



## System Specifications

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## Environmental Specifications

| Environment       |   | Specification              |
|-------------------|---|----------------------------|
| Temperature       | Ambient operating temperature   | 32 to 104°F (0 to 40°C)    |
|                   | Ambient nonoperating  | −40 to 158°F (−40 to 70°C) |
| Relative humidity | Nonoperating  | 5 to 95%                   |
|                   | Operating   | 5 to 90%                   |
| Altitude          | Altitude rating is based on power supply installed; see critical components list in the system CB report for altitude rating. |                            |

| Environment       |                               | Specification                        |
|-------------------|-------------------------------|--------------------------------------|
| Temperature       | Ambient operating temperature | 32 to 104°F (0 to 40°C)              |
|                   | Ambient nonoperating          | −40 to 158°F (−40 to 70°C)           |
| Relative humidity | Nonoperating                  | 5 to 95%                             |
|                   | Operating                     | 5 to 90%                             |
| Altitude          | Operating                     | 0 to 13,123 feet (0 to 4,000 meters) |

## Switch Dimensions

| Switch                 | Width                 | Depth             | Height                      |
|------------------------|-----------------------|-------------------|-----------------------------|
| Cisco Nexus 9332D-GX2B | 17.3 inches (43.9 cm) | 23.9 in (60.8 cm) | 1.72 inches (4.4 cm) (1 RU) |

| Chassis or Module         | Width  | Depth   | Height   |
|---------------------------|--|---|--|
| Cisco Nexus 9508 chassis  | 17.5 inches (44.5 cm)  | 31.76 inches (80.67 cm)<br>for chassis and handles  | 22.70 inches (57.78 cm)<br>(13 RU)   |
| Supervisor modules        | Without mounting brackets: 7.0 inches (17.78 cm)<br>With mounting brackets: 8.0 inches (20.32 cm)  | Inside chassis: 20.67 inches (52.5 cm)<br>Ejector levers outside chassis: 0.75 inches (1.9 cm)  | 1.75 inches (4.4 cm)   |
| System controller modules | Without mounting brackets: 6.81 inches (17.3 cm)<br>With mounting brackets: 7.81 inches (19.84 cm) | Inside chassis: 10.74 inches (27.28 cm)<br>Ejector levers outside chassis: 0.75 inches (1.9 cm) | 1.42 inches (3.61 cm)  |
| Line cards                | 17.0 inches (43.18 cm)   | Inside chassis: 16.5 inches (41.91 cm)<br>Ejector levers outside chassis: 2.5 inches (6.35 cm)  | 1.75 inches (4.4 cm)   |
| Fabric modules            | 2.46 inches (6.25 cm)  | 11.7 inches (29.72 cm)  | 16.4 inches (41.66 cm)   |
| Fan trays                 | 5.04 inches (12.81 cm)   | 5.12 inches (13.0 cm)   | Without mounting brackets: 16.5 inches (41.91 cm)<br>With mounting brackets: 18.08 inches (45.92 cm) |
| Power supply              | 5.25 inches (13.33 cm)   | Inside chassis: 17.75 inches (44.96 cm)<br>Ejector levers outside chassis: 0.75 inches (1.9 cm) | 1.75 inches (4.4 cm)   |

