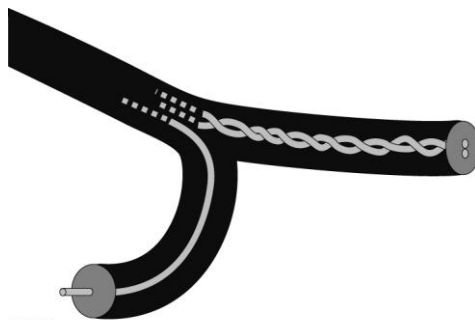
- 1 Open the PDU access cover by loosening the 3/8-inch screws.
- 2 Carefully split the parallel wire to separate the twisted pair sheath from the coax sheath.



### CAUTION:

A twisted pair power installation requires that the cable be prepared to properly mate with the twisted pair connectors.

- You must use a utility knife or similar tool to cut the web close to the twisted pair sheath without nicking the outer cover of the twisted pair or the coax.
- Cut back the web a distance of 16 in. to 18 in. (40.6 cm to 45.7 cm), or whatever is appropriate for your installation, so that the coax can gently bend to connect to the drop F-ports and the twisted pair can enter at the bottom of the PDU.
- Ensure that the twisted pair sheath is prepared so that the outside of the sheath is circular as shown in the following diagram (with any burred edges removed).



T2354

- 3 Cut off approximately 2 inches (5.1cm) of the outer sheath so that the two twisted pair wires are exposed.

**Note:** The Twisted Pair PDU uses IDC connectors and does not require insulation to be removed.



T2355

- 4 Lift the desired connector into the open position.



### WARNING:

If installing the Twisted Pair PDU with PTCs installed (part numbers 750595 and 750596), avoid electrical shock. AC power is present on the IDCs during installation.



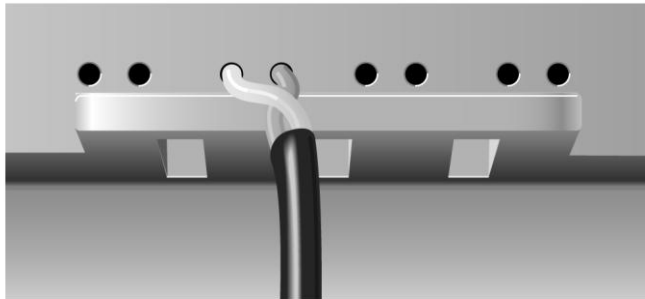


**CAUTION:**

If installing the Twisted Pair PDU with PTCs installed (part numbers 750595 and 750596), use extreme caution when inserting the IDCs, to prevent unwanted AC power transmission on the twisted pair.

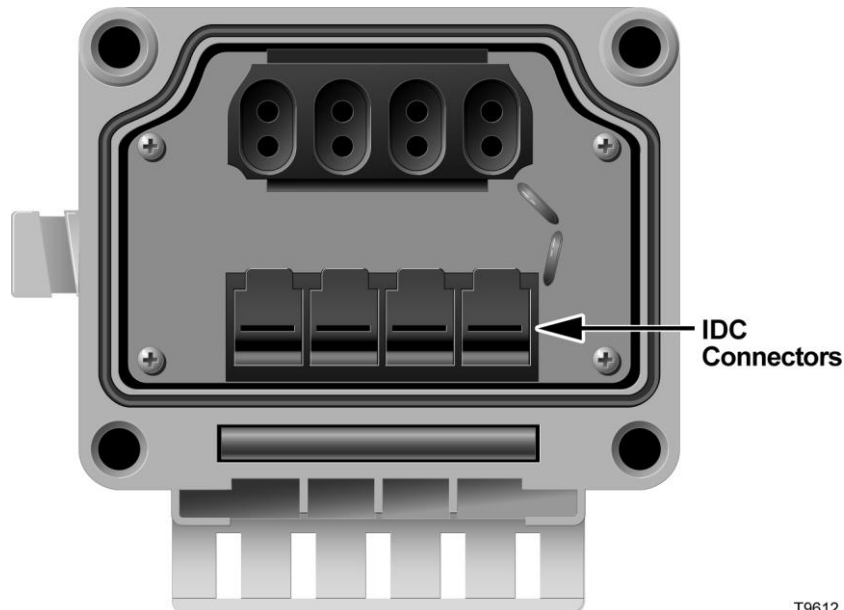
- 5 Simultaneously, push the ends of the two twisted pair wires through the small holes and into the respective hot and ground connectors.

