

H3C S1850-X & S1850V2-X & S1850V2-EI Switch Series Installation Guide

Copyright © 2022-2023, New H3C Technologies Co., Ltd. and its licensors

All rights reserved

No part of this manual may be reproduced or transmitted in any form or by any means without prior written consent of New H3C Technologies Co., Ltd.

Trademarks

Except for the trademarks of New H3C Technologies Co., Ltd., any trademarks that may be mentioned in this document are the property of their respective owners.

Notice

The information in this document is subject to change without notice. All contents in this document, including statements, information, and recommendations, are believed to be accurate, but they are presented without warranty of any kind, express or implied. H3C shall not be liable for technical or editorial errors or omissions contained herein.

Environmental protection

This product has been designed to comply with the environmental protection requirements. The storage, use, and disposal of this product must meet the applicable national laws and regulations.

Preface

H3C S1850-X & S1850V2-X & S1850V2-EI Switch Series Installation Guide describes the installation, power-on, maintenance, and troubleshooting of the S1850V2-EI switches .

This preface includes the following topics about the documentation:

- [Audience](#).
- [Conventions](#).
- [Documentation feedback](#).

Audience

This documentation is intended for:

- Network planners.
- Field technical support and servicing engineers.
- Network administrators working with the switches.

Conventions

The following information describes the conventions used in the documentation.





Command conventions

Convention	Description
Boldface	Bold text represents commands and keywords that you enter literally as shown.
<i>Italic</i>	<i>Italic</i> text represents arguments that you replace with actual values.
[]	Square brackets enclose syntax choices (keywords or arguments) that are optional.
{ x y ... }	Braces enclose a set of required syntax choices separated by vertical bars, from which you select one.
[x y ...]	Square brackets enclose a set of optional syntax choices separated by vertical bars, from which you select one or none.
{ x y ... } *	Asterisk marked braces enclose a set of required syntax choices separated by vertical bars, from which you select a minimum of one.
[x y ...] *	Asterisk marked square brackets enclose optional syntax choices separated by vertical bars, from which you select one choice, multiple choices, or none.
&<1-n>	The argument or keyword and argument combination before the ampersand (&) sign can be entered 1 to n times.
#	A line that starts with a pound (#) sign is comments.













GUI conventions

Convention	Description
Boldface	Window names, button names, field names, and menu items are in Boldface. For example, the New User window opens; click OK .
>	Multi-level menus are separated by angle brackets. For example, File > Create > Folder .

Symbols

Convention	Description
 WARNING!	An alert that calls attention to important information that if not understood or followed can result in personal injury.
 CAUTION:	An alert that calls attention to important information that if not understood or followed can result in data loss, data corruption, or damage to hardware or software.
 IMPORTANT:	An alert that calls attention to essential information.
NOTE:	An alert that contains additional or supplementary information.
 TIP:	An alert that provides helpful information.

Network topology icons

Convention	Description
	Represents a generic network device, such as a router, switch, or firewall.
	Represents a routing-capable device, such as a router or Layer 3 switch.
	Represents a generic switch, such as a Layer 2 or Layer 3 switch, or a router that supports Layer 2 forwarding and other Layer 2 features.
	Represents an access controller, a unified wired-WLAN module, or the access controller engine on a unified wired-WLAN switch.
	Represents an access point.
	Represents a wireless terminator unit.
	Represents a wireless terminator.
	Represents a mesh access point.
	Represents omnidirectional signals.
	Represents directional signals.
	Represents a security product, such as a firewall, UTM, multiservice security gateway, or load balancing device.
	Represents a security module, such as a firewall, load balancing, NetStream, SSL VPN, IPS, or ACG module.

Examples provided in this document

Examples in this document might use devices that differ from your device in hardware model, configuration, or software version. It is normal that the port numbers, sample output, screenshots, and other information in the examples differ from what you have on your device.

Documentation feedback

You can e-mail your comments about product documentation to info@h3c.com.

We appreciate your comments.

Contents

1 Preparing for installation	1-1
Safety recommendations	1-2
Examining the installation environment	1-2
Cleanliness.....	1-4
Corrosive gas limit.....	1-4
Examining the installation site.....	1-5
Checking power distribution or power supply environment.....	1-6
Laser safety.....	1-6
Installation tools	1-7
2 Installing the switch	2-8
Installing the switch in a 19-inch rack.....	2-8
Mounting brackets.....	2-8
Attaching the mounting brackets to the switch.....	2-9
Rack-mounting the switch	2-10
Mounting the switch on a workbench.....	2-11
Mounting the switch on a wall	2-12
Grounding the switch	2-13
Grounding the switch with a grounding strip	2-14
Grounding the switch with a grounding conductor buried in the earth ground	2-15
Verifying the connection after grounding the switch.....	2-16
Connecting the power cord	2-16
Connecting the AC power cord for the fixed AC power supply	2-17
Connecting the DC power cord for the fixed DC power supply.....	2-17
Verifying the installation	2-18
3 Accessing the switch for the first time	3-18
Accessing the Web GUI by using the default username and password	3-18
Changing the default login password.....	3-19
Creating user accounts	3-19
4 Maintenance and troubleshooting	4-20
Fixed power supply failure	4-20
Input failure on an AC-powered switch	4-20
Input failure on an RPS-powered switch.....	4-20
Input failure on an RPS and AC-powered switch	4-21
Fan tray failure	4-21
Symptom	4-21
Solution	4-21

1 Preparing for installation

This document provides an installation guide for the following switch series:

- S1850-X switch series
- S1850V2-X switch series
- S1850V2-EI switch series

Table1-1 describes the switch models that each switch series includes.

Table1-1 Switch series and models

Switch series		Model	Product code (PID)
S1850-X switch series	Non-PoE models	S1850-28X	LS-1850-28X
		S1850-52X	LS-1850-52X
	PoE models	S1850-28X-PWR	LS-1850-28X-PWR
		S1850-52X-PWR	LS-1850-52X-PWR
S1850V2-X switch series	Non-PoE models	S1850V2-28X	LS-1850V2-28X LS-1850V2-28X-GL
		S1850V2-52X	LS-1850V2-52X LS-1850V2-52X-GL
	PoE models	S1850V2-28X-HPWR	LS-1850V2-28X-HPWR LS-1850V2-28X-HPWR-GL
		S1850V2-52X-PWR	LS-1850V2-52X-PWR LS-1850V2-52X-PWR-GL
S1850V2-EI switch series	Non-PoE models	S1850V2-52P-EI	LS-1850V2-52P-EI LS-1850V2-52P-EI-GL
		S1850V2-28P-EI	LS-1850V2-28P-EI LS-1850V2-28P-EI-GL
		S1850V2-9P-EI	LS-1850V2-9P-EI
		S1850V2-10P-EI	LS-1850V2-10P-EI LS-1850V2-10P-EI-GL
	PoE models	S1850V2-28P-HPWR-EI	LS-1850V2-28P-HPWR-EI LS-1850V2-28P-HPWR-EI-GL
		S1850V2-10P-PWR-EI	LS-1850V2-10P-PWR-EI
S1850V2-10P-HPWR-EI		LS-1850V2-10P-HPWR-EI-GL	

NOTE:

Switches of the same model but different PIDs might differ in hardware and software features. You can view the PID of a switch on the label located on its rear panel or top panel.

