CHAPTER 3

Technical Specifications

This chapter describes the technical specifications for the Cisco UCS components and includes these sections:

Environmental Specifications for the Cisco UCS Equipment

For the environmental specifications of the Cisco UCS 5108 Blade Server Chassis, see Table 3-1. For the environmental specifications of the Cisco UCS 6100 Fabric Interconnect, see Table 3-2.

Table 3-1 Environmental Specifications for the Cisco UCS 5108 Blade Chassis

Description	Cisco UCS 5108 Blade Chassis
Temperature	
• Operating	
– 0 to 10,000 feet (0 to 3000 m)	50 to 95ºF (10 to 35ºC)
– Above 10,000 feet (3,000 m)	Subtract 1ºC (1.8ºF) for each 1000 feet above 10,000 feet
• Nonoperating	
– 0 to 40,000 feet (0 to 12,190 m)	–40 to 149ºF (–40 to 65ºC)
Relative humidity (noncondensing)	10 to 90%
Noise (Sound power levels[1])	83 dBA at normal operating conditions

1. Based on ISO 3744.

Table 3-2 Environmental Specifications for the Cisco UCS 6100 Series or UCS 6200 Series Fabric Interconnect

Description	Cisco UCS 6100 Fabric Interconnect
Temperature • Operating – 0 to 10,000 feet (0 to 3000 m) – Above 10,000 feet (3,000 m) • Nonoperating – 0 to 40,000 feet (0 to 12,190 m)	 50 to 95ºF (10 to 35ºC) Subtract 1ºC (1.8ºF) for each 1000 feet above 10,000 feet –40 to 149ºF (–40 to 65ºC)
Relative humidity (noncondensing)	10 to 90%
Noise (Sound pressure levels[1])	68 dBA at normal operating conditions

1. Based on ISO 7779.

Physical Specifications for the Cisco UCS Equipment

The Cisco UCS 5108 Blade Server Chassis ships in a package that includes the following components:

- One blade chassis
- Up to eight half-width or four full-width blade servers
- Up to two fabric extenders
- Eight fan modules
- Up to four AC or DC power supply units
- Accessory kit
- Blanking panels for any chassis slots not filled with blade servers, fabric extenders, or power supply units

The Cisco UCS 6100 Series Fabric Interconnect ships in a package that includes the following components:

- One fabric interconnect chassis
- One expansion module
- Up to two power supply units
- Two fan modules
- Accessory kit
- Blanking panels for any power supply slot not filled

The Cisco UCS 6200 Series Fabric Interconnect ships in a package that includes the following components:

- One fabric interconnect chassis
- One expansion module
- Up to two power supply units

- Two fan modules
- Accessory kit
- Blanking panels for any power supply slot not filled

For the size of the packages containing these systems, see Table 3-3. For the sizes of these chassis after they are unpacked and ready to install, see Table 3-4.

Table 3-3 Dimensions and Weight for the Cisco UCS Shipping Packages

Chassis	Width	Depth	Height	Weight
Cisco UCS 5108 Blade Server Chassis	25 inches (63.5 cm)	40.0 inches (101.6 cm)	33.5 inches (85.1 cm)	Up to 300 lbs. (136.1 kg)
Cisco UCS 6120 Fabric Interconnect	24 inches (61.0 cm)	40.0 inches (101.6 cm)	9.0 inches (22.9 cm)	Up to 40 lbs. (18.1 kg)
Cisco UCS 6248 Fabric Interconnect	24 inches (61.0 cm)	40.0 inches (101.6 cm)	9.0 inches (22.9 cm)	Up to 40 lbs. (18.1 kg)

Table 3-4 lists the physical specifications for the unpacked Cisco UCS equipment.

Table 3-4 Dimensions for the Unpacked Cisco UCS Equipment

Chassis	Width	Depth	Height
Cisco UCS 5108 Blade Server Chassis	17.5 inches (44.5 cm)	32.0 inches (81.2 cm)	10.5 inches (26.7 cm) (6 RU)
Cisco UCS 6120 Fabric Interconnect	17.3 inches (43.9 cm)	30.0 inches (76.2 cm)	1.72 inches (4.4 cm) (1 RU)
Cisco UCS 6248 Fabric Interconnect	17.3 inches (43.9 cm)	29.5 inches (74.9 cm)	1.72 inches (4.4 cm) (1 RU)

For the weights and quantities for each type of Cisco UCS equipment, see Table 3-5 for the Cisco UCS 5108 Blade Server Chassis Series and see Table 3-6 for the Cisco 6100 Fabric Interconnect. These tables do not include weights for the rack that holds the Cisco UCS equipment or the interface and power cables. For those weights, see the documentation provided by the manufacturers of those components.

Table 3-5 Weights and Quantities for the Cisco UCS 5108 Blade Server Chassis Components

Component	Weight per Unit	Quantity
Chassis (empty)	90 lbs. (40.8 kg)	1
B200 Blade Server	13.5 lbs (6.1 kg) [1]	1 to 8
B230 Blade Server	18.0 lbs (8.16 kg) [1]	1 to 8
B250 Blade Server	25 lbs (11.34 kg) [1]	1 to 4
B440 Blade Server	34.5 lbs (15.65 kg) [1]	1 to 4
Fabric Extender	2.5 lbs. (1.1 kg)	1 or 2
Power distribution unit	5 lbs. (2.3 kg)	1
Fan module	1.8 lbs. (0.8 kg)	8
Hard disk drive module	0.8 lbs. (0.4 kg)	2 per blade server
Power supply unit	7 lbs. (3.2 kg)	1 to 4

1. The system weight listed here is an estimate for a fully configured system and will vary depending on peripheral devices installed.

Table 3-6 Weights for the Cisco UCS 6120XP Fabric Interconnect Components

Component	Weight per Unit
Fabric Interconnect chassis (with two power supplies and one expansion modules installed)	35 lbs. (15.9 kg)

Table 3-7 Weights for the Cisco UCS 6140XP Fabric Interconnect Components

Component	Weight per Unit
Fabric Interconnect chassis (with two power supplies and two expansion modules installed)	50 lbs. (22.68 kg)

Table 3-8 Weights for the Cisco UCS 6248UP Fabric Interconnect Components

Component	Weight per Unit
Fabric Interconnect chassis (with two power supplies and one expansion modules installed)	32 lbs. (14.51 kg)

Power Specifications

The Cisco UCS Blade Server Chassis and Cisco UCS Fabric Interconnect use different power supply units. You can find their specifications in the following sections:

- Power Specifications for the Cisco UCS 5108 Blade Server Chassis Power Supply Units, page 3-4
- Power Specifications for the Cisco UCS 6100 Fabric Interconnects, page 3-9

Power Specifications for the Cisco UCS 5108 Blade Server Chassis Power Supply Units

To determine the number of power supply units needed for the blade server, remember that each single slot server is budgeted a max 550 W and each full width server is budgeted a max 1100 W. For a more detailed estimate, contact Cisco Sales. Table 3-9 lists the specifications for each Cisco UCS chassis AC power supply. Table 3-10 lists the specifications for each Cisco UCS chassis DC power supply.

Table 3-9 AC-input Power Supply Specifications

Description	Specification
AC-input voltage	200 to 240 VAC nominal (Range: 180 to 264 VAC)
AC-input frequency	50 to 60 Hz nominal (Range: 47 to 63 Hz)
AC-input current	15.5 Amps @ 200 VAC
Maximum Input VA	2790 VA @ 200 VAC
Maximum output power per power supply	2500 W @ 200 to 240 VAC (up to four power supplies)
Maximum inrush current	35 A <sub cycle duration

Table 3-9 AC-input Power Supply Specifications (continued)

Description	Specification
Maximum Heat Output	8525 BTU
Maximum hold up time	12 ms
Power supply output voltage	12 VDC
Efficiency Rating	Climate Savers Gold

Table 3-10 DC-Input Power Supply Specifications

Item	Specification
Minimum software requirement	Cisco UCS Manager Release 2.0(1) Capability Catalog Version 42
DC-input voltage	-48 to -60 VDC
DC-input current	62 A maximum @ -48 VDC input
Output power	2500 W
Current draw at min voltage	62 A
Current draw at max voltage	50 A
Maximum KVA rating	2.5
DC input terminal block	Accepts Panduit LCD4-14AF-L or equivalent barrel-type lug terminals with 90-degree angle, two- hole tongue, which accommodates 1/0 AWG size copper wire. The connector tongue width is 0.82 in, the stud hole spacing is 5/8 in, and the hole size is 1/4 in.
Output holdup time	8 ms
Max heat dissipation	8525 BTUs/hr

DC wiring must meet your local codes and regulations, we recommend using a licensed local electrician to install the DC wiring needed.