**Note:** The connector is labeled HOT and GND.



T9611

- 6 Press down on the IDC connector until it is fully seated.

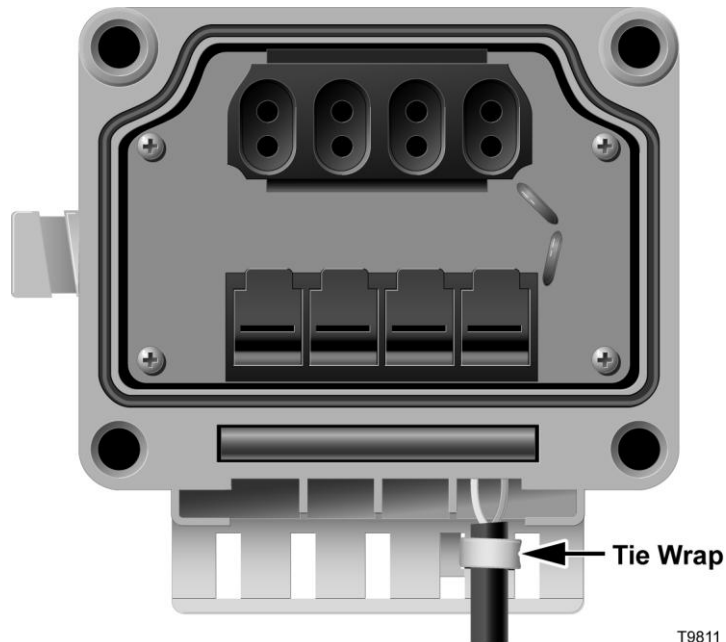


T9612

- 7 Continue with additional twisted pair connections if necessary, and then proceed to the next step.

## Chapter 2 Installing the Tap

- Using a small cable tie, secure the twisted-pair sheath to the bottom of the PDU.



### CAUTION:

Be sure to use a high-quality cable tie that is flame-resistant as well as resistant to ultraviolet light, chemicals, and temperature extremes.

**Note:** The width of the cable tie must be 0.150 in. (3.8 mm) or less. Suggested cable tie materials are listed, in descending preference, as follows:

- Stainless steel
- Halar (fluorocarbon - ECTFE)
- Tefzel (fluorocarbon - ETFE)
- High-density polyethylene
- Weather resistant polypropylene

- If installing PTCs, proceed to step 10.

If PTCs are already installed (part numbers 750595 and 750596), proceed to step 12.

- On the desired port, insert PTC, part number 592049, into the appropriate PTC guide slot as shown.



### WARNING:

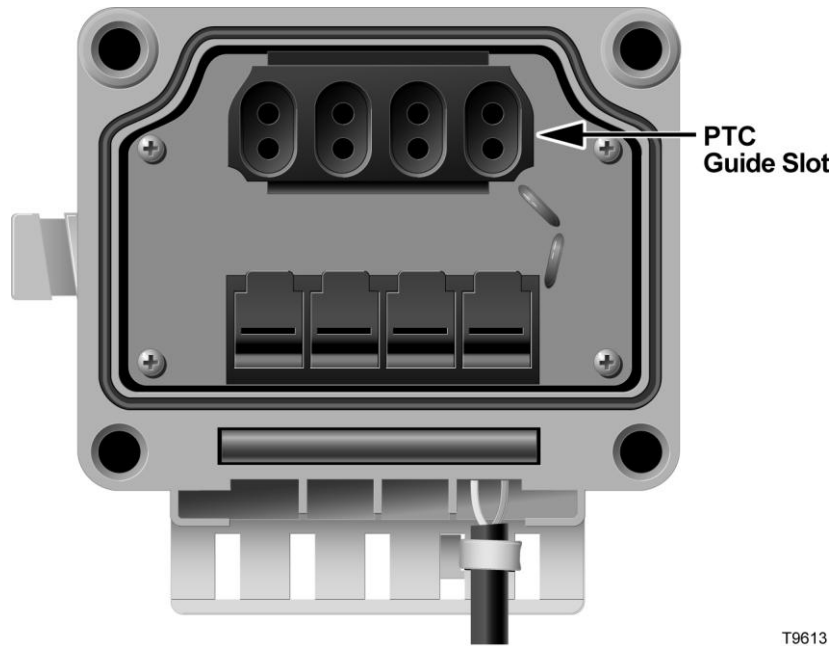
Avoid electrical shock. AC power is present on the PTC during installation. Do not touch exposed metal on the PTC. Use the plastic covered PTC.