Safety recommendations

To avoid equipment damage or bodily injury, read the following safety recommendations before installation. Note that the recommendations do not cover every possible hazardous condition.

- Before cleaning the switch, remove all power cords from the switch. Do not clean the switch with wet cloth or liquid.
- Do not place the switch near water or in a damp environment. Prevent water or moisture from entering the switch chassis.
- Do not place the switch on an unstable case or desk.
- Ensure good ventilation at the installation site and keep the air inlet and outlet vents of the switch free of obstruction.
- Make sure the power source voltage is as required.
- To avoid electrical shocks, do not open the chassis while the switch is operating or when the switch is just powered off.
- To avoid ESD damage, wear an ESD wrist strap to hot-swap a power supply.

Examining the installation environment

To ensure correct operation of your switch, make sure the installation environment meets the requirements listed in [Table1-2](#).

Table1-2 Checking list for the installation environment

Item	Requirements
Ventilation and heat dissipation	<p>⚠ CAUTION:</p> <p>To ensure correct operation of your device, make sure the installation environment is adequately ventilated to prevent the switch from overheating.</p> <ul style="list-style-type: none"> • Ensure a minimum clearance of 10 cm (3.94 in) around the chassis. • Do not install the device near a heat source, for example, a stove or heater. • Ensure air ventilation in the installation environment. • Do not block the ventilation holes in the device or power adapter.
Anti-moisture	<p>⚠ CAUTION:</p> <p>Water or moisture might damage the circuits of the device.</p> <ul style="list-style-type: none"> • Do not place the device near water or in a damp environment. • Install the switch in a clean, dry, and ventilated place where temperature is controlled in a stable range. • Make sure the installation environment is free from water leakage or condensation. If required, install a dehumidification device (such as an air conditioner with a dehumidification function or a dedicated dehumidifier). • Do not operate the device under or near the water source, such as the wash basin, laundry room, or areas with high humidity. • Do not touch the device with wet hands.
Temperature/humidity	<p>For correct operation and long service life of your switch, maintain the temperature and humidity in the equipment room at acceptable ranges.</p> <ul style="list-style-type: none"> • Lasting high relative humidity can cause poor insulation, electricity leakage, mechanical property change of materials, and metal corrosion.

Item	Requirements
	<ul style="list-style-type: none"> Lasting low relative humidity can cause washer contraction and ESD and cause issues including loose mounting screws and circuit failure. High temperature can accelerate the aging of insulation materials and significantly lower the reliability and lifespan of the switch. <p>For the temperature and humidity requirements of the switch, see technical specifications in <i>H3C S1850-X & S1850V2-X & S1850V2-EI Switch Series Hardware Information and Specifications</i>.</p>
Lightning protection	<p>⚠ CAUTION:</p> <p>Ground the switch correctly and verify the grounding. For more information, see "Grounding the switch."</p> <ul style="list-style-type: none"> If you ground the switch by using a grounding strip, make sure the grounding resistance of the grounding strip in the equipment room is less than 1Ω. If you ground the switch by using a grounding conductor buried in the earth ground, make sure the grounding resistance of the grounding conductor in the ground is less than 10Ω. Route the signal cables along indoor walls, bury the cables in the earth ground, or thread the cables through steel tubes. Install a signal lightning arrester with a nominal discharge current for a corresponding network interface. Keep the signal cables far from power cords and lightning rod down conductors. As a best practice, route power cords indoors. If an AC power cord is routed from outdoors, connect the AC power cord first to a power lightning arrester before leading it to the AC power port on the switch. Make sure the power lightning arrester has a nominal discharge current and the total length of the power cord from the power lightning arrester to the power port on the switch is less than 5 m (16.40 ft). Ground the switch, rack, independent power supplies, and lightning arresters separately. You must ground optical fibers with reinforcing metal stiffener from outdoors on an optical distribution frame (ODF) or fiber splice enclosure.
Cable routing	<p>⚠ CAUTION:</p> <p>Do not run an Ethernet cable and power cord in parallel.</p> <ul style="list-style-type: none"> Route different types of cables separately. Keep power cords a minimum of 5 cm (1.97 in) away from other cables.
ESD prevention	<ul style="list-style-type: none"> Ground the switch correctly. To avoid ESD damage to the device or components, always wear an ESD wrist strap when you install or remove the device or components. Make sure the wrist strap has good skin contact and is reliably grounded.
Cleanliness	For more information, see " Cleanliness ."
Corrosive gas prevention	The installation site must be free from corrosive gases such as acid gases and alkaline gases. For more information, see " Corrosive gas limit ."
EMI	<ul style="list-style-type: none"> If AC power is used, use a single-phase three-wire power receptacle with protection earth (PE) to filter interference from the power grid. Keep the device far away from radio transmitting stations, radar

Item	Requirements
	stations, and high-frequency devices. <ul style="list-style-type: none"> Use electromagnetic shielding, for example, shielded interface cables, when necessary.

Cleanliness

Dust buildup on the chassis might cause electrostatic adsorption and dust corrosion, resulting in poor contact of metal connectors and contact points. This might shorten the device's lifetime and even cause device failure in the worst case. [Table1-3](#) describes the switch requirement for cleanliness.

Table1-3 Switch requirement for cleanliness

Substance	Particle diameter	Concentration limit
Dust particles	$\geq 0.5 \mu\text{m}$	$\leq 1.8 \times 10^7 \text{ particles/m}^3$

To maintain cleanliness in the equipment room, follow these guidelines:

- Keep the equipment room away from pollution sources. Do not smoke, eat, or drink in the equipment room.
- Use double-layer glass in windows and seal doors and windows with dust-proof rubber strips. Use screen doors and window screens for doors and windows open to the outside and make sure the external windows are air tight.
- Use dustproof materials for floors, walls, and ceilings and use wallpaper or matt paint that does not produce powders.
- Clean the equipment room regularly and clean the air filters of the rack each month.
- Wear ESD clothing and shoe covers before entering the equipment room, keep the ESD clothing and shoe covers clean, and change them frequently.