# Weights for the Chassis, Modules, Fan Trays, and Power Supplies

| Component  | Weight per Unit    |
|--|--------------------|
| <b>Cisco Nexus 9508 Chassis (N9K-C9508)</b>                                | 150.0 lb (68.2 kg) |
| <b>Supervisor Modules</b>  | —                  |
| – Supervisor A module (N9K-SUP-A)  | 4.84 lb (2.2 kg)   |
| – Supervisor A+ module (N9K-SUP-A+)  | 5.2 lb (2.37 kg)   |
| – Supervisor B module (N9K-SUP-B)  | 6.0 lb (2.72 kg)   |
| – Supervisor B+ module (N9K-SUP-B+)  | 5.3 lb (2.39 kg)   |
| <b>System Controller Module (N9K-SC-A)</b>                                 | 1.9 lb (0.9 kg)    |
| <b>Line cards that the N9K-C9508-FM fabric modules support</b>             | —                  |
| – 36-port 40-Gigabit Ethernet QSFP+ ACI Spine line card (N9K-X9736PQ)      | 11.2 lb (5.1 kg)   |
| <b>Line cards that the N9K-C9508-FM-E fabric modules support</b>           | —                  |
| – 32-port 100-Gigabit Ethernet QSFP+ ACI Spine line card (N9K-X9732C-EX)   | 12.13 lb (5.5 kg)  |
| – 36-port 100-Gigabit Ethernet QSFP28 ACI Spine line card (N9K-X9736C-FX)  | 14.6 lb (6.62 kg)  |
| – 36-port 40-Gigabit Ethernet QSFP28 ACI Spine line card (N9K-X9736Q-FX)   | 14.6 lb (6.62 kg)  |
| <b>Line cards that the N9K-C9508-FM-E2 fabric modules support</b>          | —                  |
| – 32-port 100-Gigabit Ethernet QSFP+ ACI Spine line card (N9K-X9732C-EX)   | 12.13 lb (5.5 kg)  |
| – 36-port 100-Gigabit Ethernet QSFP28 ACI Spine line card (N9K-X9736C-FX)  | 14.6 lb (6.62 kg)  |
| – 36-port 40-Gigabit Ethernet QSFP28 ACI Spine line card (N9K-X9736Q-FX)   | 14.6 lb (6.62 kg)  |
| <b>Line cards that the N9K-C9508-FM-G fabric modules support</b>           | —                  |
| – 36-port 100-Gigabit Ethernet QSFP28 ACI Spine line card (N9K-X9736C-FX)  | 14.6 lb (6.62 kg)  |
| – 36-port 40-Gigabit Ethernet QSFP28 ACI Spine line card (N9K-X9736Q-FX)   | 14.6 lb (6.62 kg)  |
| – 16-port 400-Gigabit Ethernet QSFP-DD ACI Spine line card (N9K-X9716D-GX) | 15.2 lb (6.8 kg)   |
| <b>Fabric Modules</b>  | —                  |
| – 40-Gigabit N9K-C9508-FM fabric module                                    | 9.59 lb (4.4 kg)   |
| – 100-Gigabit N9K-C9508-FM-E fabric module                                 | 11.6 lb (5.28 kg)  |
| – 100-Gigabit N9K-C9508-FM-E2 fabric module                                | 10.94 lb (5.0 kg)  |

| Component  | Weight per Unit    |
|--|--------------------|
| – 400-Gigabit N9K-C9508-FM-G fabric module                           | 14.08 lb (6.39 kg) |
| <b>Fan Trays</b>   | —                  |
| – (N9K-C9508-FAN)  | 8.2 lb (3.72 kg)   |
| – (N9K-C9508-FAN2)   | 10.8 lb (4.9 kg)   |
| <b>Blank Fan Power Cards</b>   | —                  |
| – 400-Gigabit N9K-C9508-FAN-PWR spinner card                         | 7.2 lb (3.27 kg)   |
| <b>Power Supplies</b>  | —                  |
| – 3-kW AC Power Supply (N9K-PAC-3000W-B)                             | 6.2 lb (2.8 kg)    |
| – 3-kW Universal AC/DC Power Supply (N9K-PUV-3000W-B)                | 5.9 lb (2.67 kg)   |
| – 3.15-kW Dual Input Universal AC/DC Power Supply (N9K-PUV2-3000W-B) | 5.9 lb (2.67 kg)   |
| – 3-kW DC Power Supply (N9K-PDC-3000W-B)                             | 6.4 lb (2.9 kg)    |

## Power Specifications

Power specifications include the specifications for each type of power supply module.

### Power Requirements for Switch Modules

Determine the number of power supplies required to operate all the modules in a switch by adding the maximum power amounts for each module in the switch. Then divide the sum by 3000 W. If there is a fractional amount in the result, add 1 to the result. For  $n+1$  redundancy, add one more power supply. For  $n+n$  redundancy, double the number of power supplies and provision for a second power source.

