Connecting to DC Power

To connect the Catalyst 2950G-24-EI-DC or Catalyst 2950ST-24 LRE 997 switch to a direct current (DC)-input power source, follow these steps:

1. Preparing for Installation, page C-2
2. Grounding the Switch, page C-2
3. Wiring the DC-Input Power Source, page C-4

Warning **The Catalyst 2950G-24-EI-DC contains no field-replaceable units (FRUs). Do not open the chassis or attempt to remove or replace any components. For information about obtaining service for this unit, contact your reseller or Cisco sales representative.** Statement 121C

Warning **The Catalyst 2950ST-24 LRE 997 contains no field-replaceable units (FRUs). Do not open the chassis or attempt to remove or replace any components. For information about obtaining service for this unit, contact your reseller or Cisco sales representative.** Statement 121D

Warning **This unit is intended for installation in restricted access areas. A restricted access area can be accessed only through the use of a special tool, lock and key, or other means of security.** Statement 1017

Warning **Ethernet cables must be shielded when used in a central office environment.** Statement 171

Caution Installation of the equipment must comply with local and national electrical codes.

Preparing for Installation

Locate the DC terminal block plug, the ground lug, and the two number-10-32 screws in the DC-switch kit.

Obtain these necessary tools and equipment:

- Ratcheting torque screwdriver with a Phillips head that exerts up to 15 pound-force inches (lbf-in.) of pressure
- Panduit crimping tool with optional controlled cycle mechanism (model CT-700, CT-720, CT-920, CT-920CH, CT-930, or CT-940CH)
- 6-gauge copper ground wire (insulated or noninsulated)
- Four leads of 18-gauge copper wire
- Wire-stripping tools for stripping 6- and 18-gauge wires

Grounding the Switch

Warning **This equipment is intended to be grounded. Ensure that the host is connected to earth ground during normal use.** Statement 39

Warning **When installing the unit, always make the ground connection first and disconnect it last.** Statement 42

Caution To make sure that the equipment is reliably connected to earth ground, follow the grounding procedure instructions, and use a UL-listed lug suitable for number-6 AWG wire and two number-10-32 ground-lug screws.

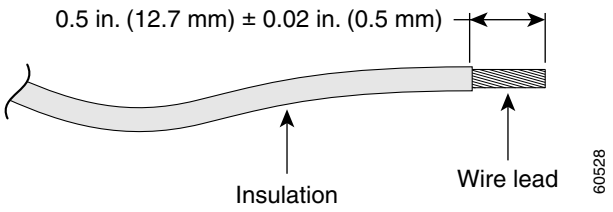
To ground the switch to earth ground, follow these steps. Make sure to follow any grounding requirements at your site.

Step 1 Locate the ground lug and the two number-10-32 screws. The ground lug and screws are on the rear panel of the Catalyst 2950G-24-EI-DC switch or on the front panel of the Catalyst 2950ST-24 LRE 997 switch.

Use a standard Phillips screwdriver or a ratcheting torque screwdriver with a Phillips head. Set the screws and the ground lug aside.

Step 2 If your ground wire is insulated, use a wire stripping tool to strip the 6-gauge ground wire to 0.5 inch (12.7 millimeter [mm]) ± 0.02 inch (0.5 mm) as shown in Figure C-1.

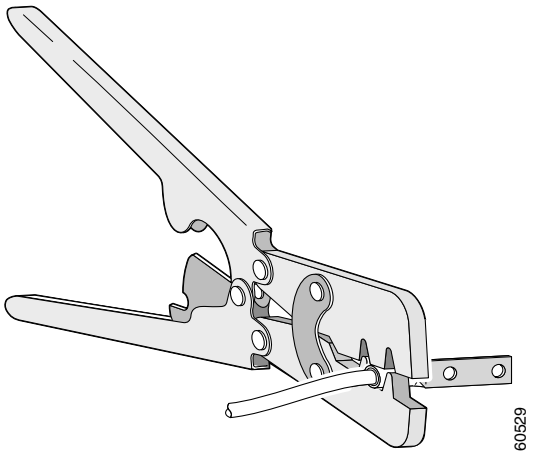
Figure C-1 Stripping the Ground Wire



Step 3 Slide the open end of the ground lug over the exposed area of the 6-gauge wire.