Corrosive gas limit

Corrosive gases can accelerate corrosion and aging of metal components. Make sure the corrosive gases do not exceed the concentration limits as shown in [Table1-4](#).

Table1-4 Corrosive gas concentration limits

Gas	Average concentration (mg/m ³)	Maximum concentration (mg/m ³)
SO ₂	0.3	1.0
H ₂ S	0.1	0.5
Cl ₂	0.1	0.3
HCl	0.1	0.5
HF	0.01	0.03
NH ₃	1.0	3.0
O ₃	0.05	0.1
NO _x	0.5	1.0

△ CAUTION:

As a best practice, control the corrosive gas concentrations in the equipment room at their average values. Make sure the corrosive gas concentrations do not exceed 30 minutes per day at their maximum values.

To control corrosive gases, use the following guidelines:

- As a best practice, do not build the equipment room in a place with a high concentration of corrosive gases.
- Make sure the equipment room is not connected to sewer, vertical shaft, or septic tank pipelines and keep it far away from these pipelines. The air inlet of the equipment room must be away from such pollution sources.
- Use environmentally friendly materials to decorate the equipment room. Avoid using organic materials that contains harmful gases, such as sulfur or chlorine-containing insulation cottons, rubber mats, sound-proof cottons, and avoid using plasterboards with high sulfur concentration.
- Place fuel (diesel or gasoline) engines separately. Do not place them in the same equipment room with the device. Make sure the exhausted air of the engines will not flow into the equipment room or towards the air inlet of the air conditioners.
- Place batteries separately. Do not place them in the same room with the device.
- Employ a professional company to monitor and control corrosive gases in the equipment room regularly.

Examining the installation site

Before you install the switch, verify that the installation site meets the installation requirements. The switch can operate correctly in an A1 or A2 installation site. Availability issues might occur if you install the switch in an A3, B1, B2, or C installation site.

Table1-5 Installation sites

Category	Definition	Example
A1: indoor controlled environment	<ul style="list-style-type: none">• Indoor environments where temperature and humidity are controlled.• Completely enclosed or shielded indoor environments.	Central equipment rooms, IDC equipment rooms, mobile cabins with air conditioners, outdoor air conditioner cabinets, and heat exchanger cabinets.
A2: indoor partially controlled environment	<ul style="list-style-type: none">• Indoor environments where temperature and humidity are partially controlled.• Incompletely enclosed or shielded places.• Places far from pollution sources.	Simple equipment rooms, ordinary houses, garages, corridors, and direct ventilation cabinets far from pollution sources, houses without direct exposure to sunlight or rain, railway station platforms, and stadiums.
A3: indoor uncontrolled environment	<ul style="list-style-type: none">• Indoor environments where temperature and humidity are uncontrolled.• Incompletely enclosed or shielded places.• Places near pollution sources.	Simple equipment rooms, ordinary houses, garages, corridors, and direct ventilation cabinets near pollution sources, houses without direct exposure to sunlight or rain, railway station platforms, stadiums, uncleaned rooms after decoration, and rooms under decoration.
B1: outdoor general environment	<ul style="list-style-type: none">• Unshielded places where the temperature and humidity are not controlled.• Places far from pollution sources.	Completely exposed outdoor places far from pollution sources.

Category	Definition	Example
B2: harsh environment	<ul style="list-style-type: none"> Unshielded places where the temperature and humidity are not controlled. Sea environments or outdoor land environments near pollution sources. 	Islands, ships, and completely exposed outdoor places near pollution sources.
C: special environments	Special application environments	Buried, underwater, or undersea environments and manholes.

Table1-6 Pollution sources

Category	Radius range
Saline water areas such as oceans and saline lakes	≤ 3.7 km (2.30 miles)
Serious pollution sources such as metallurgic plants, coal mines, and heat and power plants	≤ 3 km (1.86 miles)
Medium pollution sources such as chemical factories, rubber plants, and electroplating factories	≤ 2 km (1.24 miles)
Light pollution sources, such as food factories, tanneries, and heating boilers	≤ 1 km (0.62 miles)

Checking power distribution or power supply environment

Table1-7 Requirements for power distribution or power supply environment

Item	Requirements
Preparation	The power supply must be available before you install the switch.
Voltage	The voltage provided to the switch must be within the operating voltage range. For the operating voltage range, see <i>H3C S1850-X & S1850V2-X & S1850V2-EI Switch Series Hardware Information and Specifications</i> .
Power receptacle and cables	<ul style="list-style-type: none"> If the external power supply system provides an AC power outlet, use a country-specific AC power cord. Make sure the PE wire of the AC power supply is grounded reliably. If the external power supply system provides a DC distribution box, prepare DC power cords yourself. Do not use the power cord provided with the switch on other devices.

Laser safety

WARNING!

Disconnected optical fibers or transceiver modules might emit invisible laser light. Do not stare into beams or view directly with optical instruments when the switch is operating.

The switch is a Class 1 laser device.

Installation tools

No installation tools are provided with the switch. Prepare the following tools yourself as required.

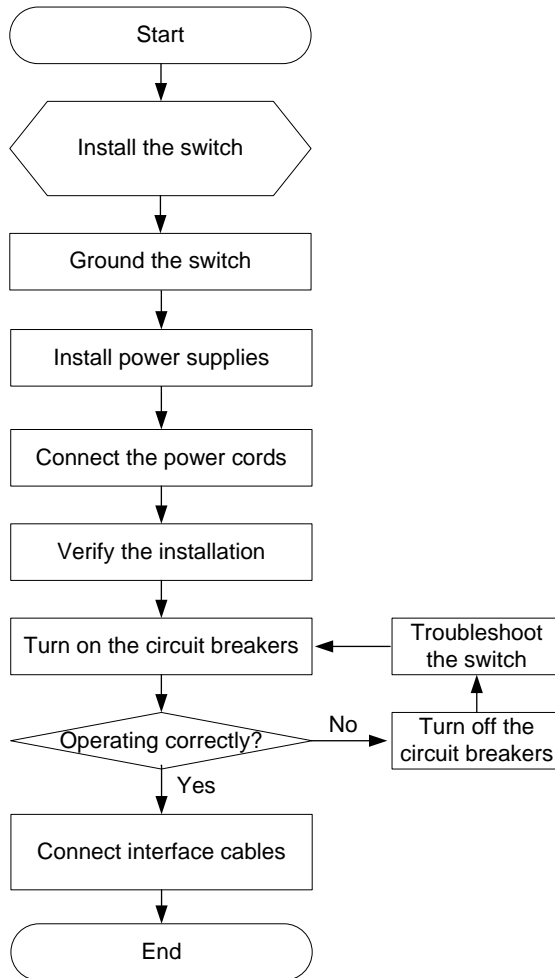
- Flat-head screwdriver
- Phillips screwdriver
- ESD wrist strap
- Needle-nose pliers
- Diagonal pliers
- Crimping tool
- Marker
- Heat gun

2 Installing the switch

△ CAUTION:

Keep the tamper-proof seal on a mounting screw on the chassis cover intact, and if you want to open the chassis, contact H3C for permission. Otherwise, H3C shall not be liable for any consequence.