To determine the typical consumption, add the typical power amounts for each module in the switch.

Make sure that any new power supplies use the same type of power (AC or DC) as the rest of the power supplies in the switch. Do not use a mix of AC and DC power sources for a switch.

### Maximum Power Available to the Switch

The maximum power available for operations depends on the input power from your power source. Also, the number and output capabilities of your power supplies, and the power redundancy mode that you use. The following table lists the amount of power available for 3-kW power supplies depending on power inputs, numbers of power supplies, and the mode used.

**Table 1: Maximum Power Available for a Switch with 3-kW Power Supplies**

| Power Inputs    | Power Supplies | Combined Mode | $n+1$ Redundancy Mode | $n+n$ Redundancy Mode |
|-----------------|----------------|---------------|-----------------------|-----------------------|
| 1 input (220 V) | 1              | 3000 W        | —                     | —                     |
|                 | 2              | 6000 W        | 3000 W                | 3000 W                |
|                 | 3              | 9000 W        | 6000 W                | 3000 W                |
|                 | 4              | 12,000 W      | 9000 W                | 6000 W                |
|                 | 5              | 15,000 W      | 12,000 W              | 6000 W                |
|                 | 6              | 18,000 W      | 15,000 W              | 9000 W                |
|                 | 7              | 21,000 W      | 18,000 W              | 9000 W                |
|                 | 8              | 24,000 W      | 21,000 W              | 12,000 W              |

The following power supply unit supports dual high-voltage AC/DC inputs and offers more flexibility to support input-source redundancy.

**Table 2: Maximum Power Available for a Switch with 3.15-kW Universal AC/DC Power Supplies**

| Power Inputs    | Power Supplies | Combined Mode | $n+1$ Redundancy Mode | $n+n$ Redundancy Mode |
|-----------------|----------------|---------------|-----------------------|-----------------------|
| 1 input (220 V) | 1              | 3150 W        | —                     | —                     |
|                 | 2              | 6300 W        | 3150 W                | 3150 W                |
|                 | 3              | 9450 W        | 6300 W                | 3150 W                |
|                 | 4              | 12,600 W      | 9450 W                | 6300 W                |
|                 | 5              | 15,750 W      | 12,600 W              | 6300 W                |
|                 | 6              | 18,900 W      | 15,750 W              | 9450 W                |
|                 | 7              | 22,050 W      | 18,900 W              | 9450 W                |
|                 | 8              | 25,200 W      | 22,050 W              | 12,600 W              |

## Power Supply Specifications

The following subtopics list the specifications for each power supply that this switch supports.

### 3000-W AC Power Supply Specifications

| Property          | Specification                    |
|-------------------|----------------------------------|
| Power             | 3000 W                           |
| Input Voltage     | 200 to 240 VAC                   |
| Frequency         | 50 to 60 Hz                      |
| Efficiency        | 90% or greater (20 to 100% load) |
| Redundancy Modes  | Combined, $n+1$ , and $n+n$      |
| RoHS Compliance   | Yes                              |
| Hot Swappable     | Yes                              |
| Airflow Direction | Port-side intake airflow         |

### 3000-W Universal AC/DC Power Supply Specifications

| Property          | Specification                          |
|-------------------|--|
| Power             | 3000 W                                 |
| Input Voltage     | 200 to 277 VAC or<br>240 to 380 VDC or |
| Frequency         | 47 to 63 Hz                            |
| Efficiency        | 90% or greater (20 to 100% load)       |
| Redundancy Modes  | Combined, $n+1$ , and $n+n$            |
| RoHS Compliance   | Yes                                    |
| Hot Swappable     | Yes                                    |
| Airflow Direction | Port-side intake airflow               |

### 3000-W Dual Input Universal AC/DC Power Supply Specifications

| Property      | Specification                          |
|---------------|--|
| Power         | 3150 W                                 |
| Input Voltage | 180 to 305 VAC or<br>192 to 400 VDC or |
| Frequency     | 50 to 60 Hz                            |
| Efficiency    | 90% or greater (20 to 100% load)       |

