HP A58x0AF

650W AC (JC680A) & 650W DC (JC681A)

Power Supplies User Guide

Contents

Power supply overview

Functions

HP A58x0AF 650W AC power supply (JC680A), referred to as 650W AC power supply hereafter, is a power supply with AC input and DC output, and HP A58x0AF 650W DC power supply (JC681A), referred to as 650W DC power supply hereafter, is a power supply with DC input and DC output. They can provide up to 650 W of output. They deliver the following features:

Feature	Description
Protection function	Protection for over-current input, under-voltage input, over-voltage output, output short circuit, and overheat.
Support for redundancy	The power supplies can work in 1+1 redundant mode, and support load sharing.
Support for hot swapping	You can plug or unplug a power supply when the switch is operating properly.

Technical specifications

Item	Specifications
Rated input voltage	• 650W AC power supply: 100 VAC to 240 VAC; 50 or 60 Hz • 650W DC power supply: −40 VDC to −60 VDC

Item	Specifications
Rated output voltage range	12 V/5 V
Maximum output current	52.9 A (12 V)/3 A (5V)
Maximum output power	650 W
Dimensions (H × W × D)	40.2 × 50.5 × 300 mm (1.58 × 1.99 × 11.81 in)
Operating temperature	650W AC power supply: −5°C to 50°C (23°F to 122°F)
	650W DC power supply: −5°C to 45°C (23°F to 113°F)
Relative humidity	5% to 95%

Appearance

Figure 1 650W AC power supply appearance
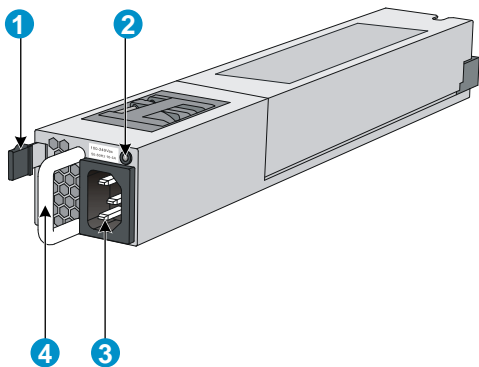
(1) Latch	(2) Status LED
(3) AC power receptacle	(4) Handle

Figure 2 650W DC power supply appearance
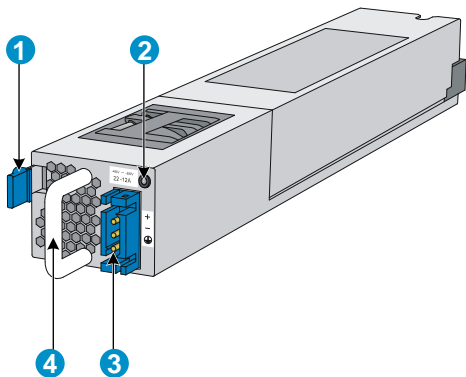
(1) Latch	(2) Status LED
(3) DC power receptacle	(4) Handle

LEDs

A 650W AC/650W DC power supply has a status LED on its front panel. The following table lists the LED status and description.

LED status	Description
Steady green	The power supply operates properly, and is in the active state.
Blinking green	The power supply operates properly, and is in the standby state.

LED status	Description
Steady red	The power supply has failed or entered the protected state.
Red/Green blinking alternatively	The power supply alarms. The power supply encounters exceptional power output problems, for example, over-voltage output, under-voltage output, over-current output, over-load, and over-heat, but does not enter the protected state.
Blinking red	The power supply has no power input. The switch has two power supplies. If one has power input, but the other does not, the status LED of the power supply that has no power input blinks red.
Off	The power supplies have no power input.

Installing and removing a power supply

Safety recommendations

To avoid possible bodily injury and power supply and device damage, follow these safety recommendations:

- When installing and removing a power supply, always wear an ESD-preventive wrist strap and make sure it makes good skin contact.

- Before installing the power supply, to avoid power supply and device damage, make sure that the voltage of the power source is the same as the rated voltage of the power supply, and the output voltage of the power supply is the same as the voltage required by the device.

- To avoid bodily injury, do not touch any cords or terminals of the power supply.

- Do not place the power supply in a wet area, and prevent liquid from flowing into the power supply.

- To avoid power supply damage, do not open the power supply. When the internal circuits or components of the power supply fail, contact the maintainer for examining and repairing.

Tools

When installing and removing a power supply and power cords, you must wear an ESD-preventive wrist strap. Prepare it yourself.

Installing and removing a power supply

The installing and removing procedures of the 650W AC power supply are similar to the 650W DC power supply. This section takes the 650W AC power supply for example.

Installing the power supply

To avoid bodily injury or device damage, follow the procedure in Figure 3 when installing the power supply.

**Figure 3 Power supply installation procedure**
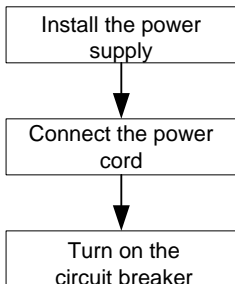
Follow these steps to install the power supply:

Step1 Put on the ESD-preventive wrist strap, making sure that the strap makes good skin contact and is well grounded.