Figure2-1 Hardware installation flow



Installing the switch in a 19-inch rack

Mounting brackets

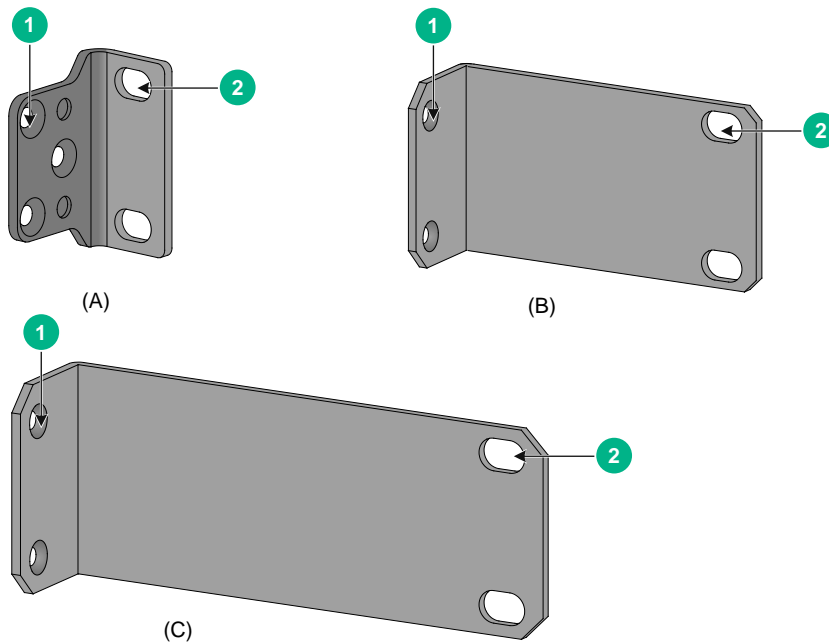
Table2-2 describes the mounting brackets applicable to the switch.

Table2-2 Mounting brackets applicable to the switch

Switch model	Mounting brackets	Views
S1850-X switch series	Mounting brackets A (provided)	See A in Figure2-2.

Switch model	Mounting brackets	Views
S1850V2-X switch series S1850V2-52P-EI S1850V2-28P-EI S1850V2-28P-HPWR-EI		
S1850V2-10P-PWR-EI S1850V2-10P-HPWR-EI	Mounting brackets B with product code SOHO-SWITCH-FL-02 (optional)	See B in Figure2-2 .
S1850V2-9P-EI S1850V2-10P-EI	Mounting brackets C with product code SOHO-SWITCH-FL-01 (optional)	See C in Figure2-2 .

Figure2-2 Mounting brackets



-
- (1) Screw hole for attaching the bracket to the switch
-
- (2) Screw hole for attaching the bracket to the rack post
-

Attaching the mounting brackets to the switch

1. Align one mounting bracket with the screw holes at the mounting position. Use M4 screws to attach the mounting bracket to the chassis. See [Figure2-3](#) for installing mounting bracket A, [Figure2-4](#) for installing mounting bracket B, and [Figure2-5](#) for installing mounting bracket C.
2. Repeat step 1 to attach the other mounting bracket to the chassis.

Figure2-3 Attaching mounting bracket A (S1850-52X switch)

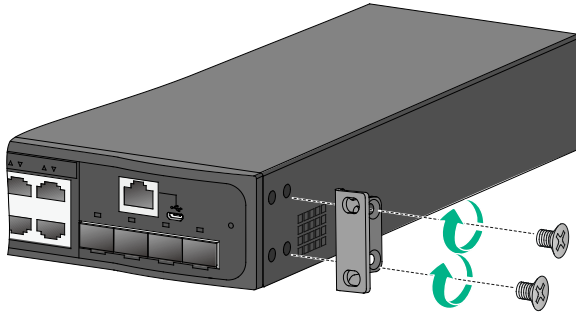


Figure2-4 Attaching mounting bracket B (S1850V2-10P-PWR-EI switch)

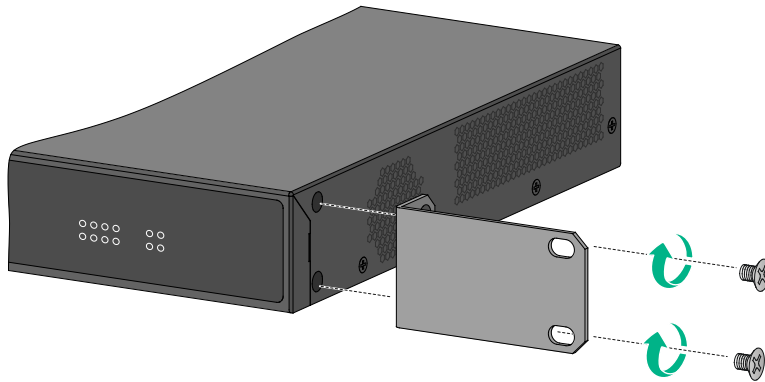
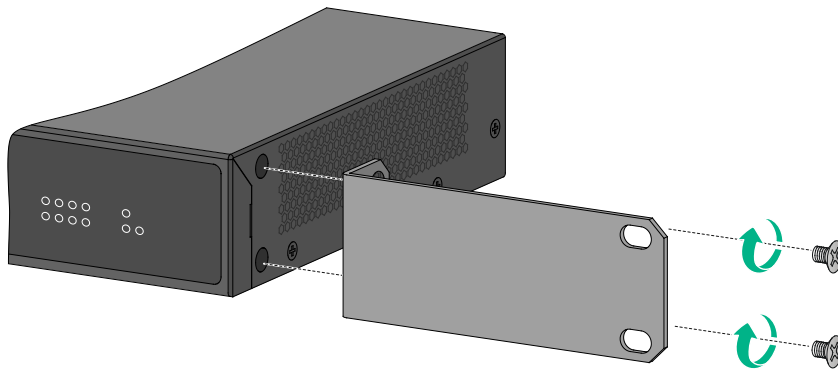


Figure2-5 Attaching mounting bracket C (S1850V2-10P-EI switch)



Rack-mounting the switch

This task requires two people. To mount the switch in the rack:

1. Wear an ESD wrist strap and make sure it makes good skin contact and is reliably grounded.
2. Verify that the mounting brackets have been securely attached to the switch chassis.
3. Install cage nuts in the mounting holes in the rack posts.
No cage nuts are provided with the switch. Prepare them yourself.