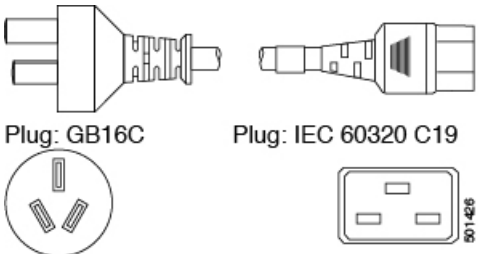
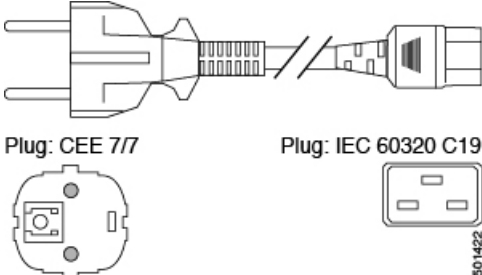
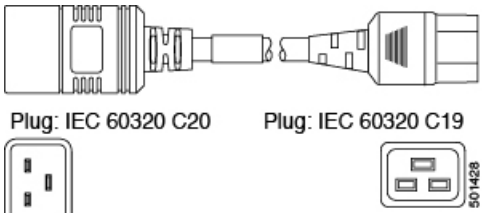
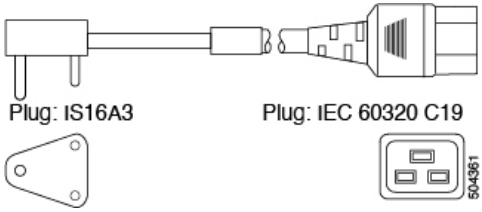
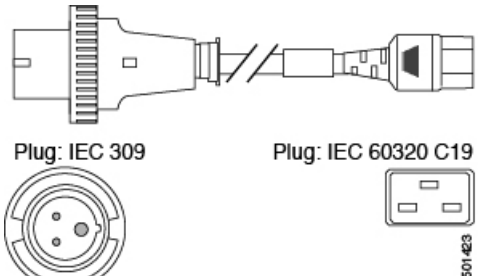
| Property          | Specification               |
|-------------------|-----------------------------|
| Redundancy Modes  | Combined, $n+1$ , and $n+n$ |
| RoHS Compliance   | Yes                         |
| Hot Swappable     | Yes                         |
| Airflow Direction | Port-side intake airflow    |

## Power Cable Specifications

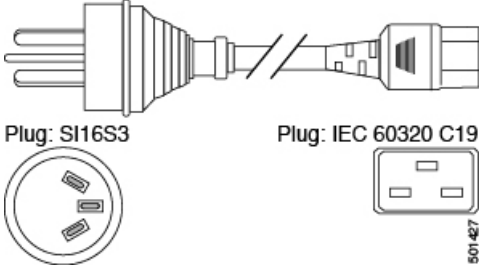
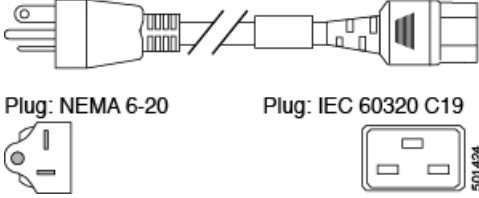
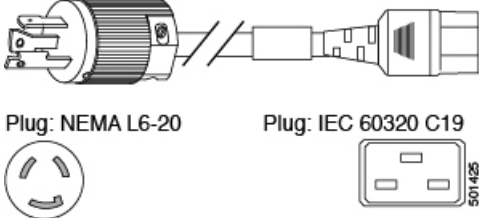
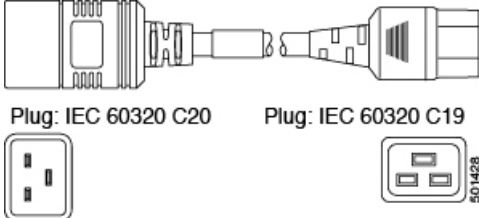
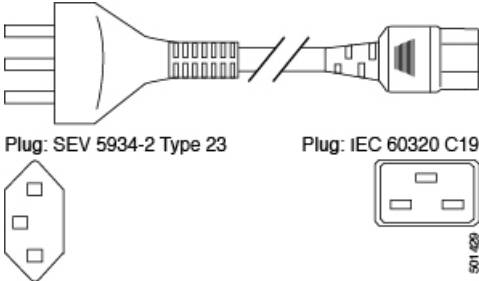
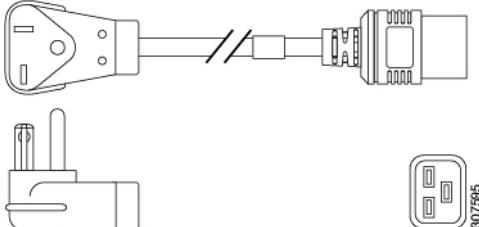
The following subtopics list the specifications for supported power cables.