Step 4 Using a Panduit crimping tool, crimp the ground lug to the 6-gauge wire.

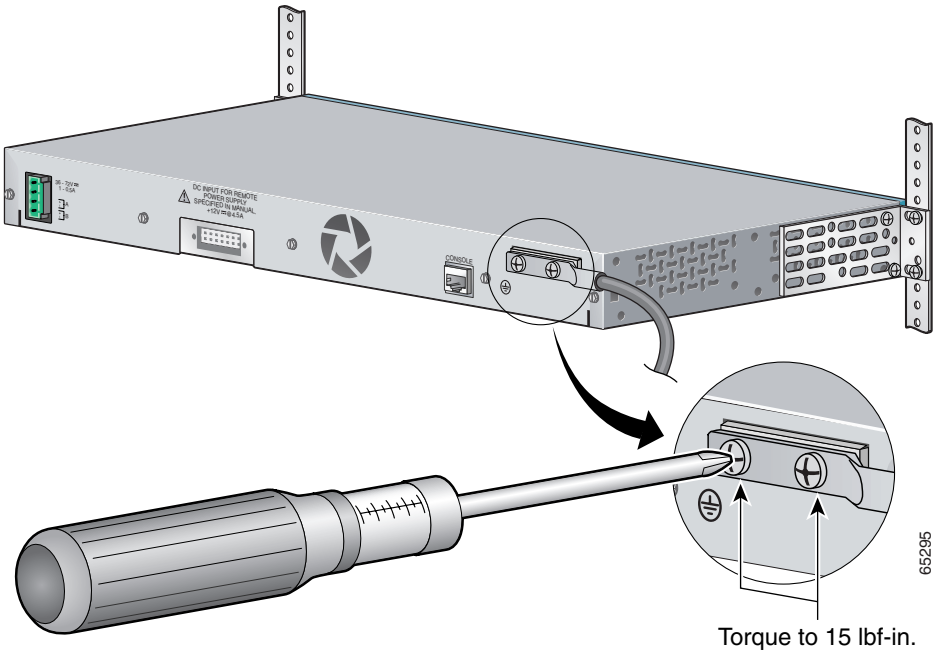
Figure C-2 Crimping the Ground Lug



Step 5 Use the two number-10-32 screws to attach the ground lug and wire assembly to the rear panel of the Catalyst 2950G-24-EI-DC switch or to the front panel of the Catalyst 2950ST-24 LRE 997 switch.

Step 6 Using a ratcheting torque screwdriver, torque each ground-lug screw to 15 lbf-in. (240 ounce-force inches [ozf-in.]). Figure C-3 shows how to torque the ground screws on a Catalyst 2950G-24-EI-DC switch.

Figure C-3 Torquing Ground-Lug Screws



Wiring the DC-Input Power Source

Warning **Only trained and qualified personnel should be allowed to install or replace this equipment.** Statement 1030

Warning **Before connecting or disconnecting ground or power wires to the chassis, ensure that power is removed from the DC circuit. To ensure that all power is OFF, locate the circuit breaker on the panel board that services the DC circuit, switch the circuit breaker to the OFF position, and tape the switch handle of the circuit breaker in the OFF position. Use a voltmeter to test for 0 (zero) voltage at the power terminals on the chassis.** Statement 196

Caution You must connect the Catalyst 2950G-24-EI-DC or Catalyst 2950ST-24 LRE 997 switch only to a DC-input power source that has an input supply voltage from –36 to –72 VDC. If the supply voltage is not in this range, the switch might not operate properly or might be damaged.

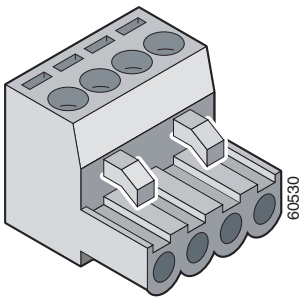
Caution The switch must be installed with 5-A-branch-circuit protection.

Note This installation must comply with all applicable codes.

To wire the switch to a DC-input power source, follow these steps:

Step 1 Locate the terminal block plug (see Figure C-4).