The AC power supply connector on the blade server chassis is an IEC 320 C20 socket. The power cord that you use to connect the blade server power supply units to an AC power outlet will have an IEC 320 C19 plug on one end a plug on the other end that conforms to the AC power outlet specifications for your country. To determine which cord to order for your blade server chassis power supply units, see Table 3-11. When you determine which power cord you need to order, you can verify that its plugs conform to the power outlets for your facility by clicking on its reference link.

Table 3-11 Power Cords Used with the Cisco UCS 5108 Blade Server Chassis

Locale	Power Cord Part Number	Cord Set Rating	Power Cord Reference Illustration
Australia and New Zealand	CAB-AC-16A-AUS	16A, 250 VAC	Figure 3-1
Peoples Republic of China	CAB-AC-16A-CH	16A, 250 VAC	Figure 3-2

Table 3-11 Power Cords Used with the Cisco UCS 5108 Blade Server Chassis (continued)

Locale	Power Cord Part Number	Cord Set Rating	Power Cord Reference Illustration
Continental Europe	CAB-AC-2500W-EU	16A, 250 VAC	Figure 3-3
International	CAB-AC-2500W-INT	16A, 250 VAC	Figure 3-4
Israel	CAB-AC-2500W-ISRL	16A, 250 VAC	Figure 3-5
Japan and North America (non-locking) 200 to 240 VAC operation	CAB-AC-2500W-US1	16A, 250 VAC	Figure 3-6
Japan and North America (locking) 200 to 240 VAC operation	CAB-AC-C6K-TWLK	16A, 250 VAC	Figure 3-7
Switzerland	CAB-ACS-16	16A, 250 VAC	Figure 3-9
Power distribution unit (PDU)	CAB-C19-CBN		Figure 3-8