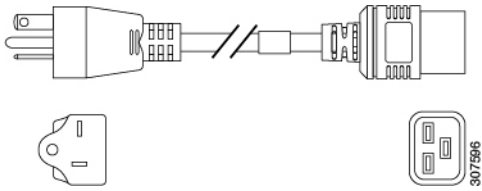
### 3-kW AC Power Cable Specifications

| Locale                    | Power Cord Part Number | Cord Set Rating | Power Cord Illustration |
|---------------------------|------------------------|-----------------|-------------------------|
| Argentina                 | CAB-9K16A-ARG          | 16 A, 250 VAC   |                         |
| Brazil                    | CAB-9K16A-BRZ          | 16 A, 250 VAC   |                         |
| Korea                     | CAB-9K16A-KOR          | 16 A, 250 VAC   |                         |
| South Africa              | CAB-9K16A-SA           | 16 A, 250 VAC   | TBD                     |
| Australia and New Zealand | CAB-AC-16A-AUS         | 16 A, 250 VAC   |                         |

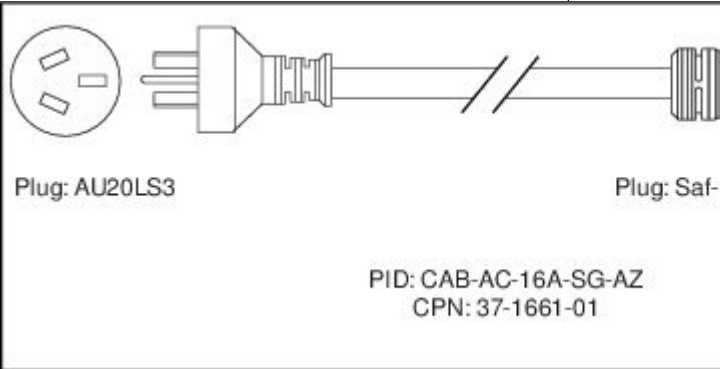
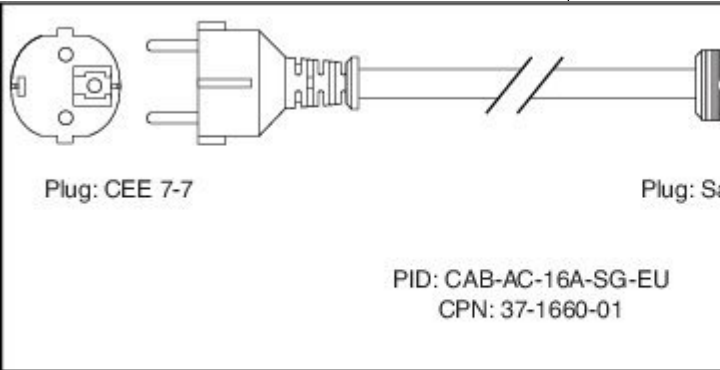
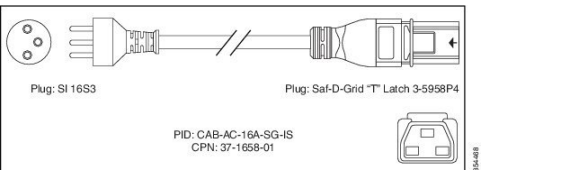
| Locale                    | Power Cord Part Number | Cord Set Rating | Power Cord Illustration   |
|---------------------------|------------------------|-----------------|---|
| Peoples Republic of China | CAB-AC-16A-CH          | 16 A, 250 VAC   |  <p>Plug: GB16C      Plug: IEC 60320 C19</p>          |
| Continental Europe        | CAB-AC-2500W-EU        | 16 A, 250 VAC   |  <p>Plug: CEE 7/7      Plug: IEC 60320 C19</p>        |
| India                     | CAB-C19-C20-IND        | 16 A, 250 VAC   |  <p>Plug: IEC 60320 C20      Plug: IEC 60320 C19</p> |
| India                     | PWR-CORD10-IND         | 16 A, 250 VAC   |  <p>Plug: IS16A3      Plug: IEC 60320 C19</p>       |
| International             | CAB-AC-2500W-INT       | 16 A, 250 VAC   |  <p>Plug: IEC 309      Plug: IEC 60320 C19</p>      |