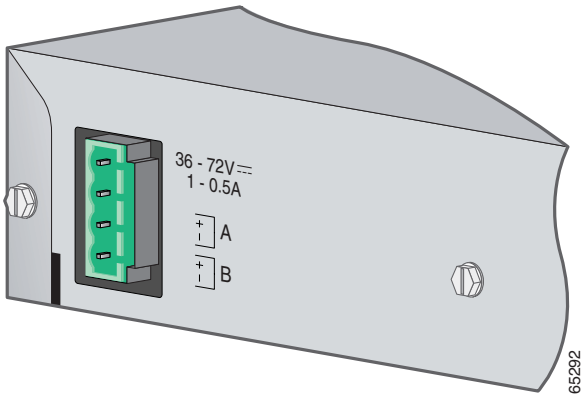
Figure C-4 Terminal Block Plug



Step 2 Identify the positive and negative feed positions for the terminal block connection. The wiring sequence is positive to positive and negative to negative for both the A and the B feed wires.

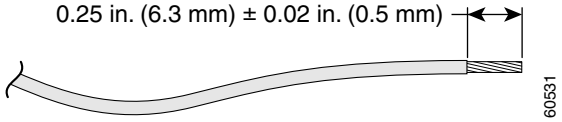
The rear panel of the Catalyst 2950G-24-EI-DC switch or the front panel of the Catalyst 2950ST-24 LRE 997 switch identifies the positive and negative positions for both the A and B feed wires. Figure C-5 shows the positions on the Catalyst 2950G-24-EI-DC switch.

Figure C-5 Positive and Negative Positions



Step 3 Using an 18-gauge wire-stripping tool, strip each of the four wires coming from the DC-input power source to 0.27 inch (6.6 mm) ± 0.02 inch (0.5 mm). Do not strip more than 0.29 inch (7.4 mm) of insulation from the wire. Stripping more than the recommended amount of wire can leave exposed wire from the terminal block plug after installation.

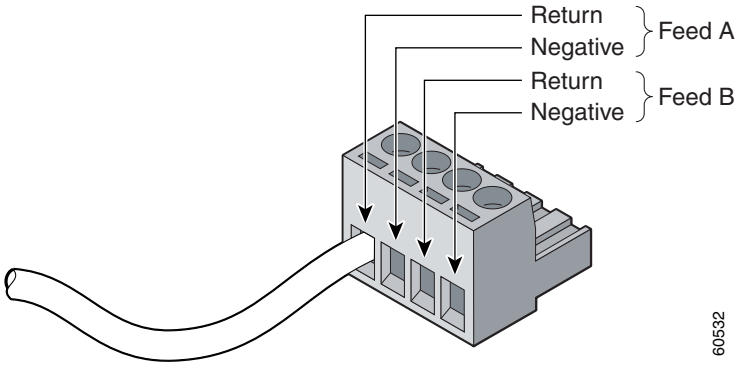
Figure C-6 Stripping the DC-Input Power Source Wire



Step 4 Insert the exposed wire of one of the four DC-input power source wires into the terminal block plug, as shown in Figure C-7. Make sure that you cannot see any wire lead. Only wire *with insulation* should extend from the terminal block.

Warning **An exposed wire lead from a DC-input power source can conduct harmful levels of electricity. Be sure that no exposed portion of the DC-input power source wire extends from the terminal block plug.** Statement 122

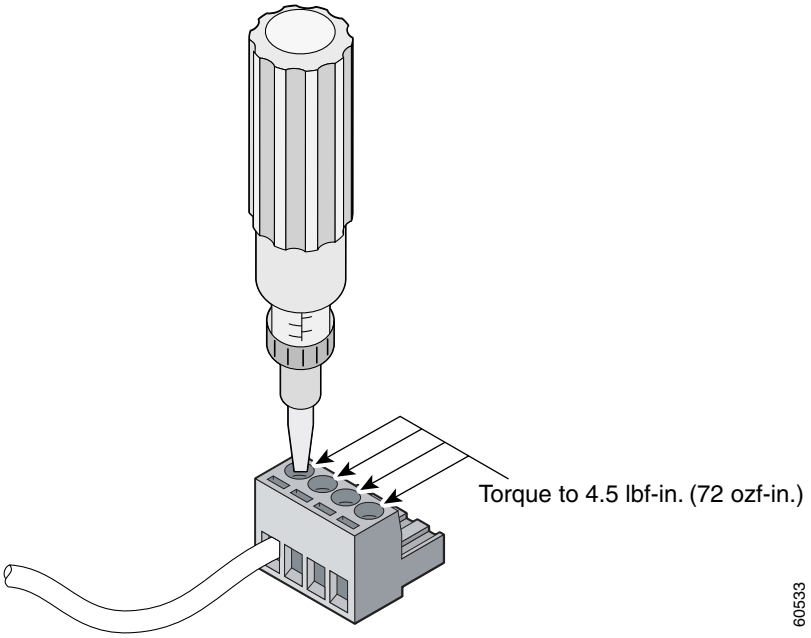
Figure C-7 Inserting Wires in the Terminal Block Plug