Step2 Unpack the power supply. Make sure that the power supply is of the required model.

Step3 As shown in Figure 4, make sure that the power supply is placed in a correct vertical direction. The power supply and the power supply slot are designed for avoiding upside down installation. If the vertical direction of the power supply is incorrect, you cannot insert the power supply completely into the slot. Holding the handle of the power supply with one hand and supporting the bottom of the power supply with the other, slide the power supply along the guide rails into the slot. When the power supply is completely inserted into the slot, you can hear that the latch of the power supply clicks into the slot.

Figure 4 Install the power supply
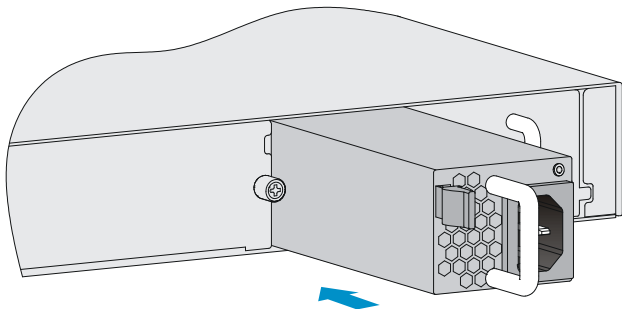
⚠ CAUTION:

- When you insert the power supply into the slot, you can do that through slight inertia so that the back end of the power supply can have a good touch with the backplane.

- To avoid damaging or bending the terminals of the power supply, if the insertion direction is improper during the installation, you must pull the power supply out, adjust the direction, and insert it again.

- Save the blank panel and the packaging box and packaging bag of the power supply for future use.

## Connecting the power cord

Connecting the AC power cord

⚠ WARNING!

- Make sure that each power cord has a separate circuit breaker.

- Turn off the circuit breaker before connecting the power cord.

Follow these steps to connect the AC power cord:

Step1   As shown in Figure 5, plug the female connector end of the AC power cord into the AC power receptacle on the switch.

Figure 5 Connect the AC power cord
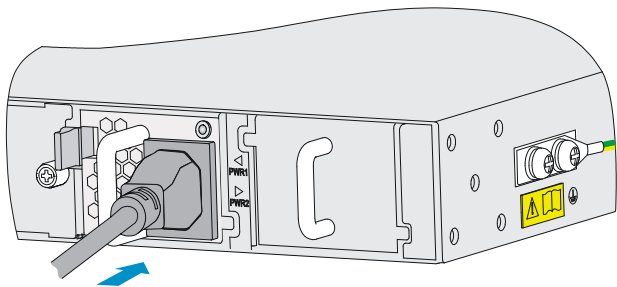
Step2 As shown in Figure 6, use the cable tie to secure the power cord to the handle of the power supply.

Figure 6 Fix the AC power cord
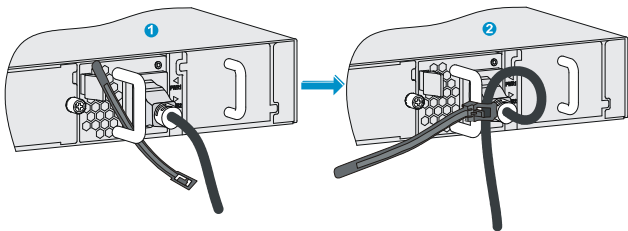
Step3 Plug the other end of the AC power cord into the socket strip of the power source, and turn on the circuit breaker of the power source.

Step4 Check the LED on the power supply. If the LED is steady green or blinking green, the power cord is correctly connected. If the LED is off or red, check the installation conditions, troubleshoot the problems, and try again until the LED is normal.

Connecting the DC power cord

Follow these steps to connect the DC power cord:

Step1 As shown in Figure 7, insert the connector of the DC power cord into the DC power receptacle of the switch. The connector of the DC power cord and the DC power receptacle are designed for avoiding upside down installation. Make sure that the vertical direction of the connector is correct.

Figure 7 Connect the DC power cord

Step2 Use the cable tie to secure the power cord to the handle of the power supply. For more information, see Step2 on page 10.

Step3 Connect the other end of the DC power cord to the DC power source.
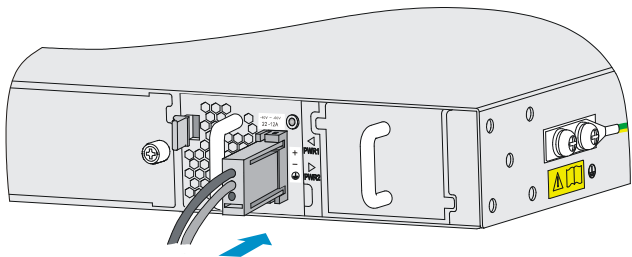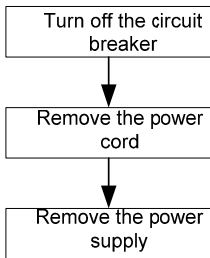
Step4   Check the LED on the power supply. If the LED is steady green or blinking green, the power cord is correctly connected. If the LED is off or red, check the installation conditions, troubleshoot the problems, and try again until the LED is normal.

