ARISTA

QUICK START GUIDE

710HXP Series Ethernet Switch

CCS-710HXP-28TXH-4S **CCS-710HXP-20TNH-4S**

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Contents

Chapter 1

Overview

This guide is intended for network or security professionals and technicians who need to install the required Arista 710HXP Series Ethernet Switch.

The following topics are covered in this section:

1.1 Scope

This section lists the devices that are described in this guide:

> **Important:**
>
> Only qualified personnel should install, service, or replace this equipment.
>
> Seul le personnel qualifié doit installer, service, ou remplacer cet équipement.

- CCS-710HXP-28TXH-4S
- CCS-710HXP-20TNH-4S

1.2 Receiving and Inspecting the Equipment

Upon receiving the device, inspect the shipping boxes and record if there is any external damage. Retain the packing equipment if you suspect any part of the shipment is damaged; the carrier might need it inspected.

If the boxes were not damaged during transit, unpack them carefully. Do not discard any accessories that may have been packed in the same box as the switch.

Inspect the packing list and confirm that you received all the items listed. Compare the packing list with your purchase order. The Parts List section provides a list of components included with the device.

1.3 Installation Process

This section describes the steps required to install the switch:

Important:

Class 1 Laser Product: This product has provisions for installing Class 1 laser transceivers that provide optical coupling to the communication network. Once a Class 1 laser product is installed, the equipment is a Class 1 Laser Product. The customer is responsible for selecting and installing the Class 1 laser transceiver and for ensuring that the Class 1 AEL (Allowable Emission Limit) per EN/IEC 60825, CSA E60825-1, and Code of Federal Regulations 21 CFR 1040 is not exceeded after the laser transceiver have been installed. Do not install laser products whose class rating is greater than 1. Refer to all safety instructions that accompany the transceiver before installation. Only Class 1 laser devices certified for use in the country of installation by the cognizant agency are to be utilized in this product.

Produit Laser de classe 1: Ce produit a des dispositions pour installer des émetteursrécepteurs de laser de classe 1 qui offre de couplage au réseau de communication optique.Une fois un produit laser de classe 1 est installé, l'équipement est un produit Laser de classe 1 (Appareil à Laser de Classe 1).Le client est responsable pour sélectionner et installer l'émetteur/récepteur de laser de classe 1 et pour assurer que la classe 1 AEL (limite d'émission admissible) par EN/IEC 60825, CSA E60825-1, et Code des règlements fédéraux 21 CFR 1040 ne soit pas dépassée après avoir installé l'émetteur/récepteur de laser. Ne pas installer des appareils à laser dont la cote de classe est supérieure à 1.Voir toutes les consignes de sécurité qui ont accompagné l'émetteur-récepteur avant l'installation. Seuls appareils laser de classe 1 certifiés pour une utilisation dans le pays d'installation par l'organisme compétent doivent être utilisées dans ce produit.

Important:

Ultimate disposal of this product should be in accordance with national laws and regulations.

Aucune pièce réparable par l'utilisateur à l'intérieur. Confiez toute réparation à un technicien qualifié.

The following steps are to be followed to install the switch:

1. Select the installation site. (Site Selection)
2. Assemble the installation tools listed. (Tools and Parts Required for Installation)
3. Attach the mounting brackets and install the switch in an equipment rack. (Rack Mounting the Switch)
4. Connect the switch to the power source and network devices. (Cabling the Switch)
5. Configure the switch. (Configuring the Switch)

1.4 Safety Information

Refer to the Arista Networks *Safety Information and Translated Safety Warnings* available at https://www.arista.com/en/support/product-documentation.

1.5 Obtaining Technical Assistance

Any customer, partner, reseller, or distributor holding a valid Arista Service Contract can obtain technical support in any of the following ways:

- **Email:** *support@arista.com*

  Include a detailed description of the problem and the “show tech-support” output.

- **Web:** https://www.arista.com/en/support

  A support case may be created through the support portal on our website. You may also download the most recent software and documentation, and view FAQs, Knowledge Base articles, Security Advisories, and Field Notices.

- **Phone:** +1 866-476-0000 or +1 408-547-5502.

1.6 Specifications

This section lists the specifications of the Ethernet switches described in this guide.

Table 1: Switch Specifications (Dimensions and Weights)

Device	Size (W x H x D)	Weight
CCS-710HXP-28TXH-4S	440 x 43.5 x 395.5 mm (17.32 x 1.71 x 15.57 inches)	8 kg 17.64 lbs
CCS-710HXP-20TNH-4S	160 x 160 x 150 mm (6.3 x 6.3 x 5.91 inches)	4.1 kg 9.03 lbs

Table 2: Switch Specifications (Operational and Storage)

Device	Operating Temperature		Storage Temperature	Operating Altitude	Relative Humidity
CCS-710HXP-28TXH-4S	blower-equipped cabinet vented cabinet sealed cabinet	-40° to 75°C (-40° to 167°F) -40° to 70°C (-40° to 158°F) -40° to 60°C (-40° to 140°F)	-40° to 85°C (-40° to 185°F)	0 to 4572 meters (0 to 15,000 feet)	5 to 95% (non-condensing)
CCS-710HXP-20TNH-4S	blower-equipped cabinet vented cabinet sealed cabinet	-40° to 75°C (-40° to 167°F) -40° to 70°C (-40° to 158°F) -40° to 60°C (-40° to 140°F)	-40° to 85°C (-40° to 185°F)	0 to 4572 meters (0 to 15,000 feet)	5 to 95% (non-condensing)

Table 3: Switch Specifications (Power Supply)

Device	Input Type	PSU Model	Input Ratings	Output Ratings
CCS-710HXP-28TXH-4S	AC	PWR-461-AC-H	100 - 240VAC, 5A, 50/60 Hz	400W, -55V
CCS-710HXP-28TXH-4S	HVDC	PWR-461-AC-H	100 - 250VDC, 5A	400W, -55V
CCS-710HXP-20TNH-4S	AC	PWR-462-AC-ADP-H	100 - 240VAC, 4.6A, 50/60 Hz	480W, 48 - 55V
CCS-710HXP-20TNH-4S	DC	PWR-462-DC-ADP-H	18 - 60VDC, 8.8A	290W, 54V

Chapter 2

Preparation

This section describes the initial setup and preparation for installing the switch.

The following topics are discussed in this section:

2.1 Site Selection

The following criteria should be considered when selecting a site to install the switch:

- **Temperature and Ventilation:** For proper ventilation, install the switch with ample airflow to the front and back of the switch.

> **Important:**
>
> To prevent the switch from overheating, do not operate it in an area where the ambient temperature exceeds 75°C (167°F).
>
> Pour empêcher l'interrupteur de surchauffe, ne pas utiliser il dans une zone où la température ambiante est supérieure à 75°C (167°F).

- **Airflow Orientation:** The fans and PSU's determine the airflow direction through the switch. The color of the visible handles or labels indicates the airflow direction.

  Orient the switch so that airflow flows from the cooler to the hotter aisle. If the airflow direction is not compatible with the installation site, reorient the fan modules to circulate air in the opposite direction.

- **Rack Space:** Install the switch in a 19" rack or cabinet. The switch height is 1 RU. The accessory kit provides mounting brackets for two-post racks.

  When mounting the switch in a partially filled rack, load the rack from bottom to top, with the heaviest equipment at the bottom. Load the switch at the bottom if it is the only item in the rack.

- **Power Requirements:** Power requirements vary by switch and power supply model. Refer to Specifications for information regarding your specific device.

> **Important:**
>
> The power input plug-socket combination must be always accessible; it provides the primary method of disconnecting power from the system.

La combinaison de la puissance-prise d'entrée doit être accessible en tout temps; Il fournit le principal moyen de coupure d'alimentation du système.

Important:

All power connections must be removed to de-energize the unit.

Toutes les connexions d'alimentation doivent être enlevées pour hors tension l'appareil.

- **Other Requirements:** Select a site where liquids or objects cannot fall onto the equipment, and foreign objects are not drawn into the ventilation holes. Verify that the following guidelines are met:
  - Clearance areas to the front and rear panels allow for unrestricted cabling.
  - All front and rear panel indicators are visible.
  - Power cords can reach from the power outlet to the connector on the rear panel.

2.2 Tools and Parts Required for Installation

Each device has an accessory kit containing the parts required to install the switch. In addition to the accessory kit, the following tools and equipment are required to install the switch:

- #1 and #3 Phillips head screwdrivers (this may differ based on supplied accessories)
- Screws or rack mounting nuts and bolts

When installing the switch into an equipment rack with unthreaded post holes, nuts are also required to secure the switch to the rack posts.

2.3 Electrostatic Discharge (ESD) Precautions

Observe these guidelines to avoid ESD damage when installing or servicing the switch.

- Assemble or disassemble equipment only in a static-free work area.
- Use a conductive work surface (such as an anti-static mat) to dissipate static charge.
- Wear a conductive wrist strap to dissipate static charge accumulation.
- Minimize handling of assemblies and components.
- Keep replacement parts in their original static-free packaging.
- Remove all plastic, foam, vinyl, paper, and other static-generating materials from the work area.
- Use tools that do not create ESD.

Chapter 3

Rack Mounting the Switch

This section provides instructions on how to mount the switch in different ways.