Figure 3-1 CAB-AC-16A-AUS Power Cord for the Cisco UCS 5108 Blade Server Chassis

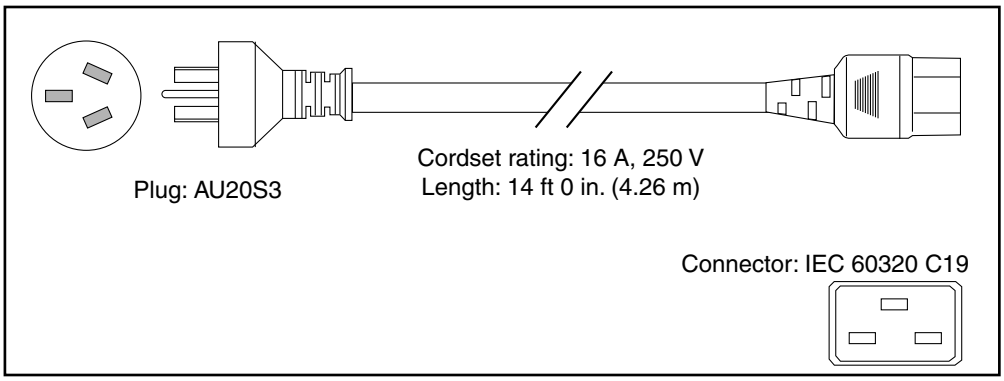


Figure 3-2 CAB-AC-16A-CH Power Cord for the Cisco UCS 5108 Blade Server Chassis

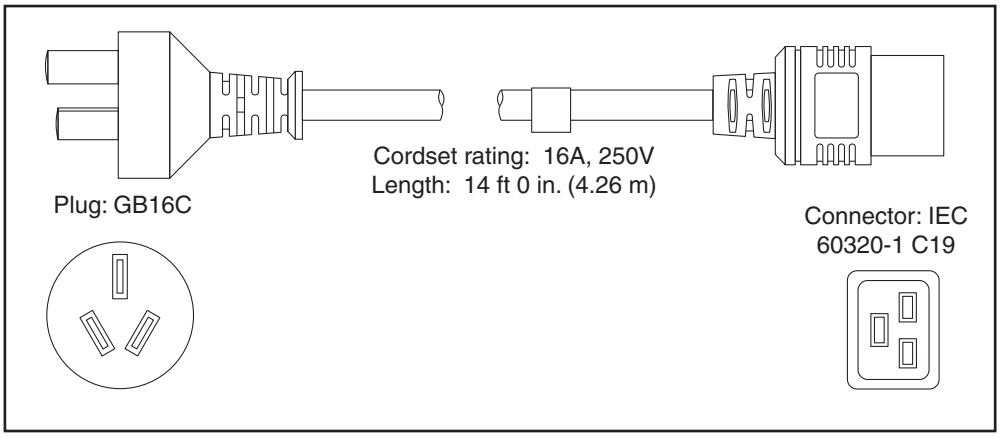


Figure 3-3 CAB-AC-2500W-EU Power Cord for the UCS 5108 Blade Server Chassis

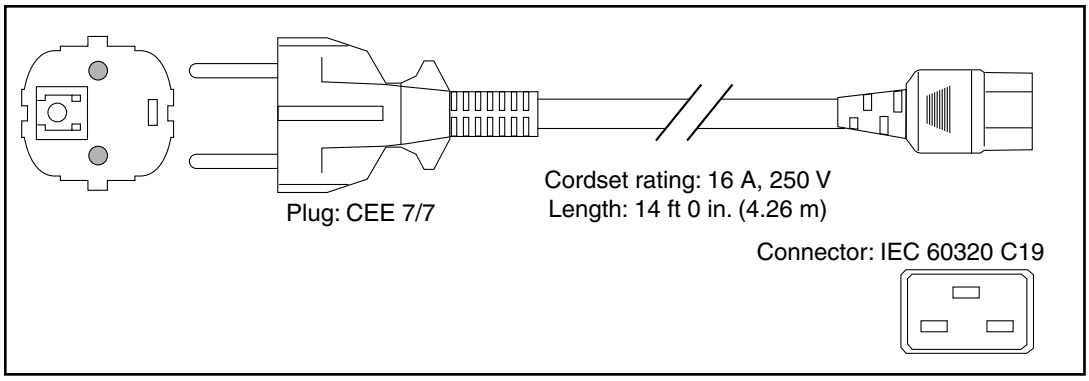


Figure 3-4 CAB-AC-2500W-INT Power Cord for the UCS 5108 Blade Server Chassis

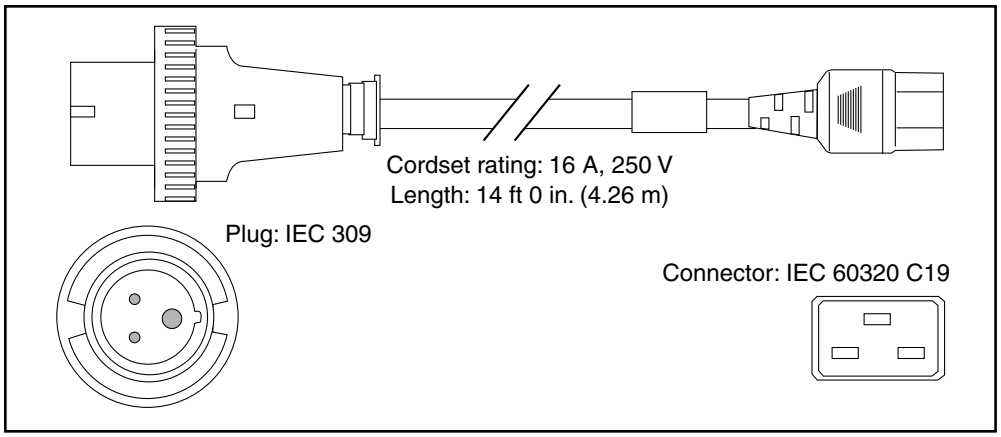


Figure 3-5 CAB-AC-2500W-ISRL Power Cord for the UCS 5108 Blade Server Chassis

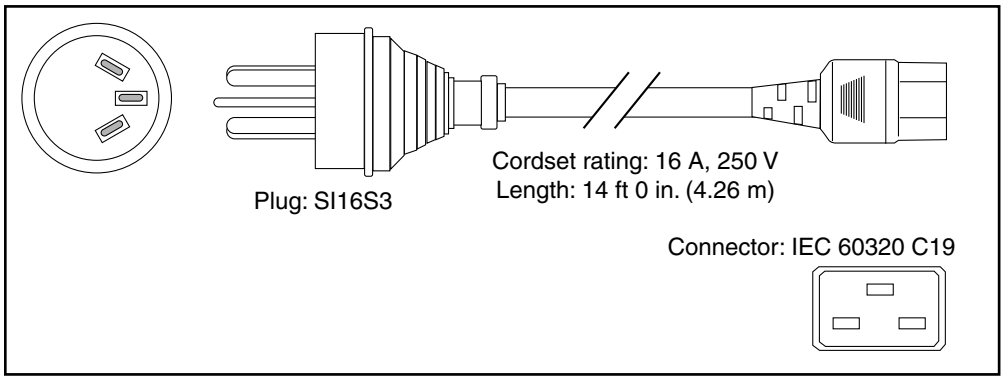


Figure 3-6 CAB-AC-2500W-US1 Power Cord for the UCS 5108 Blade Server Chassis

Figure 3-7 CAB-AC-C6K-TWLK Power Cord for the UCS 5108 Blade Server Chassis

Figure 3-8 CAB-C19-CBN Power Cord for the UCS 5108 Blade Server Chassis

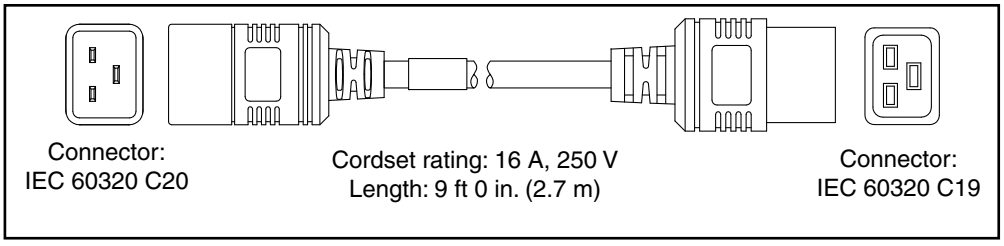
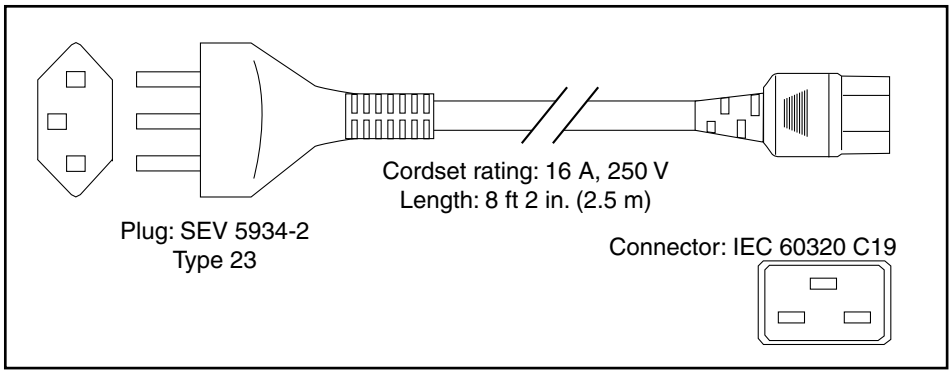


Figure 3-9 CAB-ACS-16 Power Cord for the UCS 5108 Blade Server Chassis



Power Specifications for the Cisco UCS 6100 Fabric Interconnects

Table 3-12 lists the power supply unit specifications for the Cisco UCS 6120XP Fabric Interconnect. One power supply is required for basic operation, two power supplies provides redundancy.

Table 3-12 Power Specifications for the Cisco UCS 6120XP Power Supply Units

Description	Specification
AC-input voltage	90 to 264 VAC
AC-input frequency	50 to 60 Hz nominal (Range: 47 to 63 Hz)
AC-input current	7.5 Amps @ 90 VAC
Maximum Input VA	675 VA @ 90 VAC
Maximum output power per power supply	550 W @ 12 V (up to two power supplies)
Maximum inrush current	35 A <sub cycle duration
Maximum Heat Output	1876 BTU/hr
Maximum hold up time	12 ms
Power supply output voltage	12 VDC

Table 3-13 lists the power supply unit specifications for the Cisco UCS 6140XP Fabric Interconnect.

4

Table 3-13 Power Specifications for the Cisco UCS 6140XP Power Supply Units

Description	Specification
AC-input voltage	90 to 264 VAC
AC-input frequency	50 to 60 Hz nominal (Range: 47 to 63 Hz)
AC-input current	9.2 Amps @ 90 VAC
Maximum Input VA	828 VA @ 90 VAC
Maximum output power per power supply	750 W @ 12 VDC (up to two power supplies)

Table 3-13 Power Specifications for the Cisco UCS 6140XP Power Supply Units (continued)

Description	Specification
Maximum inrush current	35 A <sub cycle duration
Maximum Heat Output	2561 BTU/hr
Maximum hold up time	12 ms
Power supply output voltage	12 VDC

The AC power supply connector on the UCS 6100 series fabric interconnect chassis is an IEC 320 C13 socket. The power cable that you use to connect the fabric interconnect power supply units to an AC power outlet will have an IEC 320 C14 plug on one end and a plug on the other end that conforms to the AC power outlet specifications for your country. To determine which cable to order for your fabric interconnect power supply units, see Table 3-14. When you determine which power cord you need to order, you can verify that its plugs conform to the power outlets for your facility by clicking on its reference link.

Table 3-14 Power Cords Used with the UCS 6100 Series Fabric Interconnect

Locale	Power Cord Part Number	Cord Set Rating	Power Cord Reference Illustration
Argentina	SFS-250V-10A-AR	10A, 250 VAC	Figure 3-10
Australia and New Zealand	CAB-9K10A-AU	10A, 250 VAC	Figure 3-11
Peoples Republic of China	SFS-250V-10A-CN	10A, 250 VAC	Figure 3-12
Continental Europe	CAB-9K10A-EU	10A, 250 VAC	Figure 3-13
South Africa, United Arab Emirates, and India	SFS-250V-10A-ID	16A, 250 VAC	Figure 3-14
Israel	SFS-250V-10A-IS	10A, 250 VAC	Figure 3-15
Italy	CAB-9K10A-IT	10A, 250 VAC	Figure 3-16
North America	CAB-AC-250V/13A	13A, 250 VAC	Figure 3-17
North America	CAB-N5K6A-NA	13A, 250 VAC	Figure 3-18
Cabinet jumper power cord	CAB-C13-C14-JMPR	13A, 250 VAC	Figure 3-19
Switzerland	CAB-9K10A-SW	10A, 250 VAC	Figure 3-20
United Kingdom	CAB-9K10A-UK	10A, 250 VAC	Figure 3-21

Figure 3-10 SFS-250V-10A-AR Power Cord for the Cisco UCS 6100 Series Fabric Interconnect