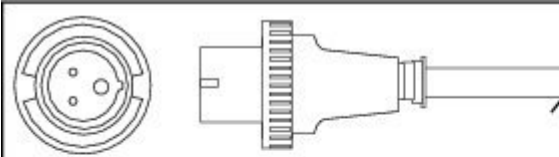
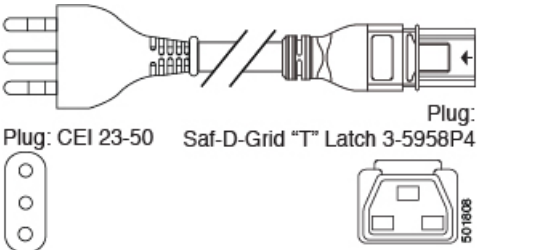
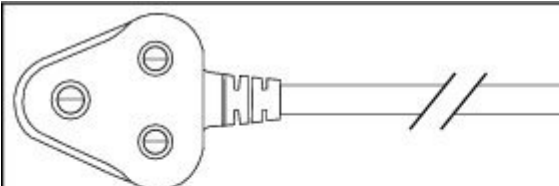


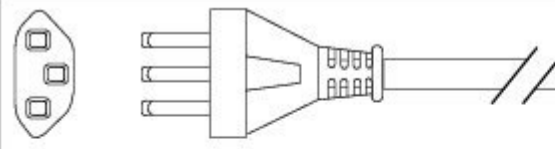



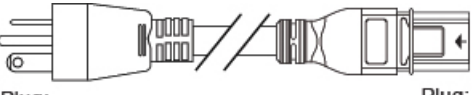


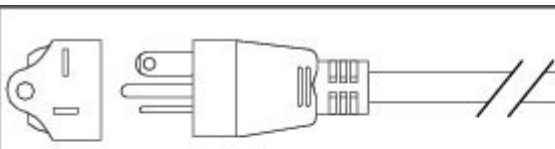
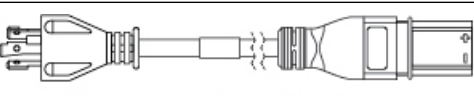


| Locale   | Power Cord Part Number | Cord Set Rating                         | Power Cord Illustration  |
|--|------------------------|---|--|
| Israel   | CAB-AC-2500W-ISRL      | 16 A, 250 VAC                           |  <p>Plug: SI16S3      Plug: IEC 60320 C19</p> <p>501427</p>               |
| Japan and North America (nonlocking) 200-240 VAC operation | CAB-AC-2500W-US1       | 16 A, 250 VAC                           |  <p>Plug: NEMA 6-20      Plug: IEC 60320 C19</p> <p>501424</p>            |
| Japan and North America (locking) 200-240 VAC operation    | CAB-AC-C6K-TWLK        | 16 A, 250 VAC                           |  <p>Plug: NEMA L6-20      Plug: IEC 60320 C19</p> <p>501425</p>          |
| Power distribution unit (PDU)                              | CAB-C19-CBN            | 16 A, 250 VAC                           |  <p>Plug: IEC 60320 C20      Plug: IEC 60320 C19</p> <p>501428</p>      |
| Switzerland  | CAB-ACS-16             | 16 A, 250 VAC                           |  <p>Plug: SEV 5934-2 Type 23      Plug: IEC 60320 C19</p> <p>501429</p> |
| Taiwan   | CAB-AC-C19-TW          | 16 A, 250 VAC (IEC 60320 C19 to EL 218) |  <p>307595</p>  |