The following topics are discussed in this section:

- CCS-710HXP-28TXH-4S
  - L-bracket Wall Mount (KIT-CCS-710HXP-WALL)
  - Two-post Rack Mount (KIT-CCS-710HXP)
  - Four-post Rack Mount (KIT-CCS-7010-4POST)
- CCS-710HXP-20TNH-4S
  - DIN Rail Wall Mount (KIT-CCS-710HXP-DIN)
  - DIN Rail Rack Mount (KIT-CCS-710HXP-DIN-RM)

3.1 CCS-710HXP-28TXH-4S

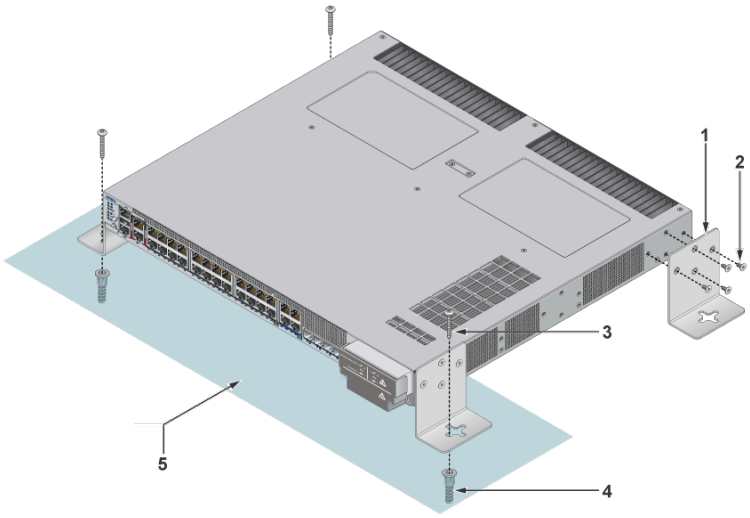
This section discusses the following topics:

- L-bracket Wall Mount (KIT-CCS-710HXP-WALL)
- Two-post Rack Mount (KIT-CCS-710HXP)
- Four-post Rack Mount (KIT-CCS-7010-4POST)

3.1.1 L-bracket Wall Mount (KIT-CCS-710HXP-WALL)

This section provides instructions for wall mounting the switch using an L-bracket.

Figure 3-1: Wall Mounting the Switch



1	L-bracket	2	Flat head screw M4x6mm	3	Screw M4x25mm
4	M4 screw anchor	5	Wall		

1. Determine the mounting position to attach the switch to the wall.
2. Position the L-bracket aligning with the chassis on each side of the switch.
3. Drill four holes 7x25mm deep on the wall aligning with the L-brackets.
4. Insert M4 screw anchor to the four holes drilled on the wall.
5. Place the chassis along with the L-bracket on the wall aligning with the mounting holes.
6. Tighten the screws to secure the device firmly to the wall.
7. The L bracket wall mount is designed for a single, fixed mounting orientation as shown in the figure above. No alternative mounting directions or orientations are supported.

3.1.2 Two-post Rack Mount (KIT-CCS-710HXP)

This section provides instructions for two-post rack mounting the switch. These are the default mounting brackets, and they support different mounting locations: front, middle, and rear.

To mount the switch in a rack, you need to assemble the mounting brackets to the chassis, and then attach the brackets to the rack posts.

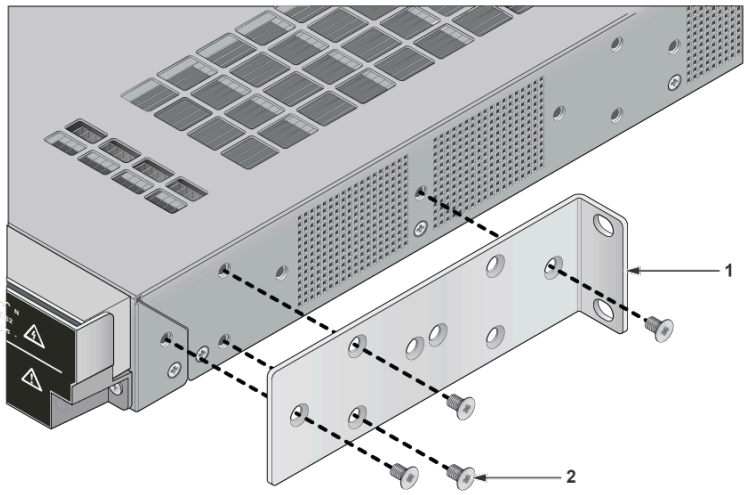
- Attaching Mounting Brackets to the Chassis (Two-post)
- Inserting the Switch into the Rack

3.1.2.1 Attaching Mounting Brackets to the Chassis (Two-post)

This section describes the steps to attach mounting brackets to the switch chassis.

To mount the switch in a two-post rack, you need to assemble the mounting brackets to the chassis, and then attach the brackets to the rack posts.

Figure 3-2: Attaching the Mounting Brackets



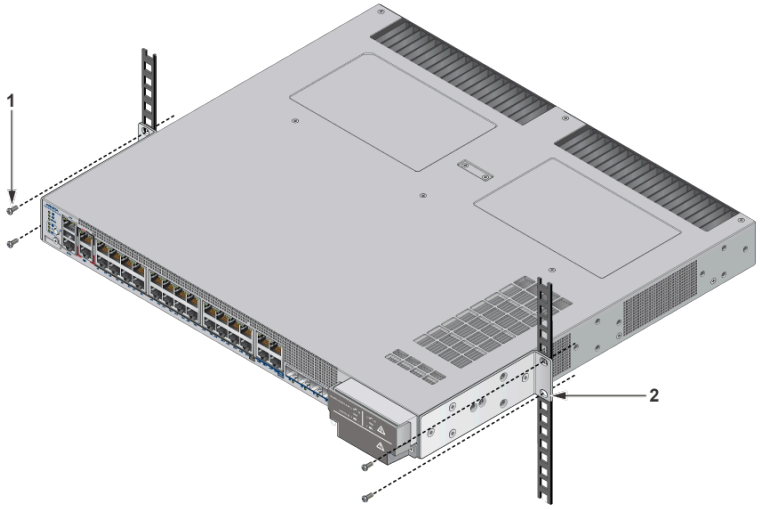
1	L-bracket	2	Flat head screw M4x6mm

1. Align the rack mounting brackets with the chassis of the switch.
2. Secure the mounting brackets firmly using the screws provided in the rack mounting kit.

3.1.2.2 Inserting the Switch into the Rack

This section describes the steps to insert the switch into a two-post rack.

Figure 3-3: Inserting the Switch into the Rack



1	Screw for cage nut	2	L-bracket

Note: Ensure that there is 1RU clearance above and below the chassis, 2” clearance on the front of the chassis, and 1” clearance on each side of the chassis.

1. Place the switch into the rack by aligning the mounting bracket with the chassis.
2. Secure the switch into the rack using the thread screws provided in the rack mount kit.
3. Position the rack against the rack posts and mount the rack to the equipment rack.
4. Tighten the screws to fix the device firmly.

3.1.3 Four-post Rack Mount (KIT-CCS-7010-4POST)

This section provides instructions for four-post rack mounting the switch.

The switch is mounted onto a four-post rack by assembling two rails onto the rear posts, sliding the switch onto the rails, then securing the switch to the front posts.

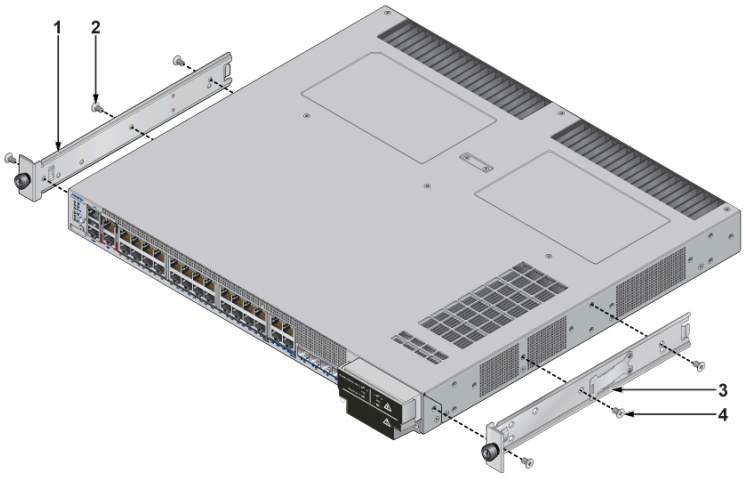
- Attaching Mounting Brackets to the Chassis (Four-post)
- Assembling the Rails onto the Equipment Rack
- Attaching the Switch to the Rack

3.1.3.1 Attaching Mounting Brackets to the Chassis (Four-post)

This section describes the steps to attach mounting brackets to the switch chassis.

To mount the switch in a four-post rack, you need to assemble the mounting brackets to the chassis, and then attach the brackets to the rack posts.

Figure 3-4: Attaching the Mounting Brackets to the Switch Chassis



1 Mounting bracket
2 Mounting screw
3 Bracket clip
4 Mounting screw

1. Align the mounting brackets with the attachment pins to obtain the desired mounting position.
2. Place the bracket flush on the chassis with attachment pins protruding through key openings.
3. Slide the bracket toward the front flange until the bracket clip locks with an audible click.
4. Attach the deep chassis adapters as needed.

To remove the mounting bracket from the chassis, lift the front edge of the mounting bracket clip with a flathead screwdriver and slide the bracket away from the front flange (opposite to the installation direction).

3.1.3.2 Assembling the Rails onto the Equipment Rack

This section describes the steps to attach the rails to a four-post rack.

