9 Cables

9.1 Ground Cable

Appearance and Structure

Figure 9-1 shows the appearance of a typical ground cable.

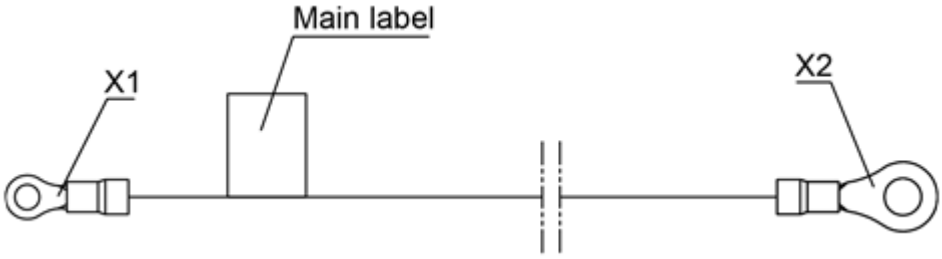
NOTE

Other types of ground cables are similar to the example shown in the figure, except for their cross-sectional area, size of the cable lugs, and cable length.

Figure 9-1 Appearance of a ground cable

[Figure 9-2](#) shows the structure of a ground cable.

Figure 9-2 Structure of a ground cable



Pin Assignments

[Table 9-1](#) lists the pin assignments of a ground cable.

Table 9-1 Pin assignments of a ground cable

X1	X2	Wire Color	Conductor Cross-Sectional Area	Length
OT-4	OT-6	Green-yellow	4 mm^2	0.4 m

Connection

A ground cable grounds a device to protect it from lightning and electromagnetic interference. A ground cable is connected to a chassis in the following way:

- The OT-4 naked crimping connector connects to the ground point on the chassis.
- The OT-6 naked crimping connector connects to the ground point on the cabinet.

9.2 PCIe Cables

Appearance and Structure

The S5700 series switches can use PCIe cables as stack cables to connect stack ports on rear stack cards. Switches connected using stack cables form a logical switch to forward packets.

Figure 9-3 shows the appearance of a PCIe cable.

Figure 9-3 PCIe cable

NOTE

Both ends of a PCIe cable must be covered by an ESD cap.

Specifications

Table 9-2 Specifications of a PCIe cable

Attribute	Description	
Cable model	1 m PCIe cable	3 m PCIe cable **NOTE** This cable is available in V200R002C00 and later versions.
Connector type	PCIe	
Standards compliance	PCIe 8X	
Length	1.0 m	3.0 m
Applicable device models	• S5700-SI • S5700-EI • S5710-C-LI	• V200R002C00: S5700-52C-EI and S5700-28C-EI-24S • V200R003C00 and later versions: – S5700-SI – S5700-EI

9.3 Optical Fiber

AOC

An active optical cable (AOC) is a fixed-length optical fiber with optical modules at both ends. It can be directly connected to an optical port on a device. In short-distance connection scenarios, AOCs can replace optical modules and optical fibers.

Figure 9-4 SFP+ to SFP+ or SFP28 to SFP28 AOC

Figure 9-5 QSFP+ to QSFP+ or QSFP28 to QSFP28 AOC

Figure 9-6 QSFP+ to 4*SFP+ AOC

Table 9-3 lists the models and attributes of AOCs.

Table 9-3 Attributes of AOCs

Model	Length	Bend Radius	Connector Type	Part Number	Operating Temperature
SFP-10G-AOC3M	3 m	30 mm	SFP+ to SFP+	02310QWG	0°C to 70°C
SFP-10G-AOC10M	10 m	30 mm	SFP+ to SFP+	02310QWH	0°C to 70°C
QSFP-H40G-AOC10M	10 m	25 mm	QSFP+ to QSFP+	02310SSH	0°C to 70°C
QSFP-4SFP10-AOC10M	10 m	25 mm	QSFP+ to 4*SFP+	02310SSJ	0°C to 70°C
QSFP-100G-AOC-10M	10 m	25 mm	QSFP28 to QSFP28	02311KNQ	0°C to 70°C
SFP-25G-AOC-3M	3 m	30 mm	SFP28 to SFP28	02311MPE	0°C to 70°C
SFP-25G-AOC-5M	5 m	30 mm	SFP28 to SFP28	02311MPD	0°C to 70°C
SFP-25G-AOC-7M	7 m	30 mm	SFP28 to SFP28	02311MPC	0°C to 70°C
SFP-25G-AOC-10M	10 m	30 mm	SFP28 to SFP28	02311KNT	0°C to 70°C
SFP-25G-AOC-3M-A	3 m	30 mm	SFP28 to SFP28	02314QWG	0°C to 70°C
SFP-25G-AOC-5M-A	5 m	30 mm	SFP28 to SFP28	02311YJH	0°C to 70°C
SFP-25G-AOC-7M-A	7 m	30 mm	SFP28 to SFP28	02311YJK	0°C to 70°C
SFP-25G-AOC-10M-A	10 m	30 mm	SFP28 to SFP28	02311YJM	0°C to 70°C

Fiber Jumper

A fiber jumper consists of one or more optical fibers of a certain length and the optical connectors at both ends. A fiber jumper connects an optical module to a fiber terminal box.