4. One person holds the switch chassis and aligns the mounting brackets with the mounting holes in the rack posts, and the other person attaches the mounting brackets to the rack with M6 screws.
M6 screws are provided only for switches shipped with mounting brackets. For switches not shipped with mounting brackets, prepare M6 screws yourself.
5. Verify that the switch chassis is horizontal and secure.

Figure2-6 Mounting an S1850-52X switch in the rack

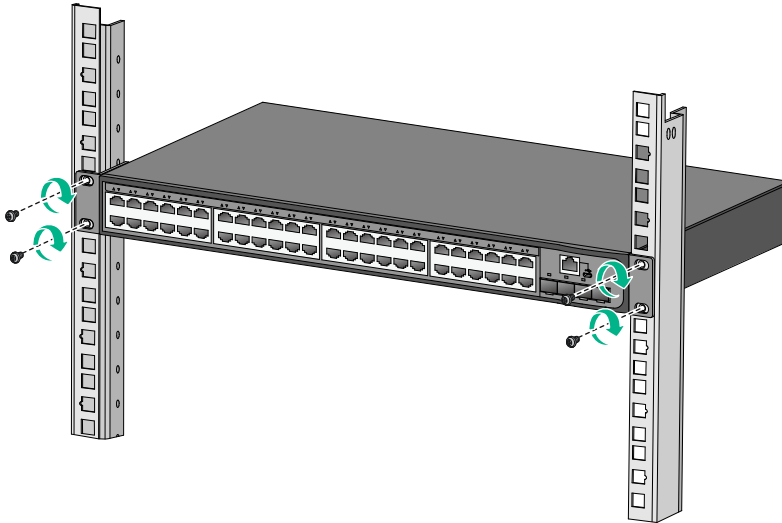
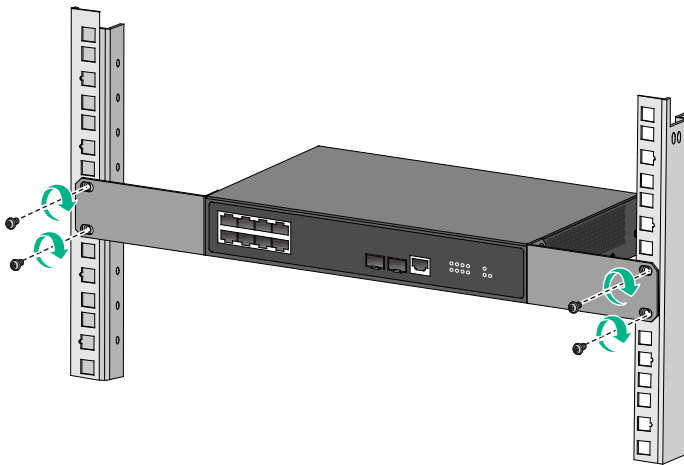


Figure2-7 Mounting an S1850V2-10P-EI switch in the rack



Mounting the switch on a workbench

! **IMPORTANT:**

- Ensure 10 cm (3.94 in) of clearance around the chassis for heat dissipation.
 - Do not place heavy objects on the switch.
-

If a standard 19-inch rack is not available, you can place you switch on a workbench.

To mount the switch on a workbench:

1. Verify that the workbench is sturdy and reliably grounded.
2. Place the switch with bottom up, and clean the round holes in the chassis bottom with dry cloth.
3. Attach the rubber feet to the four round holes in the chassis bottom.
4. Place the switch with upside up on the workbench.

Mounting the switch on a wall

△ CAUTION:

- Before drilling holes in a wall, make sure no electrical lines exist in the wall.
- Leave a minimum clearance of 10 cm (3.94 in) around the chassis for heat dissipation.

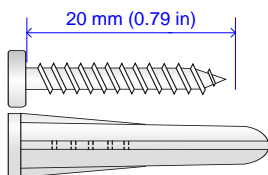
Table2-2 describes the switch models that support wall mounting and installation holes distances required for wall-mounting the switch.

Table2-3 Installation hole distances for switch models that support wall mounting

Switch model	Hole distance
S1850V2-9P-EI S1850V2-10P-EI	170 mm (6.69 in)
S1850V2-10P-PWR-EI S1850V2-10P-HPWR-EI	102 mm (4.02 in)

Use the provided screw anchors and screws with a length of 20 mm (0.79 in) to wall-mount the switch.

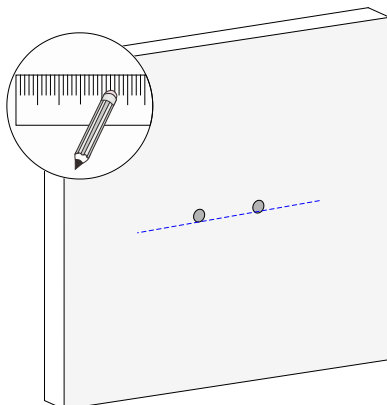
Figure2-8 Screw anchor and screw



To mount the switch on a wall:

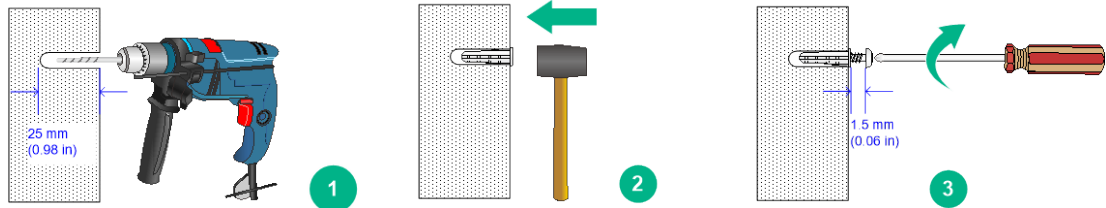
1. Mark two installation holes on the wall. Make sure the two holes are on the same horizontal line. See Table2-2 for the distance requirement between the two holes.