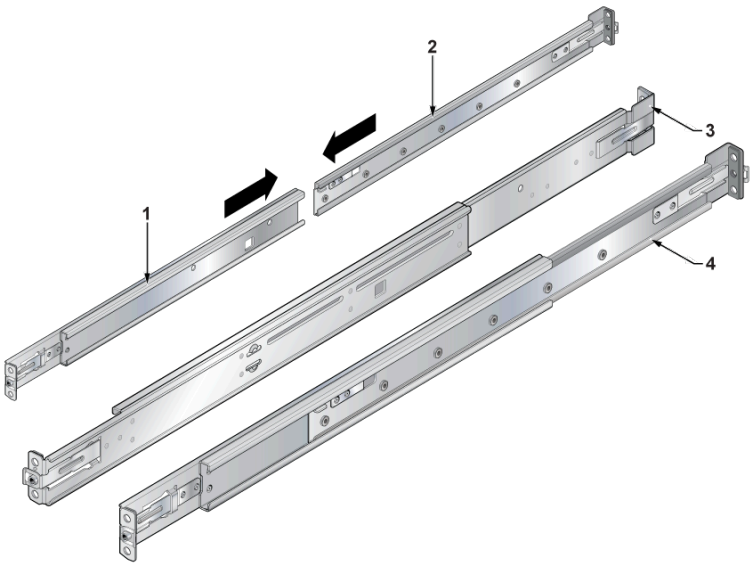
Rail rods and rail slides assemble into two identical rails. Each rail connects a front post to a rear post. When the rails are installed, the switch slides on the rails into the rack. Each bracket includes a screw that attaches the switch to the rail.

Each end of an assembled rail contains two rack plugs. The rails are installed into a rack by inserting the plugs into rack slots. When installing rails into posts with threaded or rounded holes, remove all plugs on both sides of the assembled rails, then install the rails with bolts that fit the rack.

1. Slide a rail rod into a rail slide until the rail clip makes an audible click.

   The rail clip prevents the rail extension beyond the maximum supported distance between the front and rear rack posts.

   Figure 3-5: Assembling the Rails



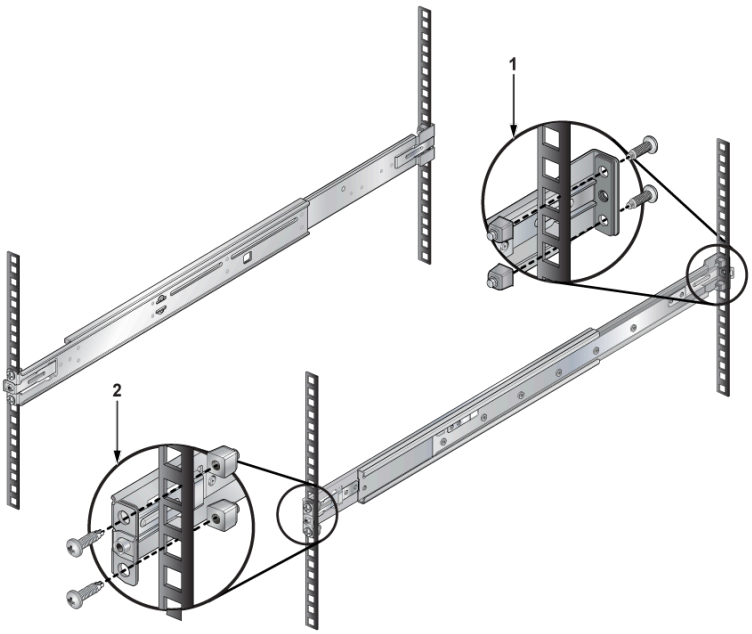
1	Rail slide	2	Rail slide	3	Rack plug
4	Rail slide				

2. Attach the rail to the right rear rack post by inserting rod-end rack plugs into post slots. The slide assembly must be inside the right posts relative to the left rack posts.

   If the rack plugs were previously removed, use bolts to attach the rail to the rack.

3. Attach the slide end of the rail to the front post by extending the rail end past the post, then contracting the rail while guiding the rack plugs into the post.

Figure 3-6: Attaching the Rails



1 Inset A(Front)

2 Inset B(Rear)

4. Repeat **Step 1** through **Step 3** for the left posts. Assure the rails are on the same horizontal level.

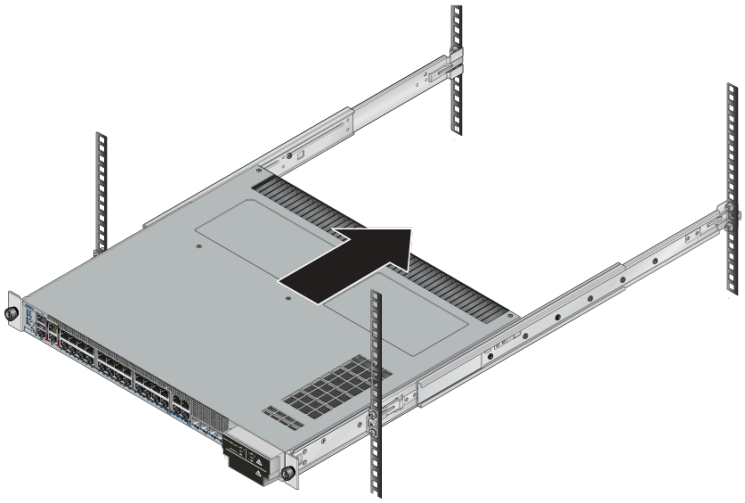
3.1.3.3 Attaching the Switch to the Rack

This section describes the steps to attach the switch into a four-post rack.

After the rails are installed, the switch slides on the rails into the rack. Each bracket includes a thumb screw that attaches the switch to the rail.

1. Lift the switch into the rack and insert the mounting brackets into the slide rails.

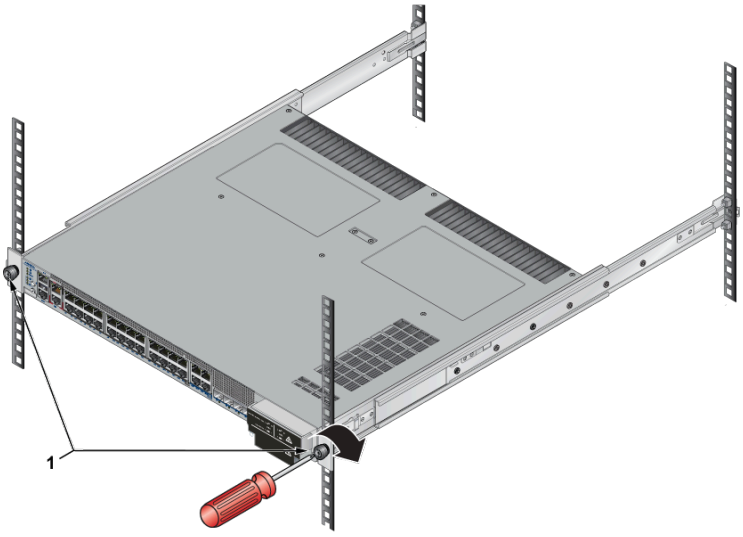
Figure 3-7: Inserting the Switch onto the Rails



2. Slide the switch on the rails toward the rear posts until the mounting bracket flanges are flush with the rail flanges attached to the rack posts.
3. Attach the bracket flanges to the rack post using the quick-release thumb screws supplied with the brackets. Hand-tighten the thumb screws or select a Phillips #2 screwdriver.

> **Note:** Do not exceed a maximum torque of 20in-lb or use powered impact drivers to secure the thumb screws.

Figure 3-8: Attaching the Switch to the Rack Posts



1 Rack plugs

3.2 CCS-710HXP-20TNH-4S

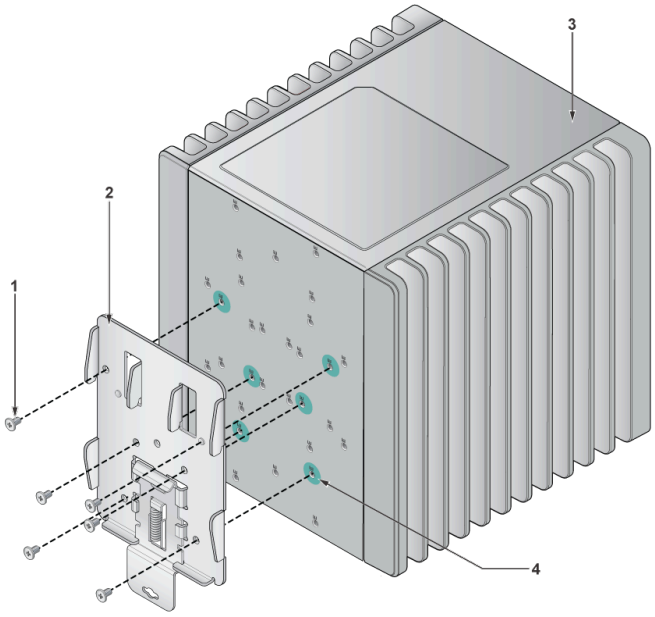
This section discusses the following topics:

- DIN Rail Wall Mount (KIT-CCS-710HXP-DIN)
- DIN Rail Rack Mount (KIT-CCS-710HXP-DIN-RM)

3.2.1 DIN Rail Wall Mount (KIT-CCS-710HXP-DIN)

This section provides instructions for wall mounting the switch using a DIN Rail.