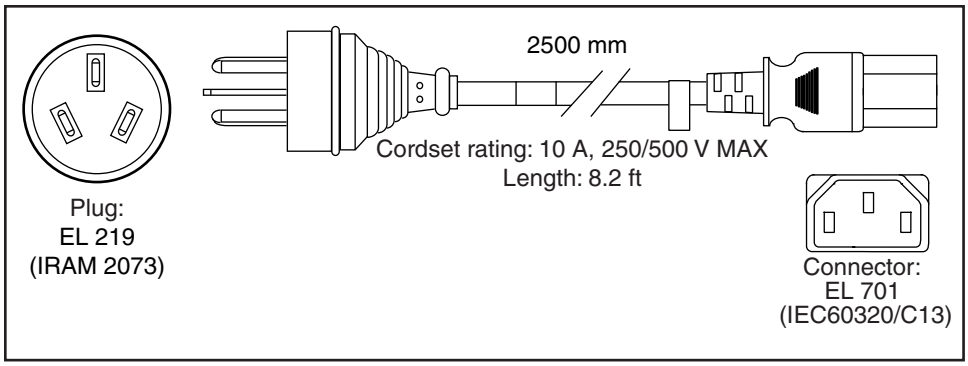


Figure 3-11 CAB-9K10A-AU Power Cord for the Cisco UCS 6100 Series Fabric Interconnect

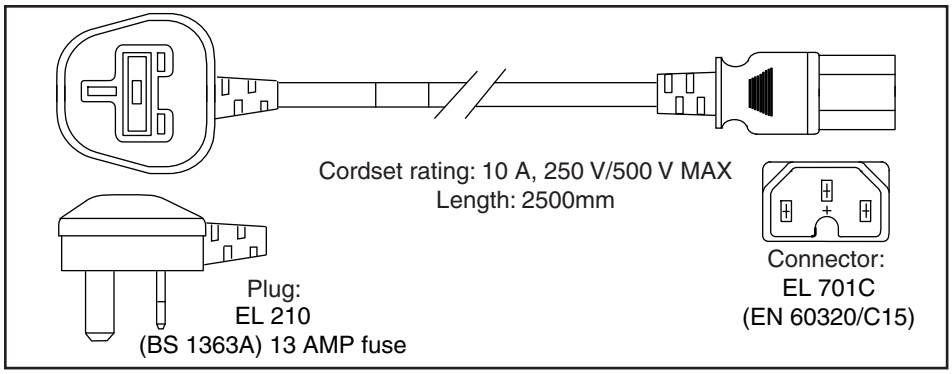


Figure 3-12 SFS-250V-10A-CN Power Cord for the Cisco UCS 6100 Series Fabric Interconnect

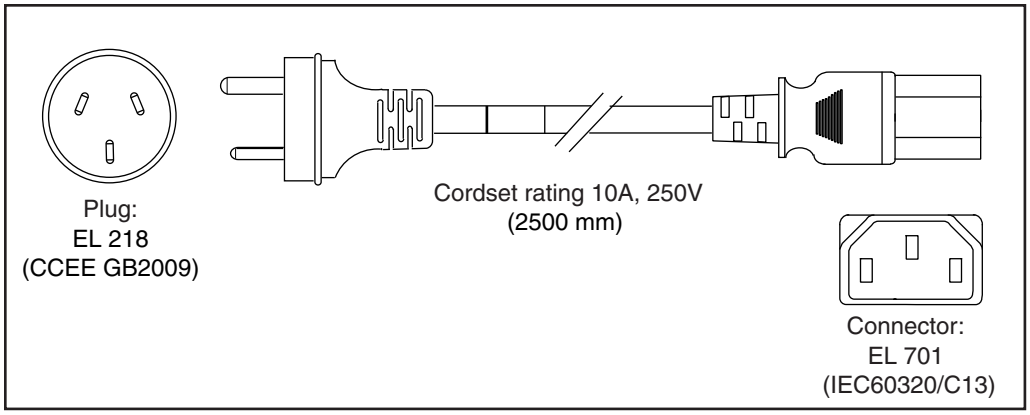


Figure 3-13 CAB-9K10A-EU Power Cord for the Cisco UCS 6100 Series Fabric Interconnect

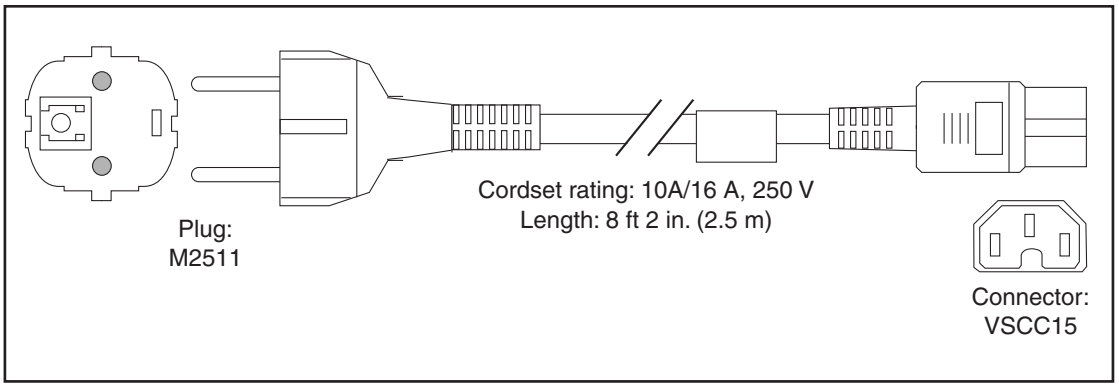


Figure 3-14 SFS-250V-10A-ID Power Cord for the Cisco UCS 6100 Series Fabric Interconnect

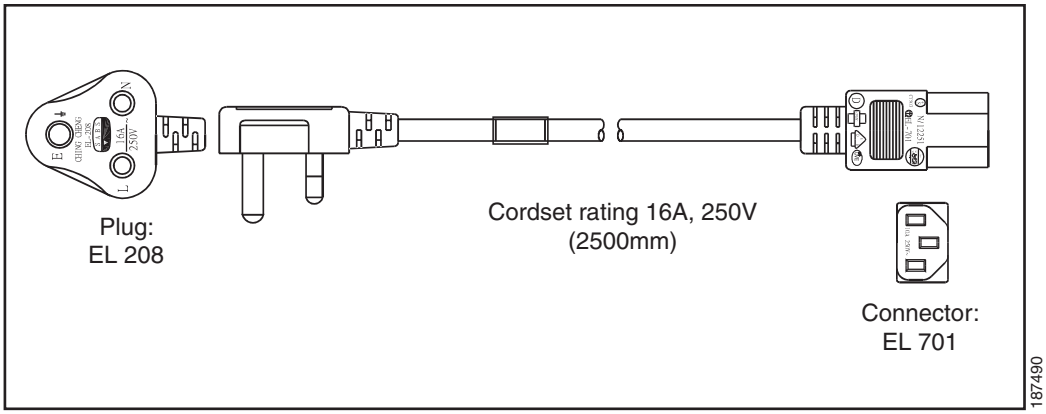


Figure 3-15 SFS-250V-10A-IS Power Cord for the Cisco UCS 6100 Series Fabric Interconnect

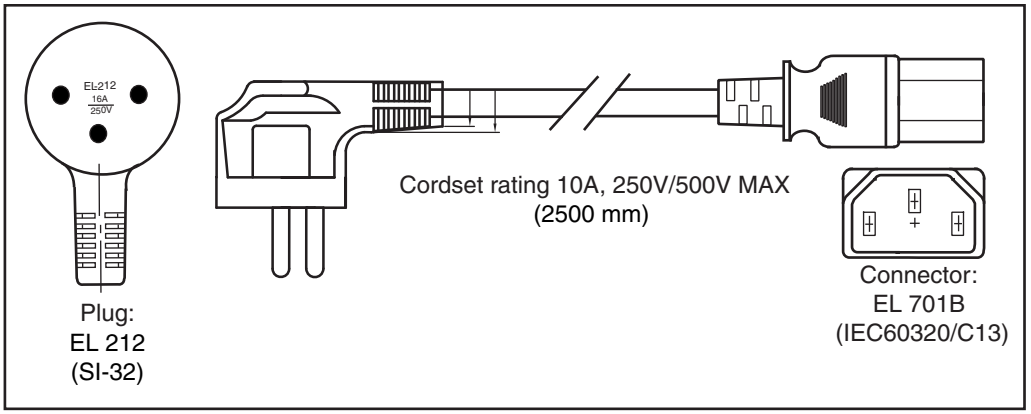


Figure 3-16 CAB-9K10A-IT Power Cord for the Cisco UCS 6100 Series Fabric Interconnect