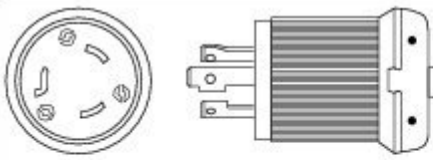
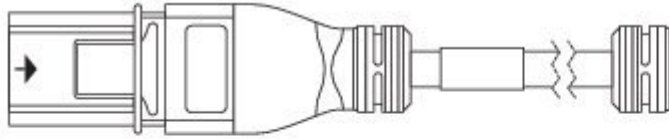

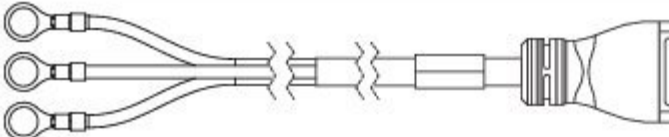
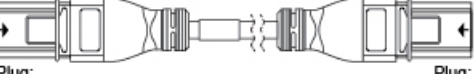


| Locale                                     | Power Cord Part Number | Cord Set Rating                                     | Power Cord Illustration  |
|--|------------------------|---|--|
| US   | CAB-AC-STRT-C19US      | 16 A, 250 VAC<br>(straight blade<br>NEMA 6-20 plug) |  |
| All except Argentina,<br>Brazil, and Japan | NO-PWR-CORD            | No power cord is<br>included with order.            | N.A.   |

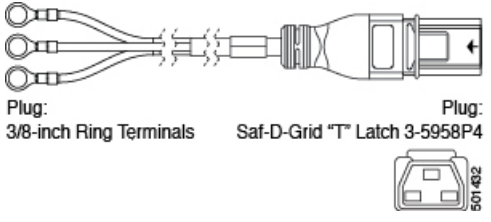
### 3-kW Universal AC/DC and 3-kW Dual Input Universal AC/DC Power Cable Specifications

| Locale                       | Power Cord Part Number | Cord Set Rating                       | Power Cord Illustration  |
|------------------------------|------------------------|---------------------------------------|--|
| Australia and New<br>Zealand | CAB-AC-16A-SG-AZ       | 16 A, 250 VAC<br>(AU20LS3/Saf-D-Grid) |   |
|                              | CAB-AC-16A-SG-EU       | 16A, 250 VAC                          |  |
| Israel                       | CAB-AC-16A-SG-IS       | 16 A, 250 VAC                         |  |

| Locale           | Power Cord Part Number | Cord Set Rating | Power Cord Illustration   |
|------------------|------------------------|-----------------|---|
| International/UK | CAB-AC-16A-SG-IN       | 16 A, 250 VAC   |  <p data-bbox="1003 474 1175 506">Plug: IEC60309</p> <p data-bbox="1373 575 1620 632">PID: CAB-AC-16A-SG-I<br/>CPN: 37-1659-01</p>  |
| Italy            | CAB-AC-16A-SG-IT       | 16 A, 250 VAC   |  <p data-bbox="943 890 1414 921">Plug: CEI 23-50 Saf-D-Grid "T" Latch 3-5958P4</p> <p data-bbox="1365 867 1414 898">Plug:</p> <p data-bbox="1393 961 1414 1010">501808</p>             |
| South Africa     | CAB-AC-16A-SG-SA       | 16 A, 250 VAC   |  <p data-bbox="1019 1255 1110 1287">Plug: EL</p> <p data-bbox="1500 1255 1620 1287">Plug: Saf-D-</p> <p data-bbox="1252 1346 1533 1402">PID: CAB-AC-16A-SG-SA<br/>CPN: 37-1647-01</p> |