### CAUTION:

When inserting PTCs, please use extreme caution to prevent unwanted AC power transmission on the twisted pair.

## Installing the Twisted Pair PDU



T9613

- 11 After the twisted pair wires are connected and PTCs are inserted, apply RTV to fill the compartment (area near the tie wrap) and seal the ends of the twisted pair jacket.
- 12 Close the PDU cover and torque the PDU cover screws from 50 in-lb to 60 in-lb (5.6 Nm to 6.8 Nm).
- 13 Attach the coax cable to the tap's drop F-ports as desired. Make sure to tighten according to the manufacturer's recommended torque specification.  
**Note:** Provide strain relief for the coax drop cable per manufacturer's recommendation.
- 14 Install 75  $\Omega$  terminators on all unused ports of the faceplate.



### CAUTION:

Avoid damage to this product. Before installing any terminators, make sure AC is not present on the drop ports.



# 3

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## Customer Support Information

### **If You Have Questions**

If you have technical questions, call Cisco Services for assistance. Follow the menu options to speak with a service engineer.

Access your company's extranet site to view or order additional technical publications. For accessing instructions, contact the representative who handles your account. Check your extranet site often as the information is updated frequently.



# A

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## Technical Information

### Introduction

Knowledge of product specifications and cable connectors can assist you in configuring the Surge-Gap Multimedia Tap in your HFC network.

### Scope

This appendix covers important technical aspects of the Surge-Gap Multimedia Tap System.

### In This Appendix

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■ Part Numbers .....	52

## Specifications

The following are the specifications for the tap system.

### Notes:

- Specifications are subject to change without notice.
- Please refer to product data sheets for RF performance specifications.

## Dimensions

The table below lists the specifications for the dimensions of the PDUs and all the Surge-Gap Multimedia Taps.

Item	Specification
Surge-Gap Multimedia Taps 2/4-way	3.6 in. H x 3.6 in. W x 3 in. D (91.44 mm H x 91.44 mm W x 76.2 mm D)
Surge-Gap Multimedia Taps 2-/4-/8-way	4.25 in. H x 5.25 in. W x 3 in. D (107.95-mm H x 133.35 mm W x 76.2 mm D)
Twisted Pair PDU 4-way	5.2 in. H x 3.83 in. W x 3 in. D (132.1 mm H x 97.3 mm W x 76.2 mm D)
Twisted Pair PDU 8-way	5.93 in. H x 5.62 in. W x 3 in. D (150.6 mm H x 142.7 mm W x 76.2 mm D)
Coax PDU 4-way	3.7 in H x 3.8 in. W x 1.81 in. D (19.3 mm H x 97.8 mm W x 46 mm D)
Coax PDU 8-way	4.46 in. H x 5.64 in. W x 1.52 in. D (113.3 mm H x 143.3 mm W x 38.73 mm D)

## Surge-Gap Multimedia Taps Electrical

The table below lists the electrical specifications for the 2/4-way and 2-/4-/8-way Surge-Gap Multimedia Tap Systems.