NOTE

- The MPO-MPO and MPO-2*MPO fibers have similar appearances except for the number of MPO connectors at the other end (1 and 2, respectively). The following figures show an MPO-MPO fiber for example.
- The MPO-4*DLC and MPO-10*DLC fibers have similar appearances except for the number of DLC connectors at the other end (4 pairs and 10 pairs, respectively).
- The MPO-MPO fibers for S series devices use type B connectors (key Up/key Up).

Figure 9-7 shows a single-mode LC/PC fiber jumper.

Figure 9-7 Single-mode LC/PC fiber jumper

Figure 9-8 shows a multimode LC/PC fiber jumper.

Figure 9-8 Multimode LC/PC fiber jumper

Figure 9-9 shows a single-mode SC/PC fiber jumper.

Figure 9-9 Single-mode SC/PC fiber jumper

Figure 9-10 shows an MPO-MPO fiber jumper.

Figure 9-10 MPO-MPO fiber jumper

Figure 9-11 shows an MPO-4*DLC fiber jumper.

Figure 9-11 MPO-4*DLC fiber jumper

Figure 9-12 shows an MPO-10*DLC fiber jumper.

Figure 9-12 MPO-10*DLC fiber jumper

Comply with the following rules when selecting fiber jumpers:

1. Determine the length of fiber jumpers based on the onsite cabling distance.
2. Determine the fiber type based on the optical module type.
   - Use a multimode fiber jumper for a multimode optical module.
   - Use a single-mode fiber jumper for a single-mode optical module.
3. Determine the optical connector type based on the interface type.

   Ensure that the optical connector at each end of a fiber jumper is the same type as the interface to which it will be connected.

Figure 9-13 shows the structure of an 8-strand MPO-MPO fiber jumper.

Figure 9-13 Structure of an 8-strand MPO-MPO fiber jumper

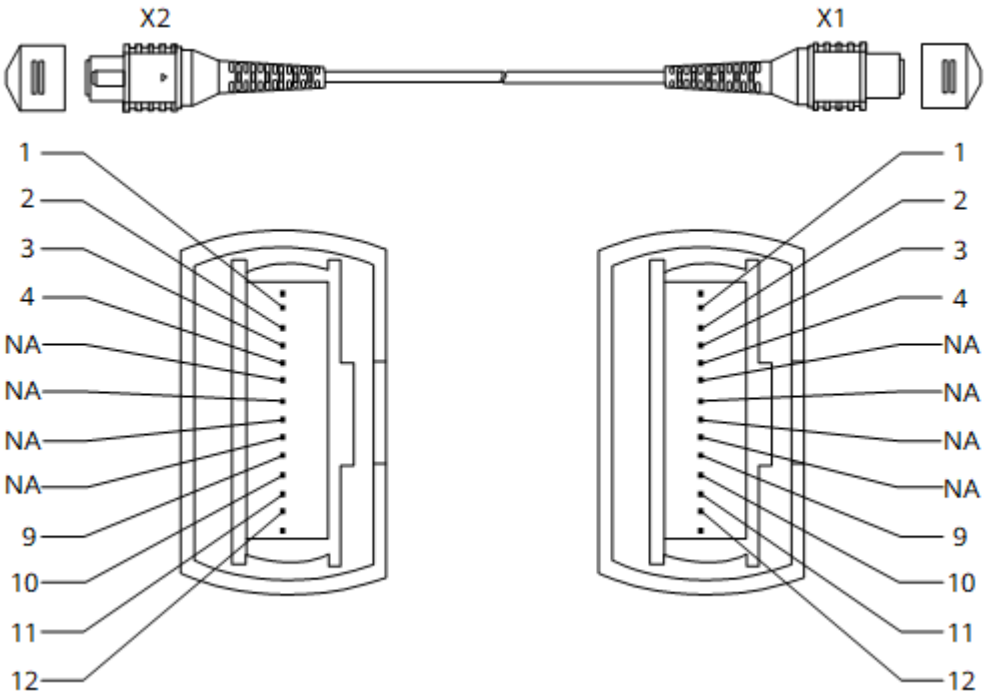


Figure 9-14 shows the structure of a 12-strand MPO-MPO fiber jumper.