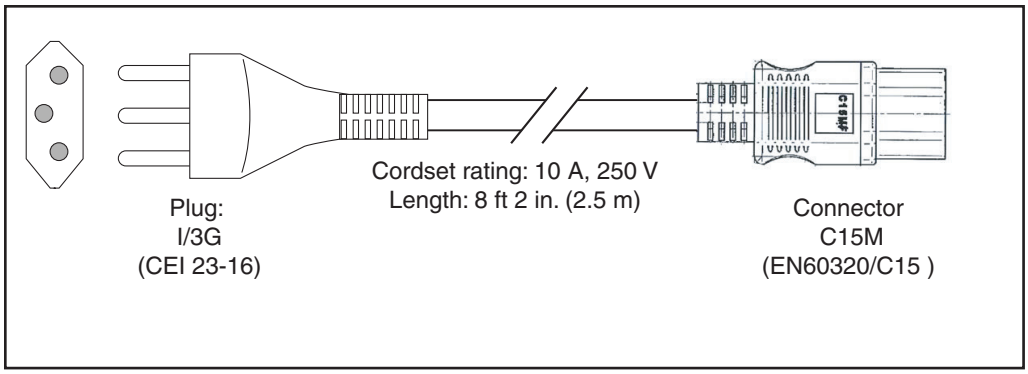


Figure 3-17 CAB-AC-250V/13A Power Cord for the Cisco UCS 6100 Series Fabric Interconnect

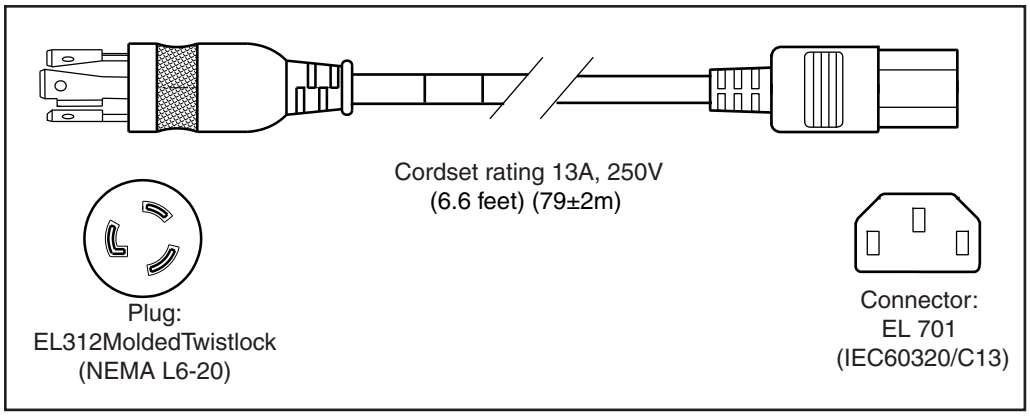


Figure 3-18 CAB-N5K6A-NA Power Cord for the Cisco UCS 6100 Series Fabric Interconnect

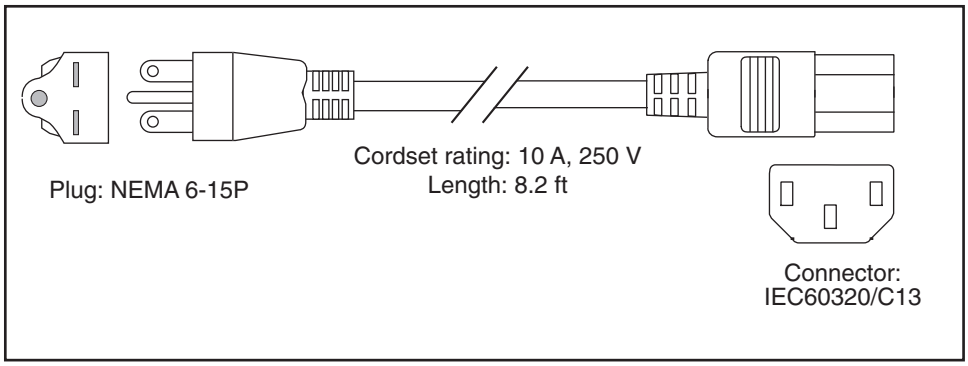


Figure 3-19 CAB-C13-C14-JMPR Power Cord for the Cisco UCS 6100 Series Fabric Interconnect

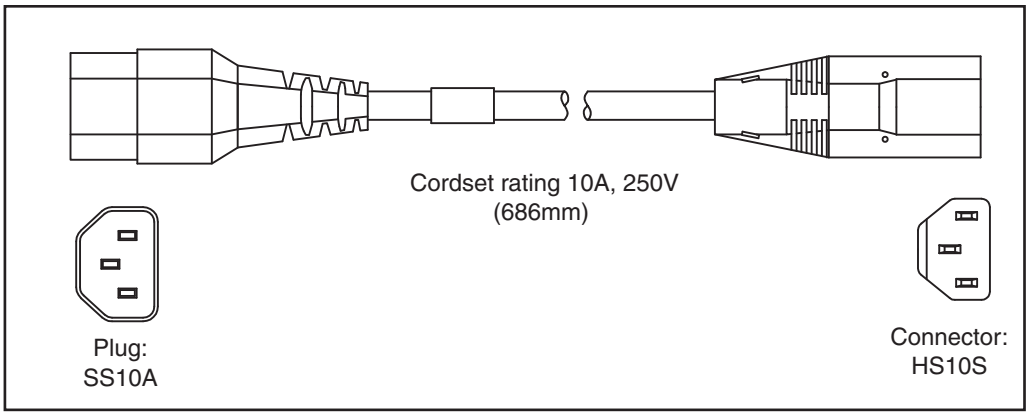


Figure 3-20 CAB-9K10A-SW Power Cord for the Cisco UCS 6100 Series Fabric Interconnect

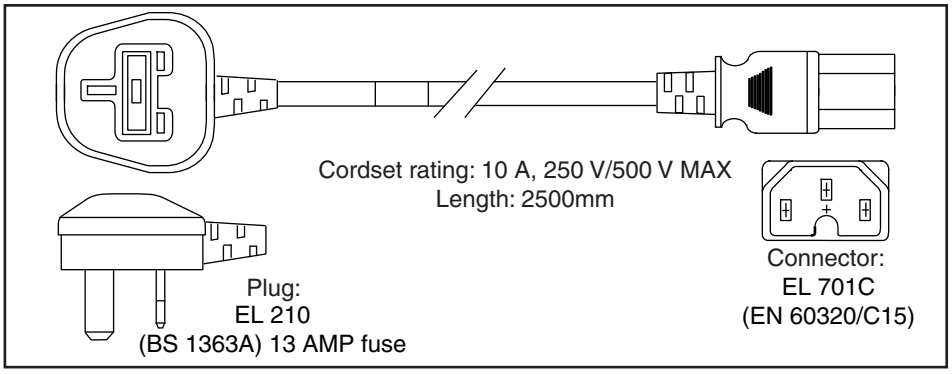
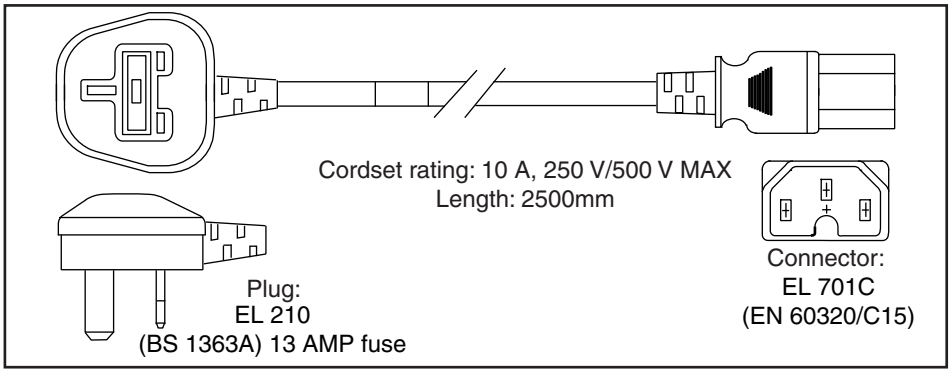


Figure 3-21 CAB-9K10A-UK Power Cord for the Cisco UCS 6100 Series Fabric Interconnect



Power Specifications for the Cisco UCS 6200 Fabric Interconnects

Table 3-15 lists the AC power supply unit specifications for the Cisco UCS 6248 UP Fabric Interconnect. One power supply is required for basic operation, two power supplies provides redundancy.