Item	Specification
Operational frequency bandwidth	5 MHz to 1000 MHz
Thru current rating	12 A, 60/90 V AC
Impedance	75 $\Omega$
Interface	F-ports
Operating temperatures	-40°F to +140°F (-40°C to +60°C)



## PDU Electrical

The table below lists the electrical specifications for the PDU.

Item	Specification
PDU thru current rating	12 A, 60/90 V AC
PDU current limiting	250 mA to 300 mA @ 60°C per drop
PDU surge resistance	1 kV
PDU twisted-pair connection	18 AWG to 24 AWG solid

## Mechanical

The table below lists the mechanical specifications for the PDUs and all the Surge-Gap Multimedia Taps.

Item	Specification
Surge-Gap Multimedia Tap: 2-/4-way and 2-/4-/8-way	<ul style="list-style-type: none"> <li>■ AL360T housing with powder coating for superior environmental protection</li> <li>■ Sealed and swaged extended F-ports for maximum resistance to moisture ingress</li> <li>■ Tin-plated brass F-ports to ensure a corrosion-resistant drop interface</li> <li>■ Component covers for additional protection of faceplate circuitry during maintenance</li> <li>■ Versatile housing design permits aerial, pedestal, or MDU mounting schemes</li> <li>■ Operating temperature from -40°F to +140°F (-40°C to +60°C)</li> <li>■ EMI shielding minimum -100 dB</li> <li>■ Pressure test at 10 psi for 60 seconds under water</li> </ul>
PDU	AL360 housing with powder coating for superior environmental protection

## Part Numbers

### Surge-Gap Multimedia Taps

The table below lists the part numbers, model numbers, and descriptions of the Surge-Gap Multimedia Tap Systems.

#### Standard Taps

Description	Part Number
Surge-Gap Tap, 2-way, 4 dB	753370
Surge-Gap Tap, 2-way, 8 dB	753371
Surge-Gap Tap, 2-way, 11 dB	753372
Surge-Gap Tap, 2-way, 14 dB	753373
Surge-Gap Tap, 2-way, 17 dB	753374
Surge-Gap Tap, 2-way, 20 dB	753375
Surge-Gap Tap, 2-way, 23 dB	753376
Surge-Gap Tap, 2-way, 26 dB	753377
Surge-Gap Tap, 2-way, 29 dB	753378
Surge-Gap Tap, 4-way, 8 dB	753379
Surge-Gap Tap, 4-way, 11 dB	753380
Surge-Gap Tap, 4-way, 14 dB	753381
Surge-Gap Tap, 4-way, 17 dB	753382
Surge-Gap Tap, 4-way, 20 dB	753383
Surge-Gap Tap, 4-way, 23 dB	753384
Surge-Gap Tap, 4-way, 26 dB	753385
Surge-Gap Tap, 4-way, 29 dB	753386

#### Standard Tap - Surge Gap Faceplate

Description	Part Number
Surge-Gap Faceplate, 2-way, 4 dB	753394
Surge-Gap Faceplate, 2-way, 8 dB	753395
Surge-Gap Faceplate, 2-way, 11 dB	753396
Surge-Gap Faceplate, 2-way, 14 dB	753397
Surge-Gap Faceplate, 2-way, 17 dB	753398

<b>Description</b>	<b>Part Number</b>
Surge-Gap Faceplate, 2-way, 20 dB	753399
Surge-Gap Faceplate, 2-way, 23 dB	753400
Surge-Gap Faceplate, 2-way, 26 dB	753401
Surge-Gap Faceplate, 2-way, 29 dB	753402
Surge-Gap Faceplate, 4-way, 8 dB	753403
Surge-Gap Faceplate, 4-way, 11 dB	753404
Surge-Gap Faceplate, 4-way, 14 dB	753405
Surge-Gap Faceplate, 4-way, 17 dB	753406
Surge-Gap Faceplate, 4-way, 20 dB	753407
Surge-Gap Faceplate, 4-way, 23 dB	753408
Surge-Gap Faceplate, 4-way, 26 dB	753409
Surge-Gap Faceplate, 4-way, 29 dB	753410