Figure2-9 Installing the switch on a wall (1)



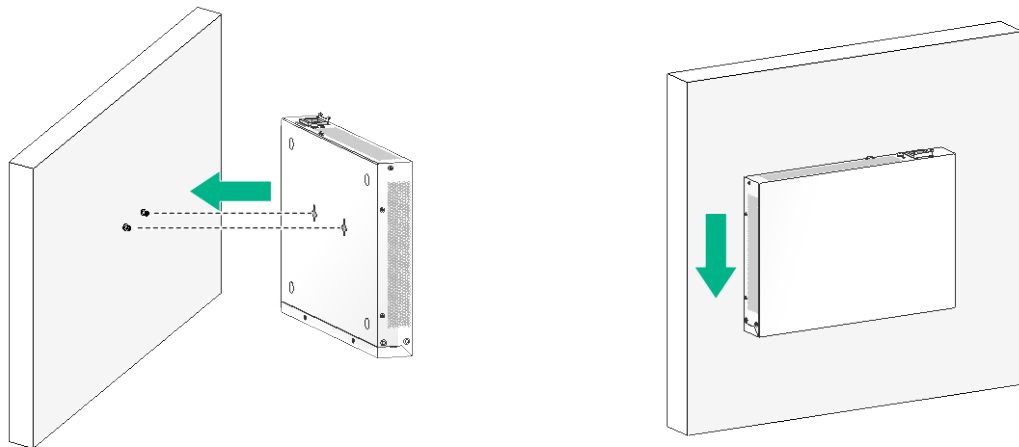
2. Drill two holes with a diameter of 6 mm (0.24 in) and a depth of 25 mm (0.98 in) at the marked locations. Hammer the screw anchors into the wall and use a Phillips screwdriver to fasten the screw into the screw anchor. Leave 1.5 mm (0.06 in) between the screw head and the wall for hanging the switch.

Figure2-10 Installing the switch on a wall (2)



3. Align the installation holes in the switch rear with the screws on the wall and hang the switch on the screws. Make sure the port side faces down and the left and right sides are perpendicular to the ground.

Figure2-11 Installing the switch on a wall (3)



Grounding the switch

⚠ WARNING!

Correctly connecting the switch grounding cable is crucial to lightning protection, ESD, and EMI protection. For information about lightning protection, see *H3C Network Devices Lightning Protection Guide*.

To protect against the following types of issues, use a grounding cable to connect the switch to the earthing facility at the installation site:

- Bodily injury from electric shocks.
- Device and power and data line damages.
- Electrical fires, lightning strokes, electromagnetic coupling interferences, and ESD damages.

You can ground the switch in one of the following ways, depending on the grounding conditions available at the installation site:

- [Grounding the switch with a grounding strip](#)
- [Grounding the switch with a grounding conductor buried in the earth ground](#)

NOTE:

The chassis views and power supply and grounding terminal positions in the following figures are for illustration only.

Grounding the switch with a grounding strip

⚠ WARNING!

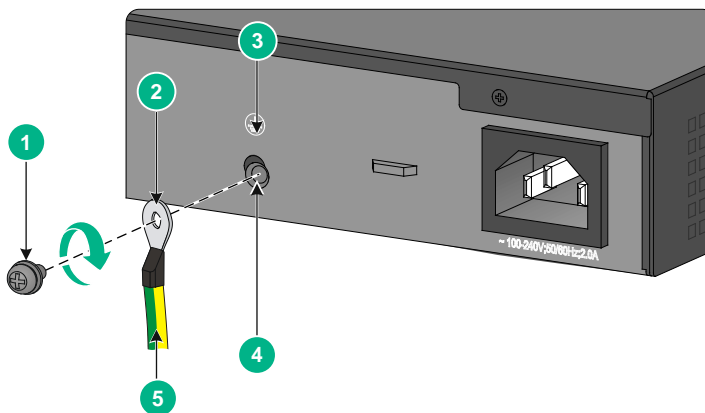
Connect the grounding cable to the grounding system in the equipment room. Do not connect it to a fire main or lightning rod.

If a grounding strip is available at the installation site, use the grounding strip to ground the switch.

To ground the switch by using a grounding strip:

1. Attach the ring terminal end of the grounding cable to the grounding hole in the switch.
 - a. Remove the grounding screw from the grounding hole in the rear panel of the switch.
 - b. Attach the grounding screw to the ring terminal of the grounding cable.
 - c. Use a screwdriver to fasten the grounding screw into the grounding screw hole.

Figure2-12 Attaching the grounding cable to the grounding hole of the switch (S1850-52X switch)



(1) Grounding screw

(2) Ring terminal

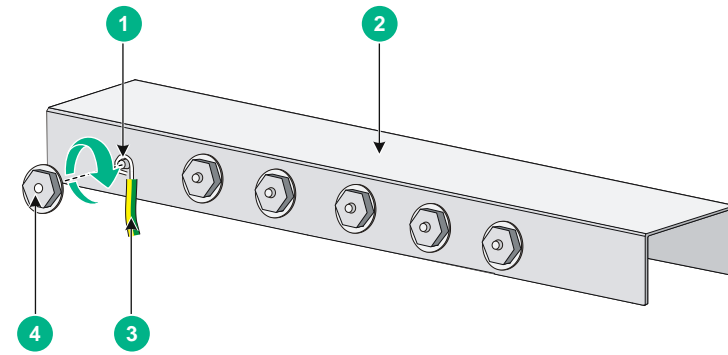
(3) Grounding sign

(4) Grounding hole

(5) Grounding cable

2. Connect the other end of the grounding cable to the grounding strip.
 - a. Use the needle-nose pliers to bend the bare wire.
 - b. Hook the grounding cable to the post on the grounding strip, and use the hex nut to secure the cable to the post.