Table 3-15 Specifications for the Cisco UCS 6248UP AC Power Supply *(UCS-PSU-6248UP-AC=)*

AC Power Supply Properties	Cisco UCS 6248UP fabric interconnect
Maximum output power	750 W
Input voltage	90 to 264 VAC
Frequency	50 to 60 Hz
Efficiency	87 to 92% (50 to 100% load)
RoHS compliance	Yes
Hot swappable	Yes
Heat dissipation	2497 BTU/hr (600 W)

Table 3-16 lists the DC power supply unit specifications for the Cisco UCS 6248 UP Fabric Interconnect. One power supply is required for basic operation, two power supplies provides redundancy.

Table 3-16 Specifications for the Cisco UCS 6248UP DC Power Supply *(UCS-PSU-6248UP-DC=)*

DC Power Supply Properties	Cisco UCS 6248UP fabric interconnect
Maximum output power	750 W
Input voltage	-40 to -72 VDC
DC-input current at max voltage	25 A maximum @ -40 VDC input
Efficiency	88 to 92% (50 to 100% load)
Maximum input KVA rating	820
DC input terminal block	If a replacement DC connector is needed, a Phoenix Contact part number PC 5/ 2-STF-7,62, order number 1975697 or direct equivalent. Connector information is available at: http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=1975697
Output holdup time	4 ms
RoHS compliance	Yes
Hot swappable	Yes
Heat dissipation	2497 BTU/hr (750 W)

Each power supply has a separate power cord. Standard power cords or jumper power cords are available for connection to a power distribution unit having IEC 60320 C19 outlet receptacles. The jumper power cords, for use in cabinets, are available as an optional alternative to the standard power cords.

The standard power cords have an IEC C19 connector on the end that plugs into the power supplies. The optional jumper power cords have an IEC C19 connector on the end that plugs into the power supplies, and an IEC C20 connector on the end that plugs into an IEC C19 outlet receptacle.

Note Only the regular power cords or jumper power cords provided with the chassis are supported.

Table 3-17 lists the power cords for the Cisco UCS 6200 Series Fabric Interconnect and provides their lengths in feet and meters.

Table 3-17 Power Cords for the Cisco UCS 6200 Series Fabric Interconnect

Description	Length		Power Cord Reference Illustration
	Feet	Meters	
SFS-250V-10A-AR Power Cord, 250 VAC 10 A IRAM 2073 Plug Argentina	8.2	2.5	Figure 3-22
CAB-9K10A-AU 250 VAC 10 A 3112 Plug, Australia	8.2	2.5	Figure 3-23
SFS-250V-10A-CN Power Cord, 250 VAC 10 A GB 2009 Plug China	8.2	2.5	Figure 3-24
CAB-9K10A-EU Power Cord, 250 VAC 10 A M 2511 Plug Europe	8.2	2.5	Figure 3-25
SFS-250V-10A-ID Power Cord, 250 VAC 16A EL-208 Plug South Africa, United Arab Emirates, India	8.2	2.5	Figure 3-26
SFS-250V-10A-IS Power Cord, 250 VAC 10 A SI32 Plug Israel	8.2	2.5	Figure 3-27
CAB-9K10A-IT Power Cord, 250 VAC 10 A CEI 23-16 Plug Italy	8.2	2.5	Figure 3-28
CAB-9K10A-SW Power Cord, 250 VAC 10 A MP232 Plug Switzerland	8.2	2.5	Figure 3-29
CAB-9K10A-UK Power Cord, 250 VAC 10 A BS1363 Plug (13 A fuse) United Kingdom	8.2	2.5	Figure 3-30
CAB-AC-250V/13A Power Cord, 250 VAC 13 A IEC60320 Plug North America	6.6	2.0	Figure 3-31
CAB-N5K6A-NA Power Cord, 250 VAC 13 A NEMA 6-15 Plug, North America	8.2	2.5	Figure 3-32
CAB-C13-C14-JMPR Cabinet Jumper Power Cord, 250 VAC 13 A, C13-C14 Connectors	2.2	0.7	Figure 3-33

AC Power Cord Illustrations

This section contains the AC power cord illustrations.