### Full Profile Taps

<b>Description</b>	<b>Part Number</b>
Surge-Gap Tap, 2-way, 4 dB	753418
Surge-Gap Tap, 2-way, 8 dB	753419
Surge-Gap Tap, 2-way, 11 dB	753420
Surge-Gap Tap, 2-way, 14 dB	753421
Surge-Gap Tap, 2-way, 17 dB	753422
Surge-Gap Tap, 2-way, 20 dB	753423
Surge-Gap Tap, 2-way, 23 dB	753424
Surge-Gap Tap, 2-way, 26 dB	753425
Surge-Gap Tap, 2-way, 29 dB	753426
Surge-Gap Tap, 4-way, 8 dB	753427
Surge-Gap Tap, 4-way, 11 dB	753428
Surge-Gap Tap, 4-way, 14 dB	753429
Surge-Gap Tap, 4-way, 17 dB	753430
Surge-Gap Tap, 4-way, 20 dB	753431
Surge-Gap Tap, 4-way, 23 dB	753432
Surge-Gap Tap, 4-way, 26 dB	753433
Surge-Gap Tap, 4-way, 29 dB	753434

### Chapter 3 Customer Support Information

<b>Description</b>	<b>Part Number</b>
Surge-Gap Tap, 8-way, 11 dB	753387
Surge-Gap Tap, 8-way, 14 dB	753388
Surge-Gap Tap, 8-way, 17 dB	753389
Surge-Gap Tap, 8-way, 20 dB	753390
Surge-Gap Tap, 8-way, 23 dB	753391
Surge-Gap Tap, 8-way, 26 dB	753392
Surge-Gap Tap, 8-way, 29 dB	753393

#### **Full Profile Taps - Surge Gap Faceplates**

<b>Description</b>	<b>Part Number</b>
Surge-Gap Faceplate, 2-way, 4 dB	753435
Surge-Gap Faceplate, 2-way, 8 dB	753436
Surge-Gap Faceplate, 2-way, 11 dB	753437
Surge-Gap Faceplate, 2-way, 14 dB	753438
Surge-Gap Faceplate, 2-way, 17 dB	753439
Surge-Gap Faceplate, 2-way, 20 dB	753440
Surge-Gap Faceplate, 2-way, 23 dB	753441
Surge-Gap Faceplate, 2-way, 26 dB	753442
Surge-Gap Faceplate, 2-way, 29 dB	753443
Surge-Gap Faceplate, 4-way, 8 dB	753444
Surge-Gap Faceplate, 4-way, 11 dB	753445
Surge-Gap Faceplate, 4-way, 14 dB	753446
Surge-Gap Faceplate, 4-way, 17 dB	753447
Surge-Gap Faceplate, 4-way, 20 dB	753448
Surge-Gap Faceplate, 4-way, 23 dB	753449
Surge-Gap Faceplate, 4-way, 26 dB	753450
Surge-Gap Faceplate, 4-way, 29 dB	753451
Surge-Gap Faceplate, 8-way, 11 dB	753411
Surge-Gap Faceplate, 8-way, 14 dB	753412
Surge-Gap Faceplate, 8-way, 17 dB	753413
Surge-Gap Faceplate, 8-way, 20 dB	753414
Surge-Gap Faceplate, 8-way, 23 dB	753415

<b>Description</b>	<b>Part Number</b>
Surge-Gap Faceplate, 8-way, 26 dB	753416
Surge-Gap Faceplate, 8-way, 29 dB	753417

## PDU's

The table below lists the part numbers and descriptions of the PDU's.

<b>Description</b>	<b>Part Number</b>
2/4-way coaxial-drop powering	738447
8-way coaxial-drop powering	738448
2/4-way twisted-pair powering	738445
8-way twisted-pair powering	738446
2/4-way twisted-pair powering with PTCs installed	750595
8-way twisted-pair powering with PTCs installed	750596
PTC Assemblies (1 bag of 100)	*592049

\* PTC Assembly required for use with the Twisted Pair PDU (sold separately).



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