Figure2-13 Connecting the grounding cable to a grounding strip



(1) Grounding post	(2) Grounding strip
(3) Grounding cable	(4) Hex nut

Grounding the switch with a grounding conductor buried in the earth ground

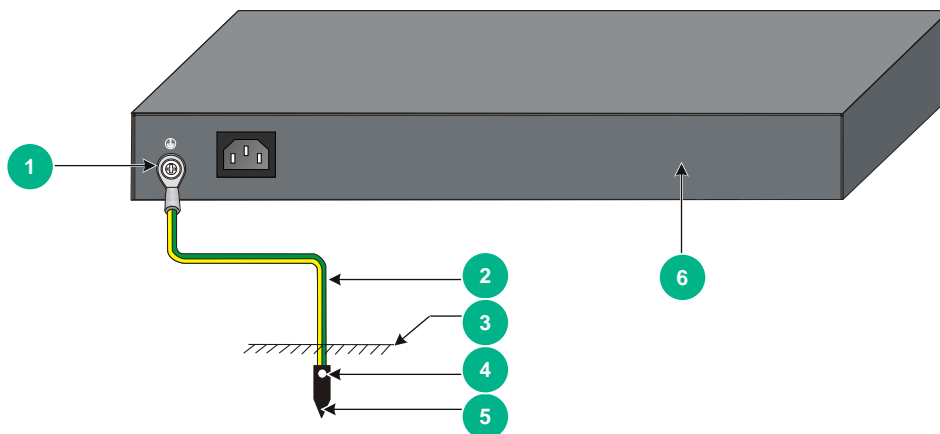
If the installation site does not have grounding strips, but earth ground is available, hammer a 2.5 m (8.20 ft) or longer angle iron or steel tube into the earth ground to act as a grounding conductor. Make sure a minimum of 0.7 m (2.30 ft) is left between the top of the grounding conductor and the ground. In cold areas, bury the grounding conductor below the frozen soil layer. In areas with thin soil or rocky gravel, determine the depth for burying the grounding conductor based on the actual condition.

If zinc-coated steel is used, the following dimensions requirements must be met:

- **Angle iron**—A minimum of 50 × 50 × 5 mm (1.97 × 1.97 × 0.20 in).
- **Steel tube**—A minimum of 3.5 mm (0.14 in) in thickness.
- **Flat steel**—A minimum of 40 × 4 mm (1.57 × 0.16 in).
- **Round steel**—A minimum of 10 mm (0.39 in).

Weld the yellow-green grounding cable to the angel iron or steel tube and treat the joint for corrosion protection.

Figure2-14 Grounding the switch by burying the grounding conductor into the earth ground



(1) Grounding screw	(2) Grounding cable	(3) Earth
(4) Joint	(5) Grounding conductor	(6) Chassis rear panel

Verifying the connection after grounding the switch

- If you ground the switch by using a grounding strip, perform the following tasks:
 - a. Use a multimeter to measure the resistance between the switch grounding terminal and grounding point, and make sure the resistance is less than 0.1Ω.
 - b. Use a grounding resistance tester to measure the grounding resistance of the grounding strip, and make sure the grounding resistance is less than 1Ω.
- If you ground the switch with a grounding conductor buried in the earth ground, perform the following tasks:
 - a. Use a multimeter to measure the resistance between the switch grounding terminal and grounding point, and make sure the resistance is less than 0.1Ω.
 - b. Use a grounding resistance tester to measure the grounding resistance of the angle iron in the ground, and make sure the grounding resistance is less than 10Ω. For locations with high soil resistivity, sprinkle some resistance reducer to reduce soil resistivity or replace soil around the grounding strip with soil with lower resistance.

For information about resistance measurement, see *H3C Network Devices Lightning Protection Guide*.

Connecting the power cord

△ CAUTION:

- Provide a circuit breaker for each power cord.
- Before connecting the power cord, make sure the circuit breaker on the power cord is turned off.

Table2-4 Power cord connection procedures at a glance

Switch model	Available power source	Connection procedure reference
S1850-52X-PWR	AC power source	Connecting the AC power cord for the fixed AC power supply
	RPS1600-A	Connecting the DC power cord for the fixed DC power supply
S1850-28X S1850-52X S1850-28X-PWR S1850V2-28X S1850V2-52X S1850V2-28X-HPWR S1850V2-52X-PWR S1850V2-52P-EI S1850V2-28P-EI S1850V2-28P-HPWR-EI S1850V2-9P-EI S1850V2-10P-EI S1850V2-10P-PWR-EI S1850V2-10P-HPWR-EI	AC power source	Connecting the AC power cord for the fixed AC power supply

Connecting the AC power cord for the fixed AC power supply

1. Connect the plug of the AC power cord to the AC-input power receptacle on the switch. See [Figure2-15](#).
2. Use a cable tie to secure the power cord to the handle near the AC power receptacle. See [Figure2-16](#).
3. Connect the other end of the power cord to an AC power source.

Figure2-15 Connecting the AC power cord for the fixed AC power supply (S1850-52X switch)

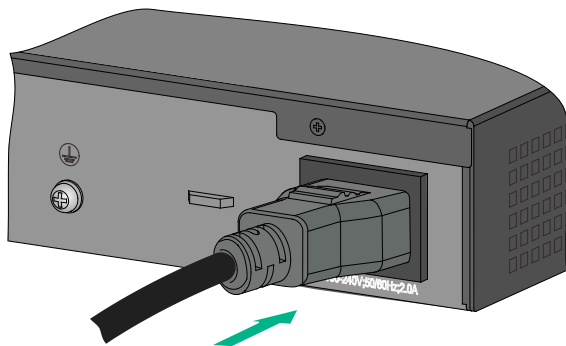
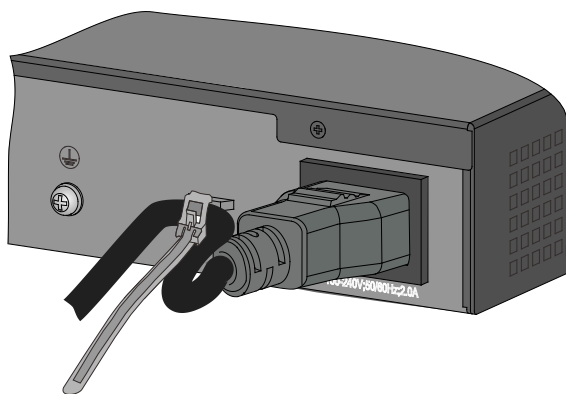


Figure2-16 Securing the AC power cord for the fixed AC power supply through a cable tie (S1850-52X switch)