Removing the power supply

To avoid bodily injury or device damage, follow the procedure in Figure 8 when removing the power supply.

Figure 8 Power supply removing procedure

```
┌─────────────────────┐
│  Turn off the circuit │
│       breaker        │
└─────────────────────┘
          │
          ▼
┌─────────────────────┐
│  Remove the power    │
│        cord          │
└─────────────────────┘
          │
          ▼
┌─────────────────────┐
│  Remove the power    │
│       supply         │
└─────────────────────┘
```

Follow these steps to remove the power supply:

Step1   Turn off the circuit breaker of the power cord.

Step2   Put on the ESD-preventive wrist strap, making sure that the strap makes good skin contact and is well grounded.

Step3   Loosen the cable tie, and take off the power cord. When removing a DC power cord, squeeze the tabs on the power cord connector with your thumb and forefinger and then pull the connector out.

Figure 9 Remove the power cord connector
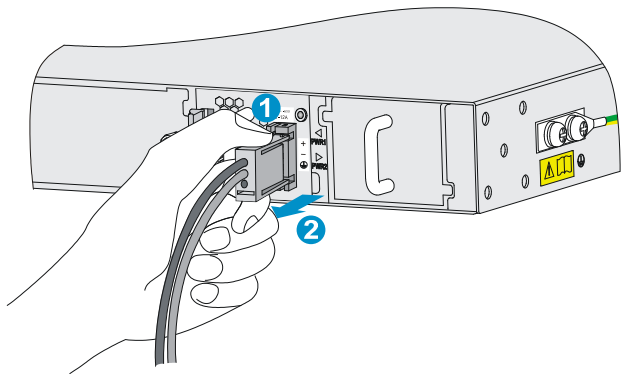
(1) Squeeze the tabs on the power cord connector	(2) Pull the connector out

Step4   As shown in Figure 10, grasp the handle of the power supply with one hand, use the thumb to press the latch towards the handle, and pull the power supply at the same time. After pulling the power supply part-way out, hold the bottom of the power supply with the other hand, and pull the power supply slowly along the guide rails out of the slot.

Figure 10 Remove the power supply
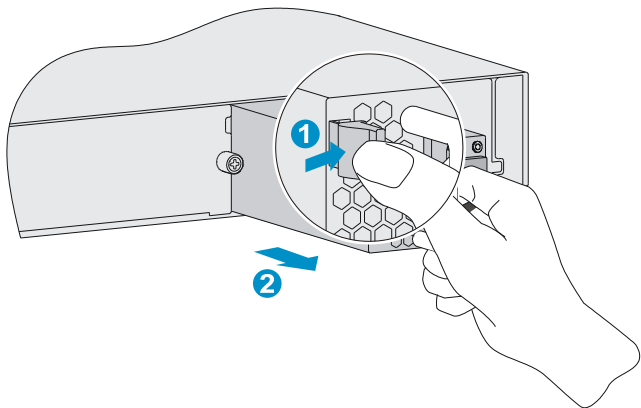
Step5   Put the removed power supply on an antistatic mat or into the initial package.

NOTE:

If you do not insert another power supply into the slot after removing the power supply, install the blank panel to the power supply slot to prevent dust from entering the chassis.

Support and other resources

Contacting HP

For worldwide technical support information, see the HP support website:

http://www.hp.com/support

Before contacting HP, collect the following information:

- Product model names and numbers
- Technical support registration number (if applicable)
- Product serial numbers
- Error messages
- Operating system type and revision level
- Detailed questions

Subscription service

HP recommends that you register your product at the Subscriber's Choice for Business website:

http://www.hp.com/go/wwalerts

After registering, you will receive email notification of product enhancements, new driver versions, firmware updates, and other product resources.

Related information

Documents

To find related documents, browse to the Manuals page of the HP Business Support Center website:

http://www.hp.com/support/manuals

- For related documentation, navigate to the Networking section, and select a networking category.
- For a complete list of acronyms and their definitions, see *HP A-Series Acronyms.*

Websites

- HP.com http://www.hp.com
- HP Networking http://www.hp.com/go/networking
- HP manuals http://www.hp.com/support/manuals
- HP download drivers and software http://www.hp.com/support/downloads
- HP software depot http://www.software.hp.com

Conventions

This section describes the conventions used in this documentation set.

Command conventions

Convention	Description
Boldface	**Bold** text represents commands and keywords that you enter literally as shown.

Convention	Description
Italic	*Italic* 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 at least 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 bold text. For example, the **New User** window appears; 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

	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.

Port numbering in examples

The port numbers in this document are for illustration only and might be unavailable on your device.