| Locale  | Power Cord Part Number | Cord Set Rating | Power Cord Illustration  |
|---|------------------------|-----------------|--|
| Switzerland                                       | CAB-AC-16A-SG-SW       | 16 A, 250 VAC   |  <p data-bbox="933 472 1128 504">Plug: SEV 5934-2</p> <p data-bbox="1542 472 1624 504">Plug: S</p> <p data-bbox="1291 556 1583 619">PID: CAB-AC-16A-SG-SW<br/>CPN: 37-1654-01</p>  |
| North America                                     | CAB-AC-20A-SG-C20      | 250 VAC 20 A    |  <p data-bbox="901 777 1031 808">Plug: IEC C20</p> <p data-bbox="1055 777 1372 808">Plug: Saf-D-Grid "T" Latch 3-5958P4</p>    |
| North America                                     | CAB-AC-20A-SG-US       | 16 A, 250 VAC   |  <p data-bbox="901 1008 1031 1060">Plug:<br/>NEMA 5-20P</p> <p data-bbox="1071 1008 1372 1060">Saf-D-Grid "T" Latch 3-5958P4</p> <p data-bbox="1323 1008 1372 1039">Plug:</p>   |
| North America (non locking) 200-240 VAC operation | CAB-AC-20A-SG-US2      | 250 VAC 20 A    |  <p data-bbox="933 1344 1128 1375">Plug: NEMA 6-20</p> <p data-bbox="1526 1344 1624 1375">Plug: Sa</p> <p data-bbox="1274 1438 1583 1501">PID: CAB-AC-20A-SG-US2<br/>CPN: 37-1657-01</p>   |
| North America                                     | CAB-AC-20A-SG-US3      | 250 VAC 20 A    |  <p data-bbox="950 1659 1323 1690">250 VAC 20A, twist lock, NEMA L6-20/Saf-D-Grid</p>    |

| Locale   | Power Cord Part Number | Cord Set Rating                      | Power Cord Illustration   |
|--|------------------------|--------------------------------------|---|
| North America 277 VAC operation                                    | CAB-AC-20A-SG-US4      | 277 VAC 20 A                         |  <p>Plug: NEMA L7-20P</p> <p>PID: CAB-AC-20A-SG-US<br/>CPN: 37-1645-1</p>   |
| International, Saf-D-Grid/Saf-D-Grid                               | CAB-HV-25A-SG-IN1      | 400 VAC 20 A                         |  <p>Plug: Saf-D-Grid "T" Latch 3-5958P4      Plug: Saf-D-Grid</p>  <p>PID: CAB-HV-25A-SG-IN<br/>CPN: 37-1642-01</p>  |
| International, Ring Terminal source plug, Ring Terminal/Saf-D-Grid | CAB-HV-25A-SG-IN2      | 20A, 300 VAC/500 VDC                 |  <p>Plug: 3/8-inch Ring Terminals      Plug: Saf-D-Grid "T" Latch</p> <p>PID: CAB-HV-25A-SG-IN2<br/>CPN: 37-1640-01</p>   |
| North America  | CAB-HV-25A-SG-US1      | 277 VAC/<br>240 VDC/ 380 VDC<br>25 A |  <p>Plug: Saf-D-Grid "T" Latch 3-5958P4      Plug: Saf-D-Grid "T" Latch 3-5958P4</p>   |

| Locale                                  | Power Cord Part Number | Cord Set Rating                      | Power Cord Illustration  |
|---|------------------------|--------------------------------------|--|
| North America                           | CAB-HV-25A-SG-US2      | 277 VAC/<br>240 VDC/<br>380 VDC 25 A |  <p>Plug:<br/>3/8-inch Ring Terminals</p> <p>Plug:<br/>Saf-D-Grid "T" Latch 3-5958P4</p> <p>501432</p> |
| All except Argentina, Brazil, and Japan | NO-PWR-CORD            | No power cord included with order    | N.A.   |

### 3-kW DC Power Supply Power Cord Specifications

Each 3-kW DC power supply requires four customer-supplied power cables (two negative cables and two positive cables). We recommend using six gauge cables. Cisco supplies 6-gauge lugs for connections to the power supply. You supply the connectors that are required to connect the cables to the DC power source.