Connecting the DC power cord for the fixed DC power supply

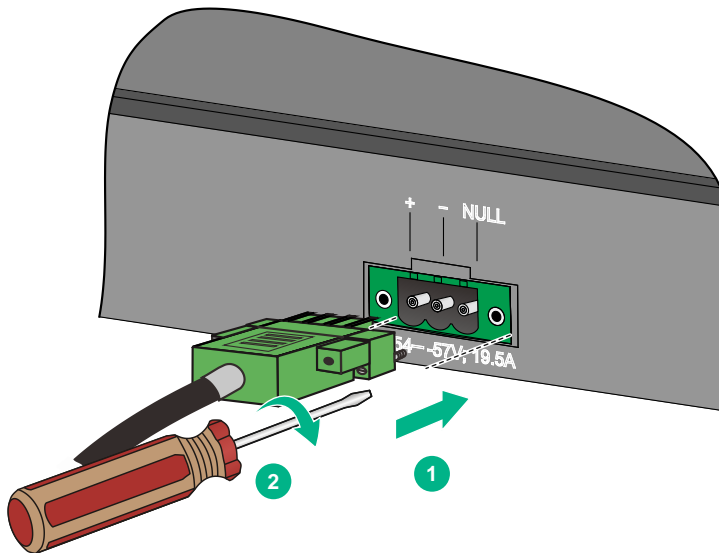
⚠ CAUTION:

To connect to an H3C recommended RPS, use a power cord compatible with the RPS.

To connect the DC power cord for the fixed DC power supply:

1. Correctly orient the DC power cord connector and insert the connector into the power receptacle on the power supply, as shown by callout 1 in [Figure2-17](#).
If you orient the DC power cord connector upside down, you cannot insert the plug into the power receptacle.
2. Use a flat-head screwdriver to fasten the screws on the power cord connector, as shown by callout 2 in [Figure2-17](#).
3. Connect the other end of the power cord to a -48 VDC power source or an RPS.

Figure2-17 Connecting the DC power cord for the fixed DC power supply (S1850-52X-PWR switch)



Verifying the installation

After you complete the installation, verify that:

- There is enough space for heat dissipation around the switch, and the rack or workbench is stable.
- The grounding cable is securely connected.
- The correct power source is used.
- The power cords are correctly connected.
- All the interface cables are cabled indoors. If any cable is routed outdoors, verify that the socket strip with lightning protection and lightning arresters for network ports have been correctly connected.

3 Accessing the switch for the first time

When the switch is powered on and started up for the first time, you can access the Web GUI of the switch to manage it.

Accessing the Web GUI by using the default username and password

The default Web login information is as follows:

- **Username**—admin
- **Password**—admin
- **IP address of VLAN-interface 1**—192.168.0.233/24

To access the Web GUI by using the default username and password:

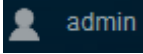
1. Use a twisted pair cable to connect a PC to an Ethernet port on the switch.
By default, all ports on the switch belong to VLAN 1.
2. Configure an IP address in subnet 192.168.0.0/24 for the PC. Make sure the PC and the switch are reachable to each other.
The PC must use an IP address different than VLAN-interface 1.
3. Start a browser on the PC, enter `http://192.168.0.233` in the address bar, and press **Enter**. The Web login page opens.
4. Enter the default username **admin** and password **admin** and then click **Login**.

NOTE:

- The PC mentioned in this section is used for initial switch configuration, which does not have to be a Web network management terminal. A Web network management terminal is a PC used for device management over the network, which can access the device if only a route to the device is available.
 - To log out, do not close the browser directly. You must click **Logout** at the top left corner on the Web interface.
-

Changing the default login password

As a best practice for security purposes, change the default login password immediately after you log in to the GUI for the first time.

To change the default login password, click the **admin** icon  at the top left corner.

Creating user accounts

You can create user accounts other than the default account.

To create a user account, click **Device > Maintenance > Administrators** and create a new user account on the page that opens.

A maximum of 32 users can access the Web GUI at the same time.

4 Maintenance and troubleshooting

Fixed power supply failure

The switch uses fixed power supplies. The S1850-52X-PWR switch supports AC input, RPS input, and concurrent AC and RPS inputs. The other switch models support only AC input. You can identify the power supply operating status by observing the system status LED and the RPS status LED on the switch.

Table4-1 Description for the power failure indication LEDs

LED	Mark	Status	Description
System status LED	SYS	Off	The switch is powered off.
RPS status LED	RPS	Steady green	Normal AC and DC inputs.
		Steady yellow	Normal DC input but no or abnormal AC input.
		Off	No or abnormal DC input.

Input failure on an AC-powered switch

Symptom

The system status LED on the switch is off.

Solution

To resolve the issue:

1. Verify that the AC power cord is securely connected to the switch, and the AC-input power receptacle on the switch and the connected AC power outlet are in good condition.
2. Verify that the AC power source is operating correctly.
3. Verify that the operating temperature of the switch is in the acceptable range, and the power supply has good ventilation. Overtemperature can cause the power supply to stop working and enter protection state.
4. If the issue persists, contact H3C Support.

Input failure on an RPS-powered switch

Symptom

The system status LED or the RPS status LED on the RPS-powered switch is off.

Solution

To resolve the issue:

1. Verify that the switch is securely connected to the RPS.
2. Verify that the RPS is operating correctly.
3. Verify that the operating temperature of the switch is in the acceptable range, and the power supply has good ventilation. Overtemperature can cause the power supply to stop working and enter protection state.

4. If the issue persists, contact H3C Support.

Input failure on an RPS and AC-powered switch

Symptom 1

The system status LED on the RPS and AC-powered switch is off.

Solution

To resolve the issue:

1. Verify that the AC power cord is securely connected to the switch, and the AC-input power receptacle on the switch and the connected AC power outlet are in good condition.
2. Verify that the AC power source is operating correctly.
3. Verify that the switch is securely connected to the RPS.
4. Verify that the RPS is operating correctly.
5. Verify that the operating temperature of the switch is in the acceptable range, and the power supply has good ventilation. Overtemperature can cause the power supply to stop working and enter protection state.
6. If the issue persists, contact H3C Support.

Symptom 2

The system status LED on the RPS and AC-powered switch is on but the RPS status LED is steady yellow.

Solution

To resolve the issue:

1. Verify that the AC power cord is securely connected to the switch, and the AC-input power receptacle on the switch and the connected AC power outlet are in good condition.
2. Verify that the AC power source is operating correctly.
3. If the issue persists, contact H3C Support.

Symptom 3

The system status LED on the RPS and AC-powered switch is on but the RPS status LED is off.

Solution

To resolve the issue:

1. Verify that the switch is securely connected to the RPS.
2. Verify that the RPS is operating correctly.
3. If the issue persists, contact H3C Support.

Fan tray failure

Symptom

The system status LED on the switch indicates a fan tray failure.

Solution

When a fan tray issue occurs, contact H3C Support.