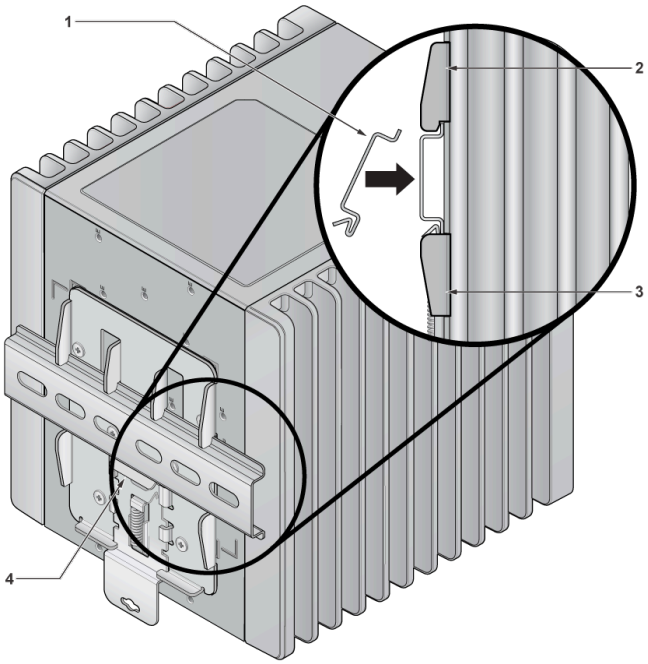
Figure 3-9: DIN Rail Wall Mount



1 Mounting screw M3*0.5*5 2 DIN bracket 3 Switch

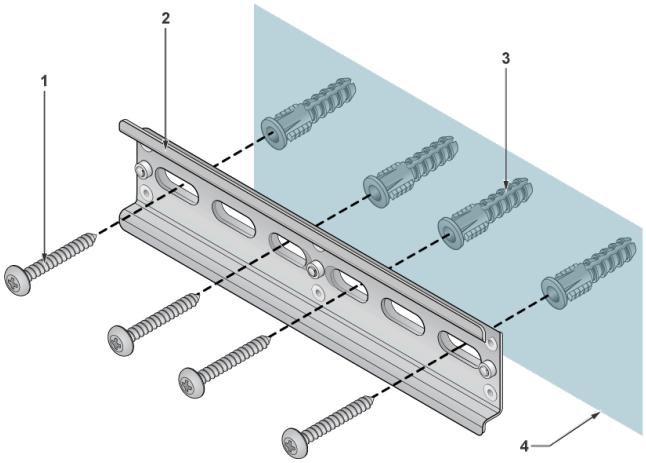
4 Mounting hole

Figure 3-10: Attaching DIN Bracket



1 DIN latch
2 DIN bracket
3 DIN bracket
4 DIN rail

Figure 3-11: Attaching DIN Rail



1 Mounting screw M5*2*32
2 Screw anchor
3 DIN rail
4 Wall surface

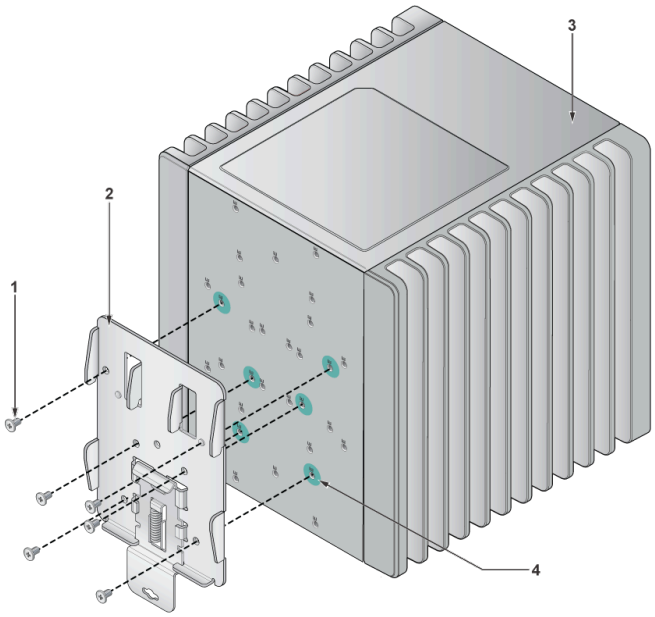
1. Position the DIN mount bracket aligning it with the mouting screws on the chassis.
2. Place the DIN rail on the wall surface by aligning it with the DIN rail holder and mouting screws.
3. Attach the DIN rail to the mounting bracket with the help of DIN latch and mouting screws. Tighten the screws to fix the device firmly.

3.2.2 DIN Rail Rack Mount (KIT-CCS-710HXP-DIN-RM)

This section provides instructions for rack mounting the switch using a DIN Rail.

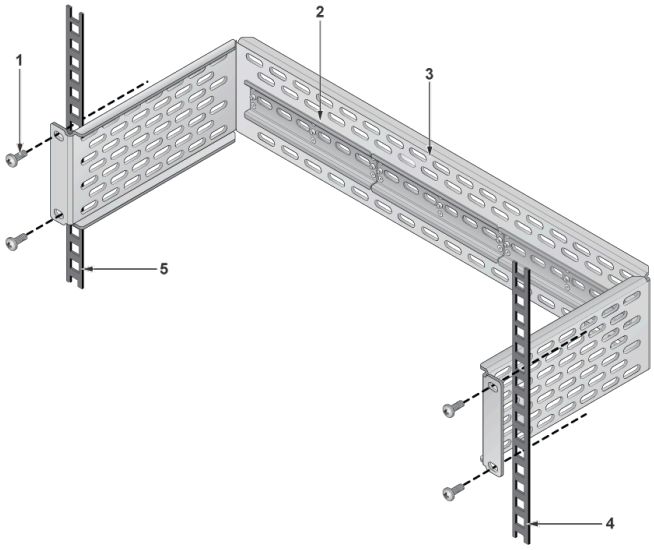
To mount the switch in a two-post rack, you need to assemble the mounting brackets to the chassis, and then attach the brackets to the rack posts.

Figure 3-12: Attaching the DIN Bracket



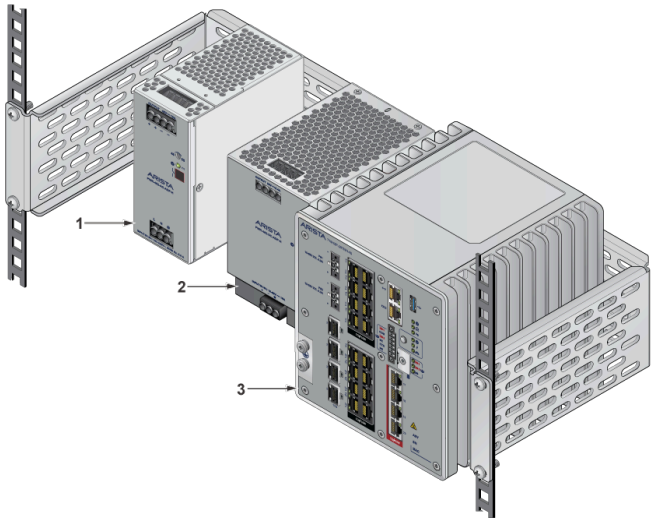
1	Mounting screw M3*0.5*5	2	DIN bracket	3	Switch
4	Mounting hole	4			

Figure 3-13: Assembling the Rack



1	Mounting screw	2	Rail	3	Two-post rack
4	Rack posts	5	Rack posts		

Figure 3-14: Inserting the Switch into the Rack



1	PSU 1	2	PSU 2	3	Switch

1. Position the DIN mount bracket aligning it with the mounting screws on the chassis.
2. Secure the mounting brackets firmly using the screws provided in the rack mounting kit.
3. Assemble the DIN rail within the two-post rack.
4. Insert the switch into the rack by aligning with the rack posts.
5. Install the power supply units next to the switch in the equipment rack.

> **Warning:** The AN2419 Ethernet switch is intended to be supplied by approved external power source (UL listed/ IEC 60950-1/IEC 62368-1) whose output complies with ES1/ SELV, output rating 24-54VDC, 8.8A minimum, at an ambient temperature of 75°C, and at maximum altitude of 4572m.

6. The wiring of input terminal block shall be installed by a skilled person.
7. Terminal block wire type: Cu, Only use 12 -16 AWG wire size, tightening torque value 4.5 lb-in.

Chapter 4

Cabling the Switch

The Cabling the Switch section discusses the following topics:

- Grounding the Switch
- Connecting Power Cables
- Connecting Serial and Management Cables

4.1 Grounding the Switch

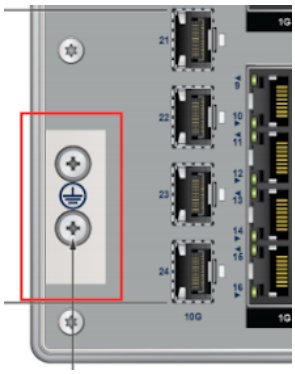
This section describes the importance of grounding the device to the data center ground.

Normally, the functional grounding of the switch is achieved through the input connection. If you would like to do additional grounding, proceed to the following instructions:

Note: Grounding wires and grounding lugs are not supplied with the product. The wire size should meet local and national installation requirements.

CAUTION: The grounding connection must only be removed if all supply connections are disconnected.