Figure 3-22 SFS-250V-10A-AR

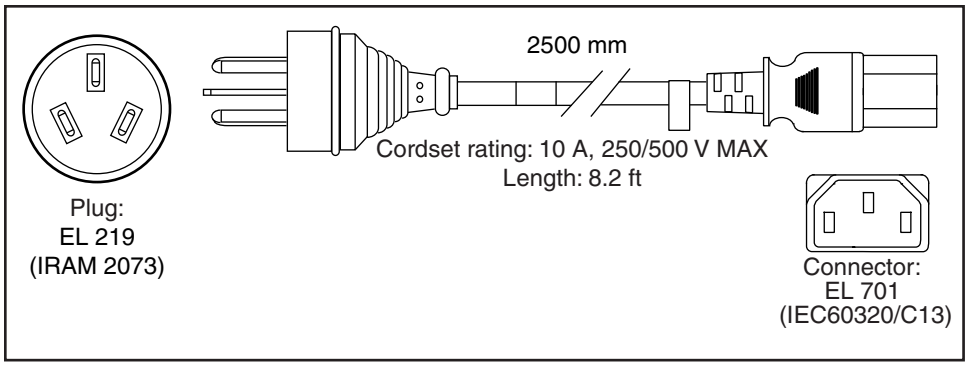


Figure 3-23 CAB-9K10A-AU

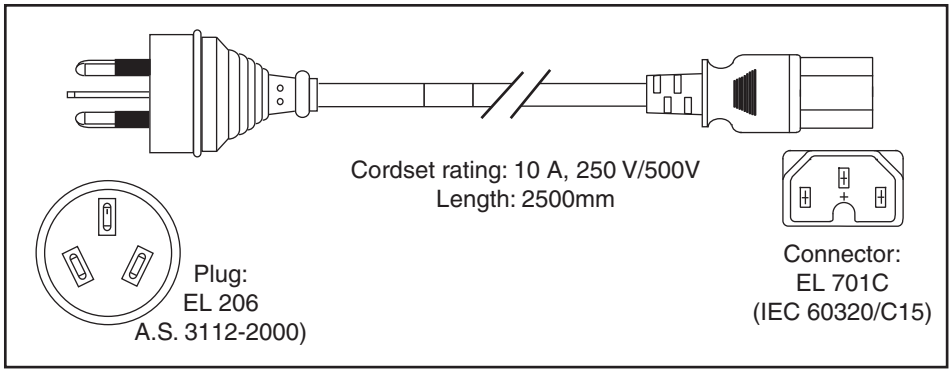


Figure 3-24 SFS-250V-10A-CN

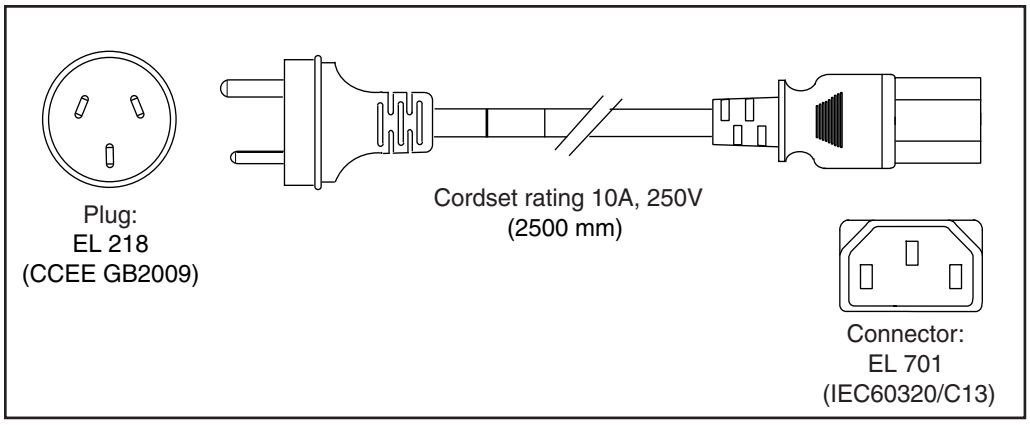


Figure 3-25 CAB-9K10A-EU

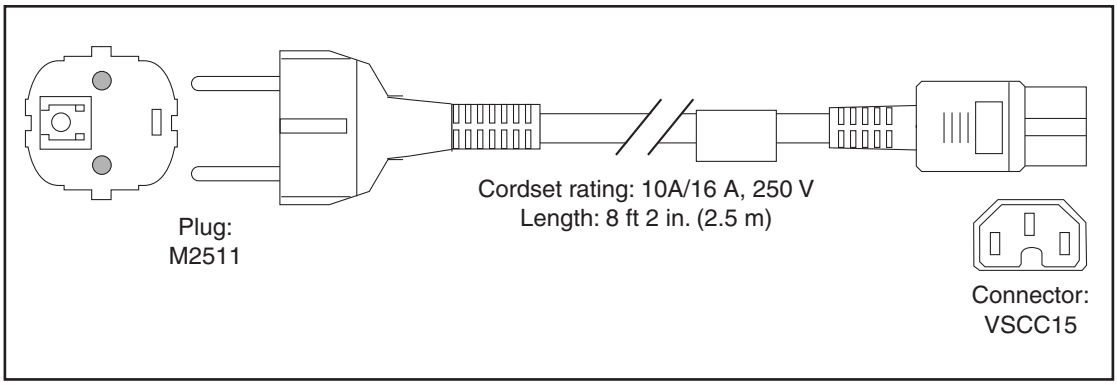


Figure 3-26 SFS-250V-10A-ID

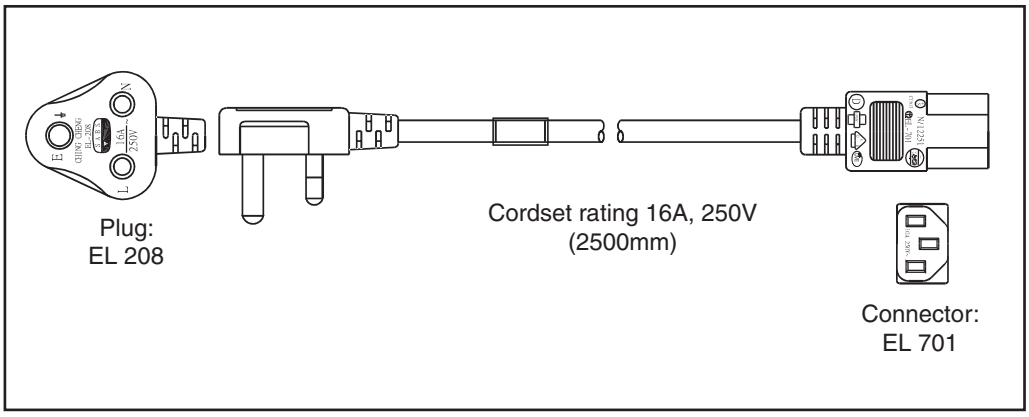


Figure 3-27 SFS-250V-10A-IS

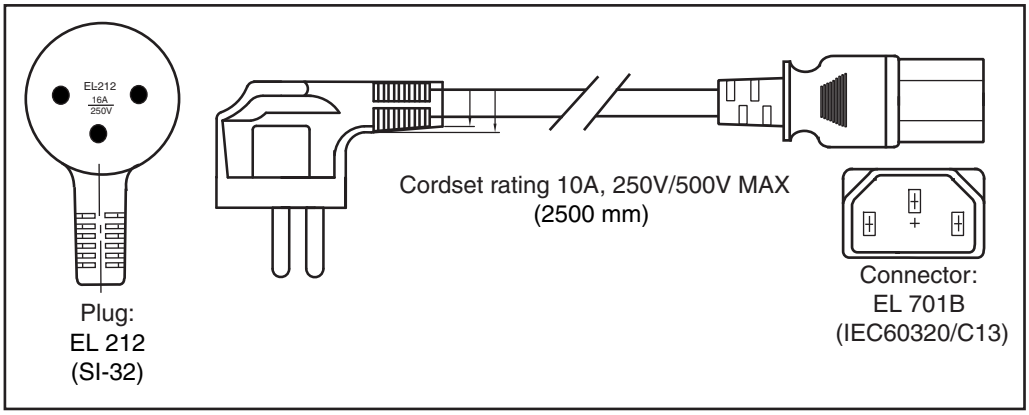


Figure 3-28 CAB-9K10A-IT

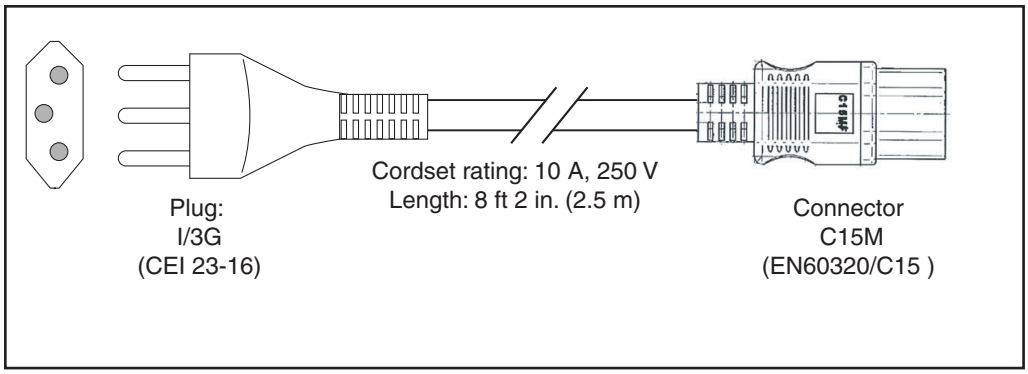


Figure 3-29 CAB-9K10A-SW

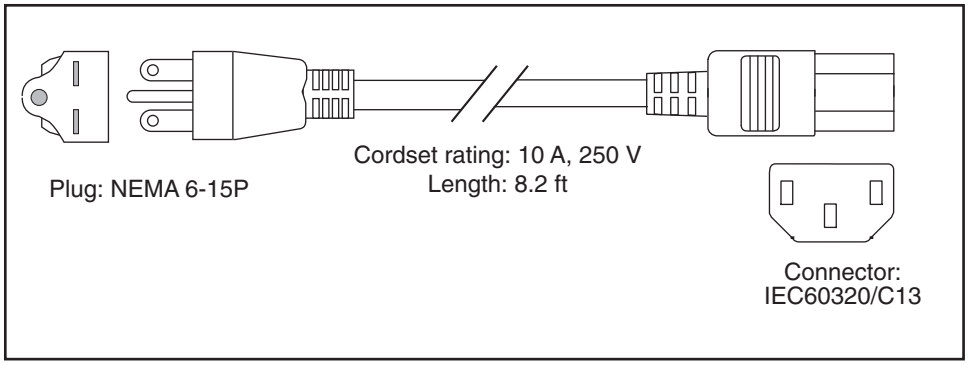


Figure 3-30 CAB-9K10A-UK

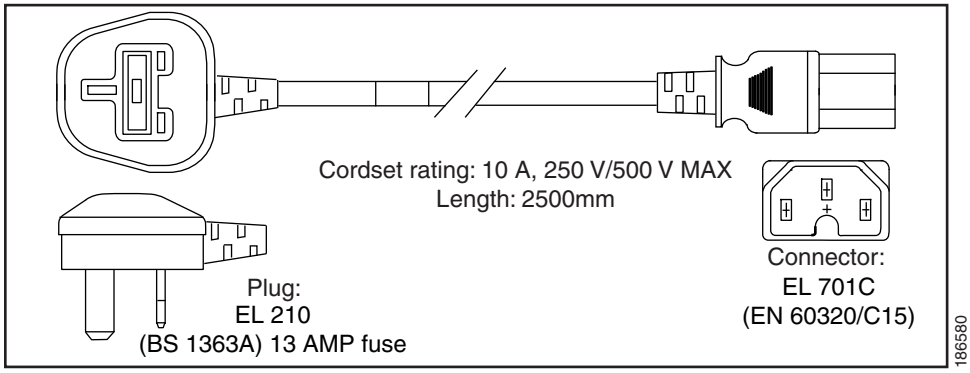


Figure 3-31 CAB-AC-250V/13A

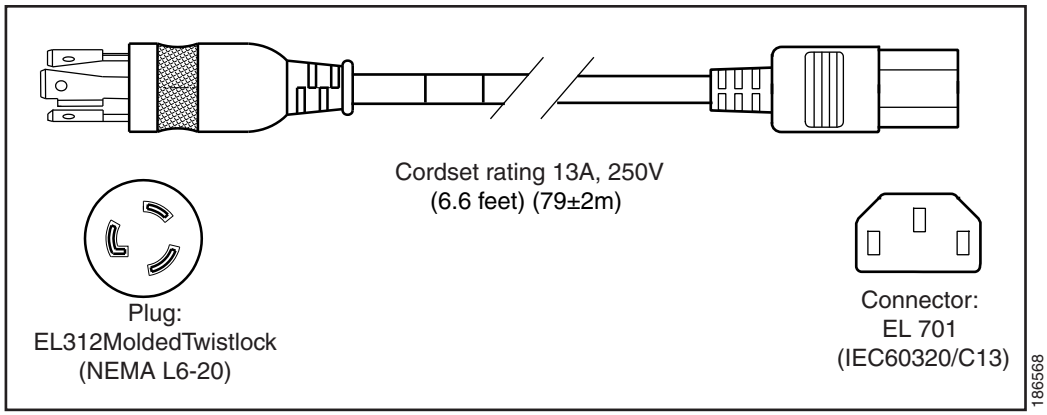


Figure 3-32 CAB-N5K6A-NA

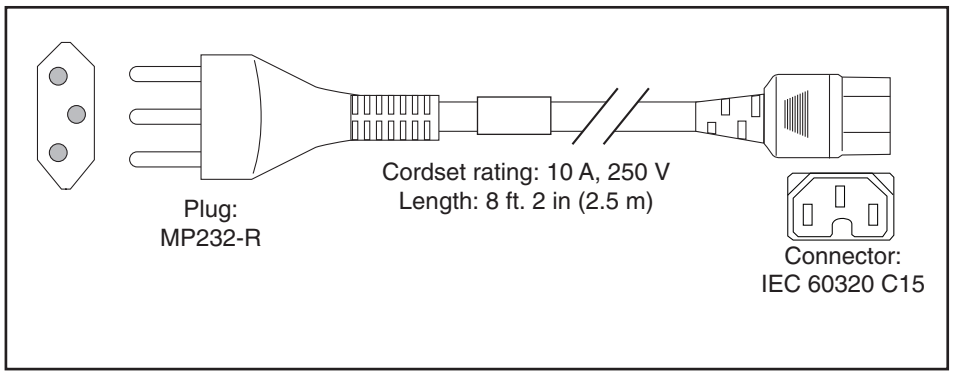
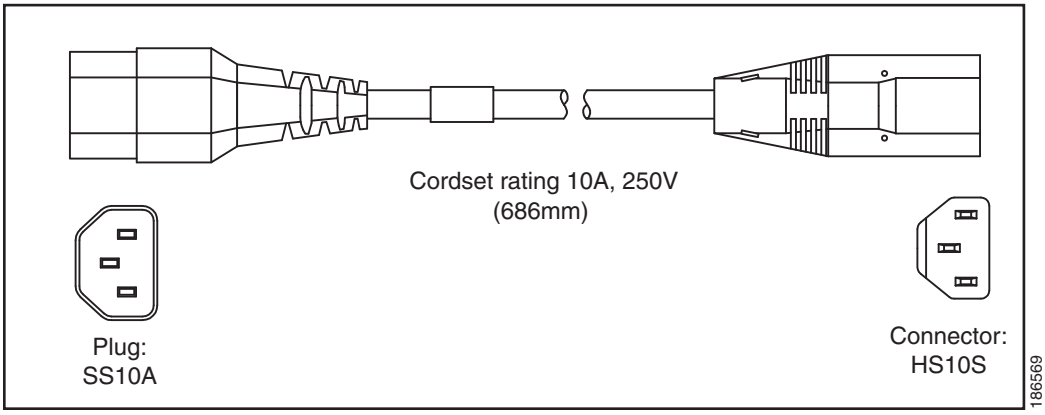


Figure 3-33 shows the plug connector on the optional jumper power cord for the Cisco UCS 6200 Series Fabric Interconnect. The plug plugs in to the Cisco UCS 6200 Series Fabric Interconnect power supply, while the connector plugs into the receptacle of a power distribution unit for a cabinet.

Figure 3-33 CAB-C13-C14-JMPR, Jumper Power Cord



Power Supply Configuration Modes

You can configure power modes to either use the combined power provided by the installed power supply units or to provide power redundancy when there is a power outage.

The power supplies are all operated in parallel output. You should connect two separate input sources (grids) to have the highest level of availability (grid redundancy). The system will operate on two power supplies (2+2 redundancy) for the Cisco UCS 5108 blade server chassis and one power supply (1+1 redundancy) for the Cisco UCS 6100 Series Fabric Interconnect. More detail is at:

- http://www.cisco.com/en/US/docs/unified_computing/ucs/hw/chassis/install/overview.html#wp1245307

Blade Server Chassis and Fabric Interconnect Clearances