Step 5 Use a ratcheting torque screwdriver to torque the terminal block captive screw (above the installed wire lead) to 4.5 lbf-in. (72 ozf-in.). (See Figure C-8.)

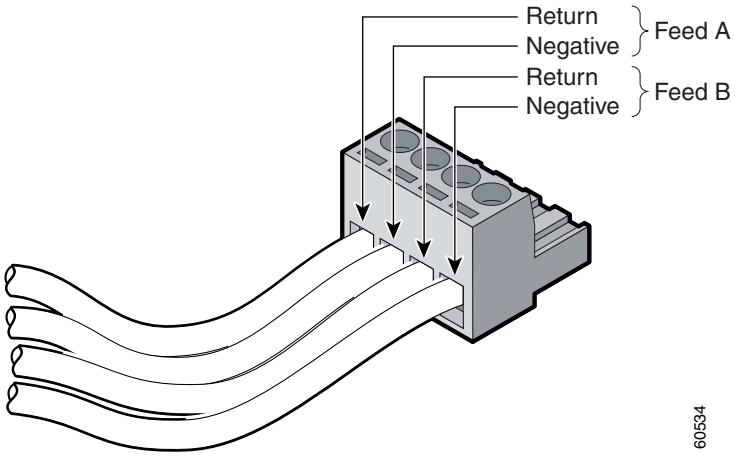
Caution Do not overtorque the terminal-block captive screws. The recommended maximum torque is 4.5 lbf-in.

Figure C-8 Torquing the Terminal-Block Captive Screws



Step 6 Repeat Steps 4 and 5 for the remaining three DC-input power source wires. Figure C-9 shows the completed wiring of a terminal block plug.

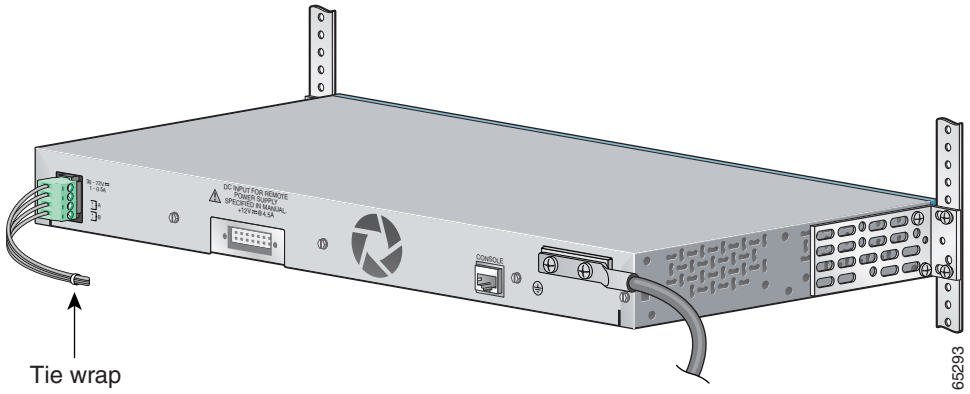
Figure C-9 Completed Wiring of Terminal Block Plug



Step 7 Insert the terminal block plug in the terminal block header on the rear panel of the Catalyst 2950G-24-EI-DC switch or on the front panel of the Catalyst 2950ST-24 LRE 997 switch. Figure C-10 shows how to insert the terminal block on a Catalyst 2950G-24-EI-DC switch.

Caution Secure the wires coming in from the terminal block so that they cannot be disturbed by casual contact. For example, use tie wraps to secure the wires to the rack.

Figure C-10 Inserting the Terminal Block in the Block Header



Step 8 Remove the tape from the circuit-breaker switch handle, and move the circuit-breaker handle to the on position.