1. Ensure the rack is properly grounded and complies with ETSI ETS 300 253.
2. Verify a good electrical connection to the grounding point on the rack (no paint or isolating surface treatment).
3. Attach the solder terminal lug to an 18 AWG minimum grounding wire and connect it to the grounding point on the rear panel of the switch.
4. Tighten the M4 screw to secure the lug to the grounding point.
5. Connect the other end of the wire to the nearby grounded surface.



4.2 Connecting Power Cables

This section describes the installation requirements for connecting the power cables to the device.

Important:

- Installation of this equipment must comply with local and national electrical codes. Consult with the appropriate regulatory agencies and inspection authorities to assure compliance if necessary.

  Installation de cet équipement doit être conformes aux codes électriques locaux et nationaux. Si nécessaire, consulter les organismes de réglementation appropriés et des autorités de contrôle pour assurer la conformité.

- Read all installation instructions before connecting the system to the power source.

  Lire toutes les instructions d'installation avant de brancher le système à la source d'alimentation.

- This equipment must be grounded. Never defeat the ground conductor.

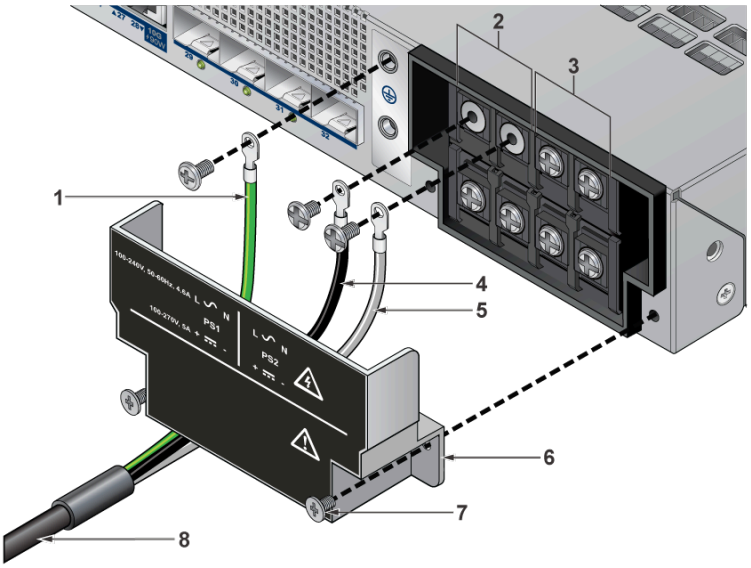
  Cet équipement doit être mis à la terre. Ne jamais modifier le conducteur de terre.

- This unit requires overcurrent protection.

  Cet appareil requiert une protection contre les surintensités.

4.2.1 Connecting AC/HVDC Power on CCS-710HXP-28TXH-4S

This section describes how to connect the AC power supply to the device. The power inlet connector is a terminal block located on the front panel. PS1 and PS2 have its own terminal block connector.



1	Earth Ground Cable	5	Neutral/Negative Cable
2	PS1 Input Power Terminal Block	6	Protective Cover
3	PS2 Input Power Terminal Block	7	Securing Screw
4	Line/Positive Cable	8	Power Cable

The same power supply, PWR-461-AC-H, supports AC and HVDC. The power ratings for each power inlet:

- AC input: 100–240 Vac, 50/60 Hz, 5 A
- DC input: 100–250 Vdc, 5 A

Equipment classification

- This equipment is classified as pluggable equipment when operated from AC mains. The mains plug on the power cord serves as the disconnect device and shall remain readily accessible at all times.
- This equipment is classified as a mating connection when operated from a DC power source. A UL approved DC breaker or removable fuse assembly serves as the disconnect device and shall remain readily accessible at all times.

The equipment is shipped without a power cord. A suitable power cord shall be field-installed by a skilled person and connected to the input terminal block according to the terminal markings.

Power cord requirements:

- UL approved
- Minimum conductor size: 16 AWG

- Temperature rating: -40C to 105C
- Flammability rating: VW-1 or equivalent
- The plug shall comply with the applicable national or regional requirements (e.g. NEMA 5-15P or NEMA 6-15P for US/CA)
- Wiring length is determined by acceptable voltage drop and temperature rise, proper routing and protection, effective strain relief, and ease of access to disconnect the device.

Terminal block ring requirements:

- UL approved
- Conductor size: 16 – 14 AWG
- Temperature rating: -40C to 105C
- Ring outer (width) diameter: 6.6 mm
- Ring inner (stud) diameter: 3.7 mm
- Screw tightening torque: 1.0 N.m
- Example part number: TE 2-34158-1

To connect each power supply to the power source, perform the following:

1. Remove the terminal cover to expose the terminal block connectors.
2. Attach the appropriate lugs/rings to the proper cable. Use cables with insulated crimp-on spade lugs or crimp-on ring connectors.
3. Connect the wires to the terminal block in this order:
   a. Ground cable to the ground connector on the face of the power supply.
   b. Neutral/Negative source cable to the terminal block's Neutral/Negative connector.
   c. Line/Positive source cable to the Line/Positive connector on the terminal block.
   d. Torque the screws to 1.0 N.m.
4. Replace the terminal cover.

Note:

Remove all power cords and wires from the power supplies to power down the Switch.

Input power and power Supply redundancy is dependent on the actual system power draw.

Each power supply should be connected to its own input overcurrent protection for maximum Input Power redundancy.

4.2.2 Connecting AC and DC Power on CCS-710HXP-20TNH-4S

This section describes how to connect the AC and DC power supply to the device.

Power requirements vary by switch. Refer to Specifications for information regarding your specific switch.

Important:

A disconnect device must be provided as part of the installation.

Ensure power is removed from DC circuits before performing any installation actions. Locate the disconnect device, circuit breakers, or fuses on DC power lines servicing the circuits. Turn off the power line circuits or remove the fuses.

Wire size must comply with local and national requirements and electrical codes. Use only copper wire.

Apply ground connection to the switch first during installation and remove last when removing power.

Un dispositif de sectionnement doit être fourni dans le cadre de l'installation.

Pouvoir assurer qu'il est retiré de circuits DC avant d'effectuer des actions d'installation . Localiser les disjoncteurs ou des fusibles sur les lignes de courant continu desservant les circuits. Coupez les circuits de lignes d'alimentation ou retirer les fusibles.

Le calibre du fil doit être conforme aux exigences locales et nationales et les codes électriques. Utiliser du fil de cuivre.

Appliquer connexion à la terre à l'interrupteur premier lors de l'installation et de supprimer la dernière alimentation lors du débranchement.

CCS-710HXP-20TNH-4S requires an external isolated DC power source. The following external power supplies are available:

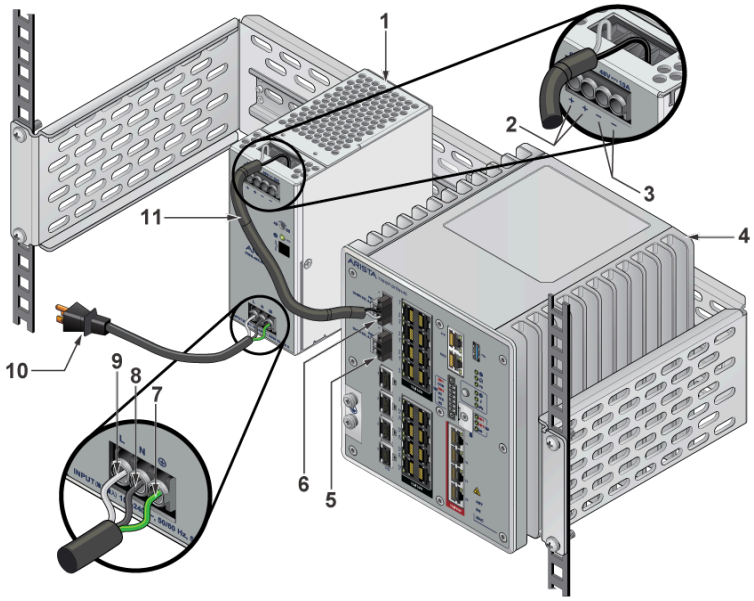
- PWR-462-AC-ADP-H
  - Input Voltage: 100 – 240VAC
  - Output Power: 480W
  - Output Voltage: 48 – 55VDC (adjustable)
- PWR-462-DC-ADP-H
  - Input Voltage: 18 – 60VDC

- Output Power: 290W
- Output Voltage: 54VDC

Two power supply input connectors, PS1 DC Input and PS2 DC Input, are available to provide 1+1 power redundancy. Each DC input has the following specifications:

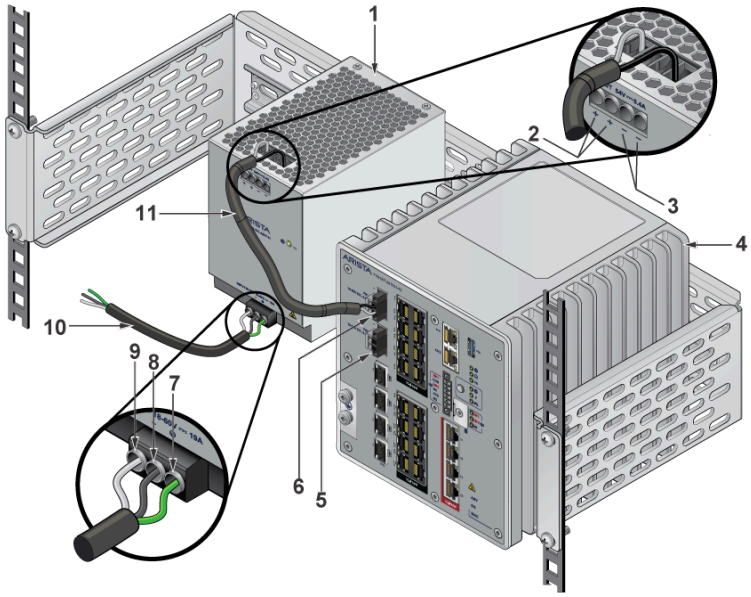
- Input voltage rating: 24 – 54VDC, 8.8A
  - PoE is enabled when input voltage is at least 44V.
  - PoE is disabled when input voltage is less than 44V.
- Maximum power rating: 440W
  - Maximum system power: 40W
  - Maximum PoE power budget: 400W
  - PoE power budget must be configured in EOS.
- Input power mating connector: Dinkle EC350VM-02P
  - 2 power mating connectors are included with each system.
- DC interconnect cable conductor size: 16 – 12 AWG
  - For PWR-462-AC-ADP-H: 14 – 12 AWG
  - For PWR-462-DC-ADP-H: 16 – 12 AWG
- Maximum DC interconnect cable length: 0.5m
  - Contact Arista TAC if a longer DC interconnect cable is required.
- Temperature rating: -40C to 105C
- Flammability rating: VW-1 or equivalent

Figure 4-1: Connecting AC PSU to CCS-710HXP-20TNH-4S



1	AC PSU	7	Earth Ground
2	Positive Terminal	8	Neutral/Negative
3	Negative Terminal	9	Line/Positive
4	CCS-710HXP-20TNH-4S Device	10	AC Power Cord
5	PS2 DC Input	11	DC Interconnect Cable
6	PS1 DC Input		

Figure 4-2: Connecting DC PSU to CCS-710HXP-20TNH-4S



1	DC PSU	7	Earth Ground
2	Positive Terminal	8	Neutral/Negative
3	Negative Terminal	9	Line/Positive
4	CCS-710HXP-20TNH-4S Device	10	DC Power Cord
5	PS2 DC Input	11	DC Interconnect Cable
6	PS1 DC Input		

Power Configurations

- **Non-redundant**: Connect power to either of the two power supplies.
- **Redundant**: Connect each DC power supply to a circuit that provides the required power.

Note: Remove all power cords and wires from the power supplies to power down the Switch. Input power and power Supply redundancy is dependent on the actual system power draw. Each power supply should be connected to its own input overcurrent protection for maximum Input Power redundancy.

4.3 Connecting Serial and Management Cables

This section describes the type of cables required to connect the device.

The following RJ-45 to DB-9 table lists the pin connections of the RJ-45 to DB-9 adapter cable.

Table 4: RJ-45 to DB-9 Connections

RJ-45		DB-9		RJ-45		DB-9	
RTS	1	8	CTS	GND	5	5	GND
DTR	2	6	DSR	RXD	6	3	TXD
TXD	3	2	RXD	DSR	7	4	DTR
GND	4	5	GND	CTS	8	7	RTS

Connect the front panel ports as described below:

- **Console (Serial) Port:** Connect to a computer with the RJ-45 to DB-9 serial adapter cable. The switch uses the following default settings:
  - 9600 baud
  - No flow control
  - 1 stop bit
  - No parity bits
  - 8 data bits
- **Ethernet Management Port:** Connect to a 10/100/1000 management network with an RJ-45 Ethernet cable.
- **USB Port:** The USB port may be used for software or configuration updates.

Important:

Excessive bending can damage interface cables, especially optical cables.

Flexion excessive peut endommager les câbles d'interface, notamment des câbles optiques.

Chapter 5

Configuring the Switch

Arista switches ship from the factory in Zero Touch Provisioning (ZTP) mode. ZTP configures the switch without user intervention by downloading a startup configuration file or a boot script from a location specified by a DHCP server. To manually configure a switch, ZTP is bypassed. The initial configuration provides one username (admin) that is accessible only through the console port because it has no password.

When bypassing ZTP, initial switch access requires logging in as admin, with no password, through the console port. Then you can configure an admin password and other password protected usernames.

This manual configuration procedure cancels ZTP mode, logs into the switch, assigns a password to the admin, assigns an IP address to the management port, and defines a default route to a network gateway.

1. Provide power to the switch (Connecting Power Cables).
2. Connect the console port to a PC (Connecting Serial and Management Cables).

   As the switch boots without a startup-config file, it displays the following through the console:

```
The device is in Zero Touch Provisioning mode and is
attempting to download the startup-config from a remote system.
The device will not be fully functional until either a valid
startup-config is downloaded from a remote system or Zero Touch
Provisioning is cancelled. To cancel Zero Touch Provisioning, login
as admin and type 'zerotouch cancel' at the CLI.
localhost login:
```

3. Log into the switch by typing **admin** at the login prompt.

```
localhost login: admin
```

4. Cancel ZTP mode by typing **zerotouch cancel**.

   Important: This step initiates a switch reboot.

```
localhost> zerotouch cancel
```

5. After the switch boots, log into the switch again by typing **admin** at the login prompt.

```
Arista EOS
localhost login: admin
Last login: Fri Mar 15 13:17:13 on console
```

6. Enter global configuration mode.

```
localhost> enable
localhost# config
```

7. Assign a password to the admin username using the **`username secret`** command.

```
localhost(config)# username admin secret pxq123
```

8. Configure a default route to the network gateway.

```
localhost(config)# ip route 0.0.0.0/0 192.0.2.1
```

9. Assign an IP address (*192.0.2.8/24* in this example) to an Ethernet management port.

```
localhost(config)# interface management 1
localhost(config-if-Ma1/1)# ip address 192.0.2.8/24
```

10. Save the configuration by typing **`write memory`** or **`copy running-config startup-config`**.

```
localhost# copy running-config startup-config
```

11. When the management port IP address is configured, use this command to access the switch from a host, using the address configured in **Step 9**:

```
ssh admin@192.0.2.8
```

Refer to the *Arista Networks User Manual* for complete switch configuration information.

Chapter 6

Status Indicators

This section describes the front panel LED status of the device.

Figure 6-1: LED Status Indicators

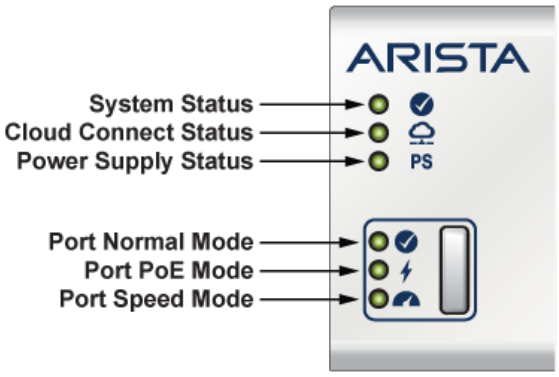


Table 5: Switch LED States

LED Name	LED State	Device Status
System Status LED	Off	No power or in the midst of a power cycle.
	Blinking Green	The system is powering up.
	Green	The system is operating in a normal initialization sequence.
	Blue	The locator function is active.
	Amber	The system is malfunctioning. The system is overheating, or temperature sensors have recorded passing the software-defined critical threshold. The switch will automatically execute a “graceful shutdown” shortly.
Cloud Connect Status LED	Off	The system is not connected to the cloud.
	Green	The system is connected to the cloud.
	Amber	Problem connecting to the cloud.
Power Supply Status LED	Off	The power supply unit is not available.
	Green	The power supply unit is fully functional.
	Amber	The power supply unit has a fault.
Port Normal Mode LED	Off	Normal mode is not selected.
	Green	Port LED is selected to indicate the port link status (normal mode).
Port PoE Mode LED	Off	PoE mode is not selected.
	Green	Port LED is selected to indicate the port PoE status.
Port Speed Mode LED	Off	Speed mode is not selected.
	Green	Port LED is selected to indicate the port speed.

Table 6: Port LED Modes

Port LEDs	Normal Mode		PoE Mode		Speed Mode	
1GE RJ45 Port LED	Off	Port link is down	Off	No PoE	Blinking Amber	10M
	Green	Port link is up	Blinking Amber	15W	Amber	100M
	Amber	Port is software disabled	Amber	30W	Green	1G
			Blinking Green	60W		
5GE RJ45 Port LED	Off	Port link is down	Off	No PoE	Blinking Amber	1G
	Green	Port link is up	Blinking Amber	15W	Amber	2.5G
	Amber	Port is software disabled	Amber	30W	Green	5G
			Blinking Green	60W		
			Green	90W		
10GE RJ45 Port LED	Off	Port link is down	Off	No PoE	Blinking Amber	2.5G
	Green	Port link is up	Blinking Amber	15W	Amber	5G
	Amber	Port is software disabled	Amber	30W	Green	10G
			Blinking Green	60W		
			Green	90W		
SFP+ Port LED	Off	Port link is down	Off	No PoE	Blinking Amber	100M
	Green	Port link is up			Amber	1G
	Amber	Port is software disabled			Green	10G

Chapter 7

Parts List

This section lists the installation parts contained in the switch accessory kit. Each device has an accessory kit that contains the necessary parts to install the switch.