You must provide adequate clearance for installing the chassis, replacing modules, and allowing airflow to and from the equipment. The blade server chassis and fabric interconnect require at least 36.0 inches (91.4 cm) of clearance in front to replace a blade or a fabric interconnect. They also require at least 16 inches (40.6 cm) of clearance in back of the equipment to install and replace their components. No side clearance is required because there are no components to replace on the sides of the chassis. No clearance or empty rack units are required between the equipment.

Note If you need more space for the mechanical lift, include the additional space with the clearance for the front of the chassis.

For the blade server chassis and fabric interconnect, the clearances for installation and replacement of components is adequate for the cooling airflow. Side clearance is not needed for installation, replacement, or airflow.

Facility Cooling Requirements

The Cisco UCS components dissipate considerable power and generate considerable heat. The major components require the following heat dissipation:

- Cisco UCS 6120XP Fabric Interconnect dissipates up to 1534 BTUs per hour
- Cisco UCS 6140XP Fabric Interconnect dissipates up to 2561 BTUs per hour
- Cisco UCS 6248UP Fabric Interconnect dissipates up to 1998 BTUs per hour
- Cisco UCS 5108 Blade Server Chassis dissipates up to 1364 BTUs per hour
- Each Cisco B200 or B230 Blade Server dissipates up to 1347 BTUs per hour

Chassis Airflow

The Cisco UCS 5108 chassis and the Cisco UCS 6100 Series Fabric Interconnect each use front-to-back airflow for cooling, and both components are designed to work in a hot-aisle/cold-aisle environment.

Cable management can be an important factor in preventing overheating issues. In Figure 3-34, the "before" illustration shows cables blocking the rear of the chassis, and preventing the fans from exhausting warm air from the chassis. This situation causes failed DIMMs in the blade servers, and seemingly random server shutdowns when internal temperatures exceed specification. Use cable ties and other wiring practices to keep the rear of the chassis unobstructed as shown in the "after" illustration.

Figure 3-34 Cable Management