- Console Cable
- Screw kit

Spare Accessories Kit

The following table lists the spare accessory kit that can be ordered separately, if required:

Table 7: Accessories Kits

SKU	Spare SKU	Description
CCS-710HXP-28TXH-4S	KIT-CCS-710HXP	Spare accessory kit for two-post rack mount
CCS-710HXP-28TXH-4S	KIT-7010-4POST	Spare accessory kit for four-post rack mount
CCS-710HXP-28TXH-4S	KIT-CCS-710HXP-WALL	Spare L-bracket wall mount kit
CCS-710HXP-20TNH-4S	KIT-CCS-710HXP-DIN-RM	Spare DIN Rail rack mount kit
CCS-710HXP-20TNH-4S	KIT-CCS-710HXP-DIN	Default and spare DIN Rail bracket kit

Power Supply

The following table lists the spare power supply kit.

SKU	PSU Model	Power Wire Size	Description
CCS-710HXP-28TXH-4S	PWR-461-AC-H	16-14 AWG	Spare 400W AC/HVDC Power Adapter
CCS-710HXP-20TNH-4S	PWR-462-AC-ADP-H	14-12 AWG	Spare 480W AC Power Adapter
CCS-710HXP-20TNH-4S	PWR-462-DC-ADP-H	16-12 AWG	Spare 290W DC Power Adapter

Product Description

The following lists the product description of the respective device.

SKU	Product Description
CCS-710HXP-28TXH-4S	Arista 710HXP, 24x 1G 60W PoE, 4x 10G 90W PoE, 4x10G SFP+ Fanless Switch, 2 x AC/HVDC, Standard Rack Mount
CCS-710HXP-20TNH-4S	Arista 710HXP, 16x 1G 30W PoE, 4x 5G 90W PoE, 4x 10G SFP+ Fanless Switch, DIN Rail Mount

Chapter 8

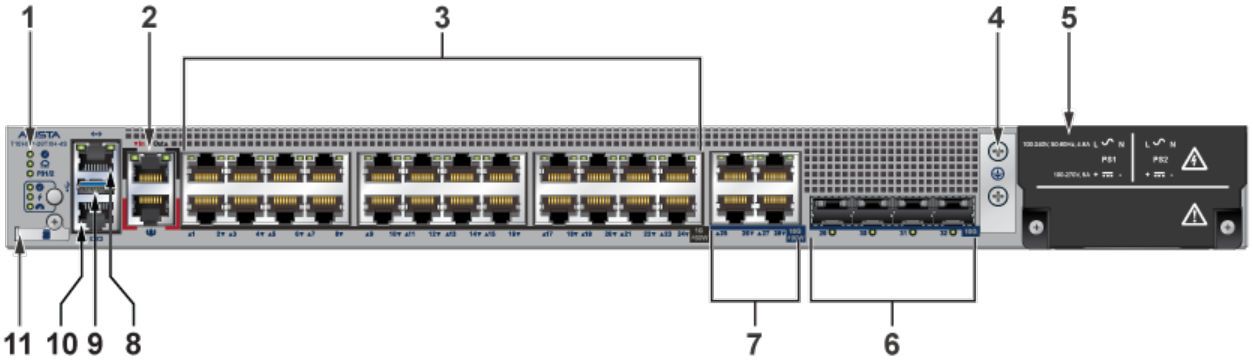
Front Panel

This section describes the front panel of the Ethernet switch.

8.1 CCS-710HXP-28TXH-4S

The CCS-710HXP-28TXH-4S front panel includes the following key components:

Figure 8-1: CCS-710HXP-28TXH-4S Front Panel

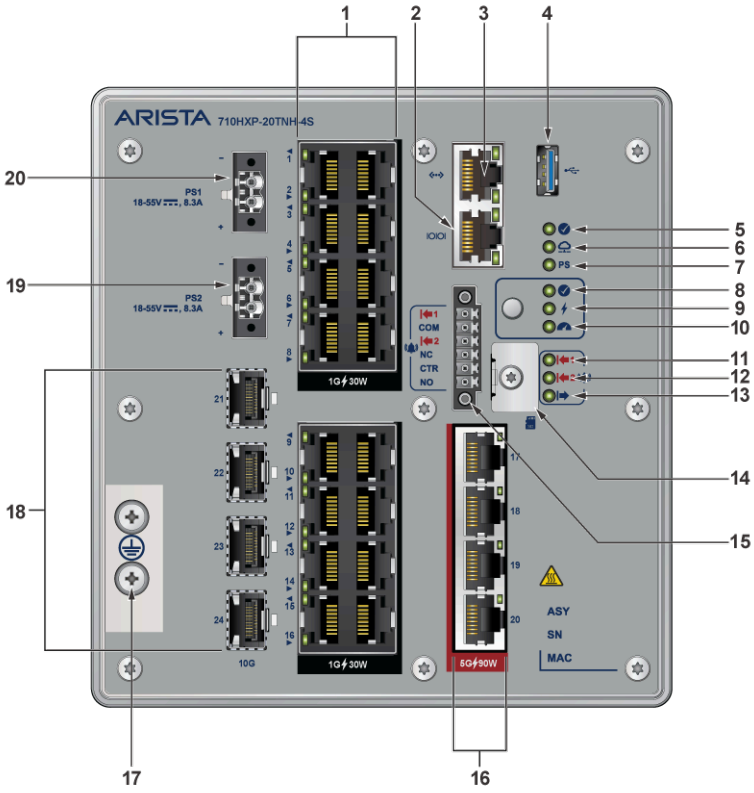


1	System Status LEDs	2	Alarm port	3	24x 1G 60W PoE ports
4	Earthing grounding point	5	Power supply socket	6	4x10G SFP+ ports
7	4x 10G 90W PoE ports	8	RJ45 Ethernet management port	9	USB port
10	Console port	11	Micro SD slot		

8.2 CCS-710HXP-20TNH-4S

The CCS-710HXP-20TNH-4S front panel includes the following key components:

Figure 8-2: CCS-710HXP-20TNH-4S Front Panel



1	16x 1G 30W PoE ports	2	Console port	3	RJ45 Ethernet management port
4	USB port	5	System status LED	6	Cloud connect status LED
7	Power supply status LED	8	Port normal mode	9	Port PoE mode
10	Port speed mode	11	Alarm In 1	12	Alarm In 2
13	Alarm Out	14	Micro SD slot	15	Alarm status indicator
16	4x 5G 90W PoE ports	17	Earthing grounding point	18	4x10G SFP+ ports
19	Power Supply 2 (PS2)	20	Power Supply 1 (PS1)		

Chapter 9

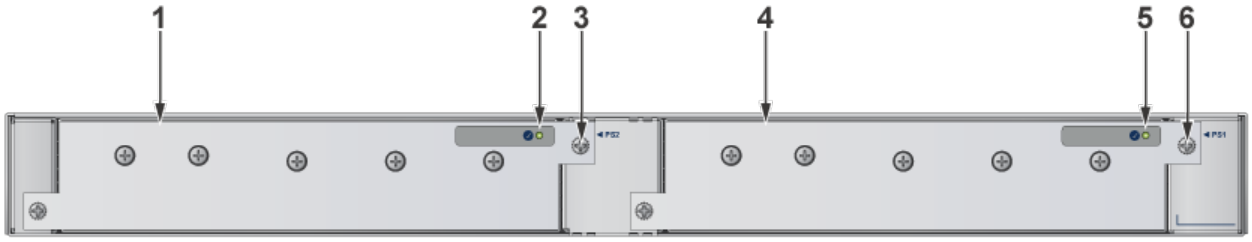
Rear Panel

The section describes the rear panel of the Ethernet switch.

9.1 CCS-710HXP-28TXH-4S

The CCS-710HXP-28TXH-4S rear panel includes the following key components:

Figure 9-1: CCS-710HXP-28TXH-4S Rear Panel

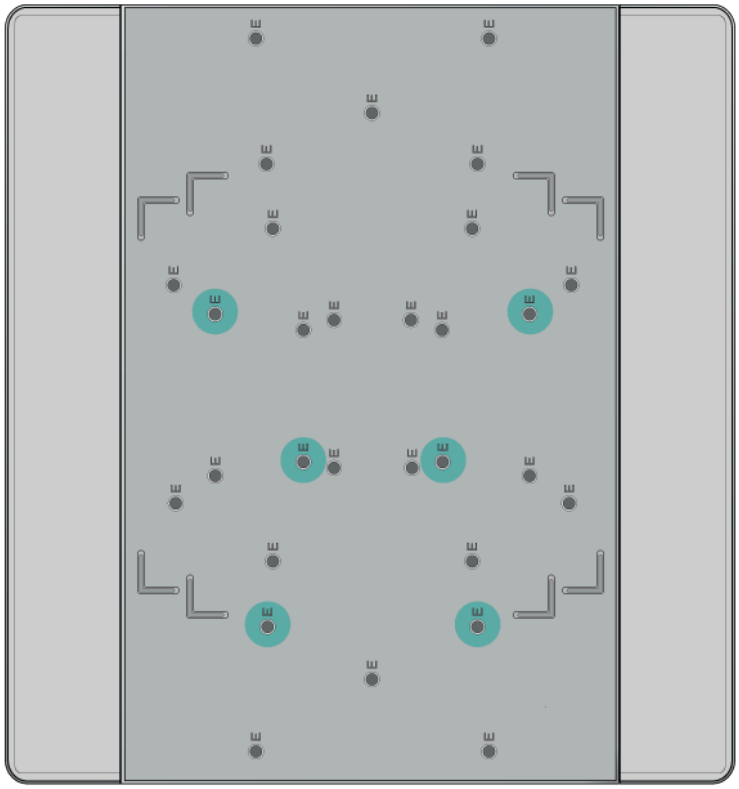


1	Power Supply 2	2	PS2 Status LED	3	Functional Grounding Point
4	Power Supply 1	5	PS1 Status LED	6	Functional Grounding Point

9.2 CCS-710HXP-20TNH-4S

The CCS-710HXP-20TNH-4S rear panel includes the following key components:

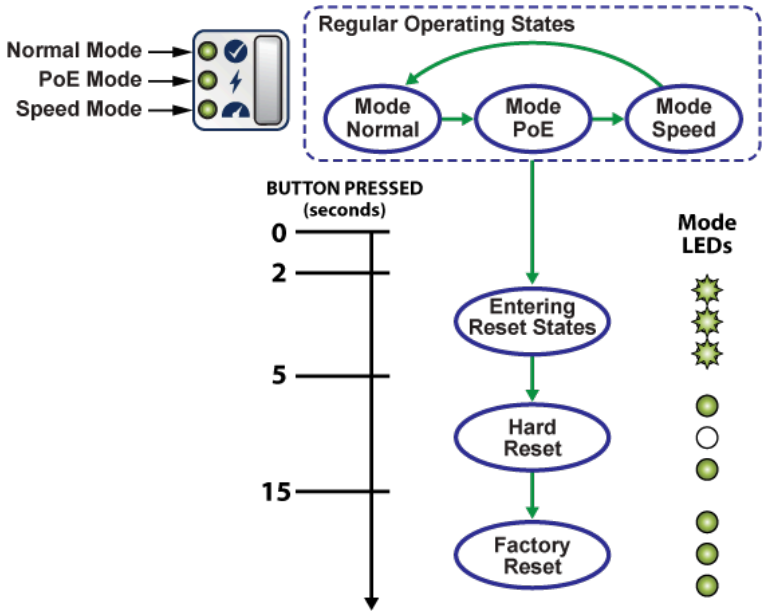
Figure 9-2: CCS-710HXP-20TNH-4S Rear Panel



Operating Mode Button

This section describes the functionality of the mode button located on the front panel of the switch.

Figure 10-1: Mode Button States



The mode button port LEDs will transition to different modes as listed below when the user presses the mode button for less than 2 seconds, and the same is indicated by the corresponding mode status LED.

- Normal Mode
- PoE Mode
- Speed Mode

In addition to controlling the port/mode LEDs, the button can trigger other actions, including a hard reset and a factory reset. To access these actions, it is required to long-press the button as shown in the Figure 10-1: Mode Button States.

- **Entering Reset States:** If you press and hold the button for more than 2 seconds, all the three mode status LEDs will flash to indicate the transition from regular operating states to reset states. If the button is released before 5 seconds, no action will occur, and the system will return to its previous mode (normal, PoE, or link speed).
- **Hard Reset:** If you press and hold the button for about 5 to 15 seconds, it will trigger a hard reset of the system 2 seconds later.
- **Factory Reset:** If you press and hold the button for about 15 seconds or longer, it will trigger a hard reset of the system 2 seconds later. In addition, the system will also trigger factory reset on system configuration.

Appendix A

Regulatory Model Numbers

This section lists the Regulatory Model Numbers (RMN's) of the Ethernet switches described in this guide.

Table 8: Regulatory Model Numbers

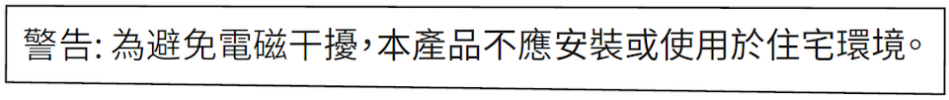
SKU	Regulatory Model Number (RMN)
CCS-710HXP-28TXH-4S	AN2418
CCS-710HXP-20TNH-4S	AN2419

Appendix B

BSMI Class A Statement

This section provides BSMI Class A Statement information for switches described in this guide.

Figure B-1: BSMI Class A Statement



Appendix C

RoHS Information

This section provides the Taiwan RoHS information for switches covered by this guide.

Figure C-1: AN2418

設備名稱：乙太網交換機　型號（型式）：AN2418
Equipment name　Type designation (Type)

單元Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛Lead (Pb)	汞Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr^{+6})	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
金屬部件 (Metal Parts)	–	○	○	○	○	○
印刷電路板組件 (PCB Assemblies)	–	○	○	○	○	○
電纜及電纜組件 (Cables & Cable Assemblies)	–	○	○	○	○	○
電源組件 (Power Assemblies)	–	○	○	○	○	○

備考1.〝超出0.1 wt %〞及〝超出0.01 wt %〞係指限用物質之百分比含量超出百分比含量基準值。
Note 1：“Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.

備考2.〝○〞係指該項限用物質之百分比含量未超出百分比含量基準值。
Note 2：“○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.

備考3.〝–〞係指該項限用物質為排除項目。
Note 3：The “–” indicates that the restricted substance corresponds to the exemption.

Figure C-2: AN2419 AC

設備名稱：乙太網交換機　型號（型式）：AN2419
Equipment name　Type designation (Type)

單元Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛Lead (Pb)	汞Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr^{+6})	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
金屬部件 (Metal Parts)	–	○	○	○	○	○
印刷電路板組件 (PCB Assemblies)	–	○	○	○	○	○
電纜及電纜組件 (Cables & Cable Assemblies)	–	○	○	○	○	○
電源組件 (Power Assemblies)	–	○	○	○	○	○

備考1.〝超出0.1 wt %〞及〝超出0.01 wt %〞係指限用物質之百分比含量超出百分比含量基準值。
Note 1：“Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.

備考2.〝○〞係指該項限用物質之百分比含量未超出百分比含量基準值。
Note 2：“○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.

備考3.〝–〞係指該項限用物質為排除項目。
Note 3：The “–” indicates that the restricted substance corresponds to the exemption.

Figure C-3: AN2419 DC

設備名稱：乙太網交換機，型號（型式）：AN2419 (本型式係DC機種)
Equipment name　Type designation (Type)

單元 Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr^{+6})	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
金屬部件 (Metal Parts)	—	○	○	○	○	○
印刷電路板組件 (PCB Assemblies)	—	○	○	○	○	○
電纜及電纜組件 (Cables & Cable Assemblies)	—	○	○	○	○	○
電源組件 (Power Assemblies)	—	○	○	○	○	○

備考1.〝超出0.1 wt %〞及〝超出0.01 wt %〞係指限用物質之百分比含量超出百分比含量基準值。
Note 1：“Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence.

備考2.〝○〞係指該項限用物質之百分比含量未超出百分比含量基準值。
Note 2：“○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.

備考3.〝－〞係指該項限用物質為排除項目。
Note 3：The “－” indicates that the restricted substance corresponds to the exemption.

Appendix D

Additional Information

Supply Connection – Pluggable System Connection

(Field-installed cord to equipment terminal block)

Equipment classification

- This equipment is classified as pluggable equipment when operated from AC mains.
- This equipment is classified as a mating connection when operated from a DC power source.

Disconnect device

- **AC:** The mains plug on the power cord serves as the disconnect device and shall remain readily accessible at all times.
- **DC:** A UL approved DC breaker or removable fuse assembly serves as the disconnect device and shall remain readily accessible at all times.

Ratings (per input)

- **AC input:** 100–240 VAC, 50/60 Hz, 5 A (×2)
- **DC input:** 100–250 VDC, 5 A (×2)

Field-installed **cord and terminal block wiring**

The equipment is shipped *without* a power cord. A suitable power cord shall be field-installed by a skilled person and connected to the input terminal block according to the terminal markings.

- **Terminal block conductor material:** Copper (Cu) only
- **Permitted wire size:** 12–18 AWG
- **Minimum tightening torque:** 8.68 lb-in (≈ 1.0 N·m)

Note on classification

The equipment itself uses a field-installed cord connected to the input terminal block. The pluggable disconnect device is provided at the supply end of the power cord as part of the installation.

AC power cord requirements

- Use a UL approved power supply cord suitable for the ratings specified above.
- **Minimum conductor size:** 18 AWG
- **Minimum temperature rating:** 105 °C

- Flame rating: VW-1 or equivalent
- The plug shall comply with the applicable national or regional requirements (e.g. NEMA 5-15P or NEMA 6-15P for US/CA; other national plugs as applicable).
- Route and secure the power cord to prevent mechanical damage and strain at the cord entry.
- Ensure that the mains plug remains readily accessible after installation.

Power cord length

- Select the cord length based on the cord construction/type and the defined installation environment (restricted access; wall/ceiling-mounted or rack-mounted).
- The length shall allow proper routing, effective strain relief, and readily accessible disconnection at the plug.

DC power wiring requirements

- **Conductor identification:** + (positive), − (negative), and PE (protective earth), as applicable.
- **Minimum conductor size:** 18 AWG
- **Minimum temperature rating:** 105 °C
- **Flame rating:** VW-1 or equivalent
- Insulation suitable for the rated DC voltage.

DC power wiring length

- The wiring length is determined by the selected wire type and the defined installation environment (restricted access; wall/ceiling-mounted or rack-mounted).
- Choose a length that maintains acceptable voltage drop and temperature rise, proper routing and protection, effective strain relief, and easy access to the disconnect device.

Protective earthing (PE)

- The PE conductor in the AC power cord or DC power wiring (green-yellow) provides protective earthing to the equipment.
- Where bonding of the metal enclosure to an external earthing point is required by the installation, bond the enclosure using a UL Listed dual-hole grounding lug at the designated grounding points with:
  - Two M4 screws
  - 18 AWG (minimum), 105 °C (minimum) grounding conductor