Figure 9-14 Structure of a 12-strand MPO-MPO fiber jumper

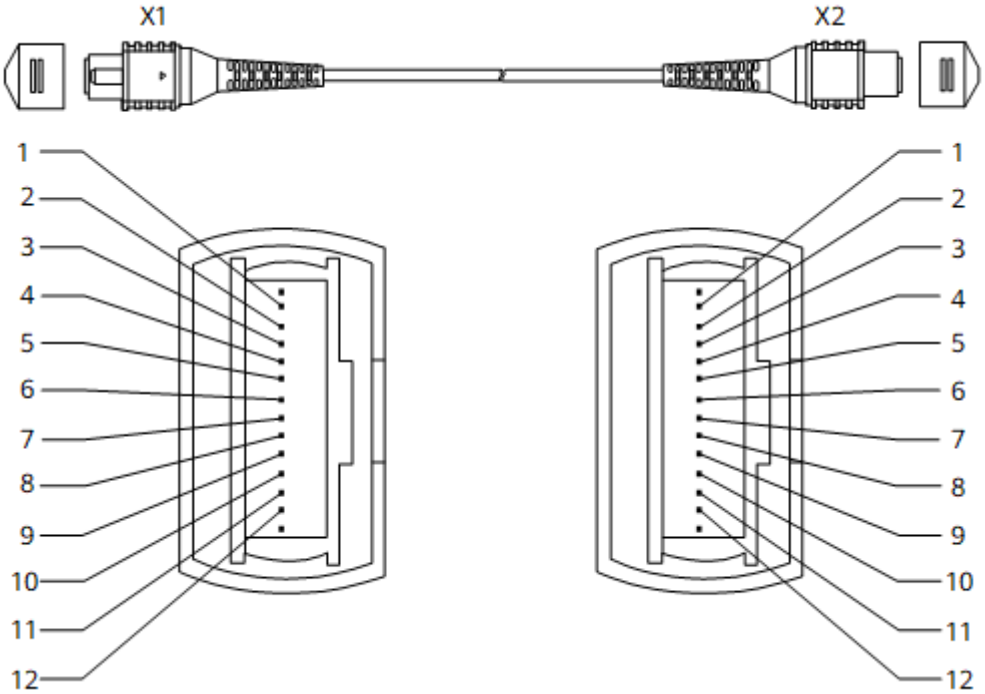


Figure 9-15 shows the structure of a 24-strand MPO-MPO fiber jumper.

Figure 9-15 Structure of a 24-strand MPO-MPO fiber jumper

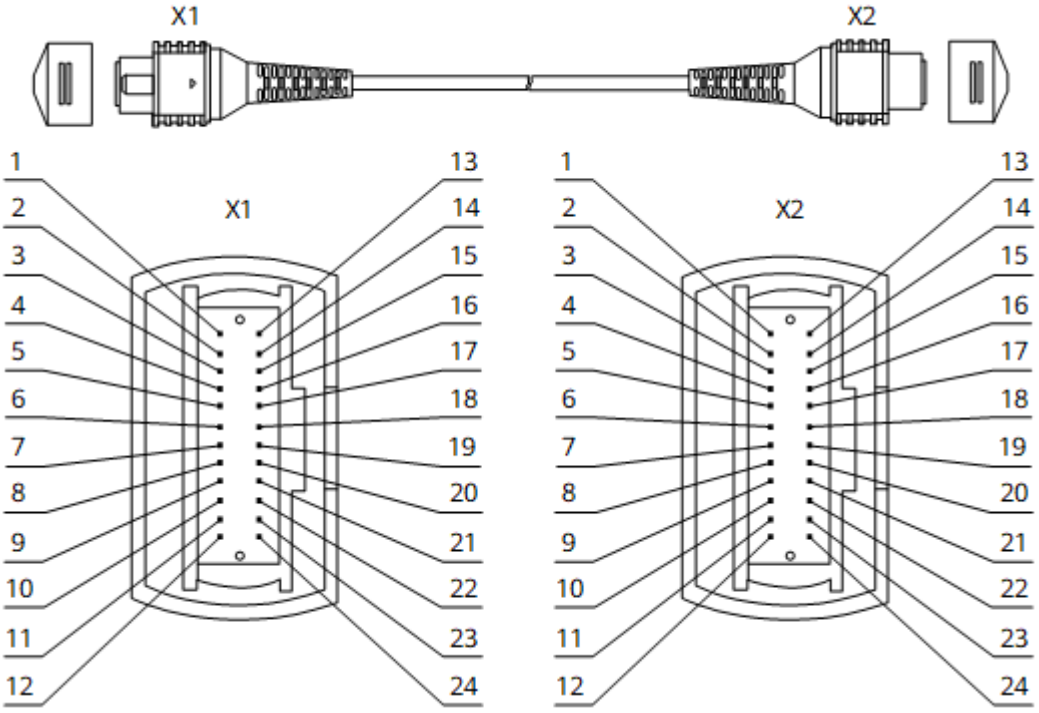


Figure 9-16 shows the structure of an MPO-4*DLC fiber jumper.

Figure 9-16 Structure of an MPO-4*DLC fiber jumper

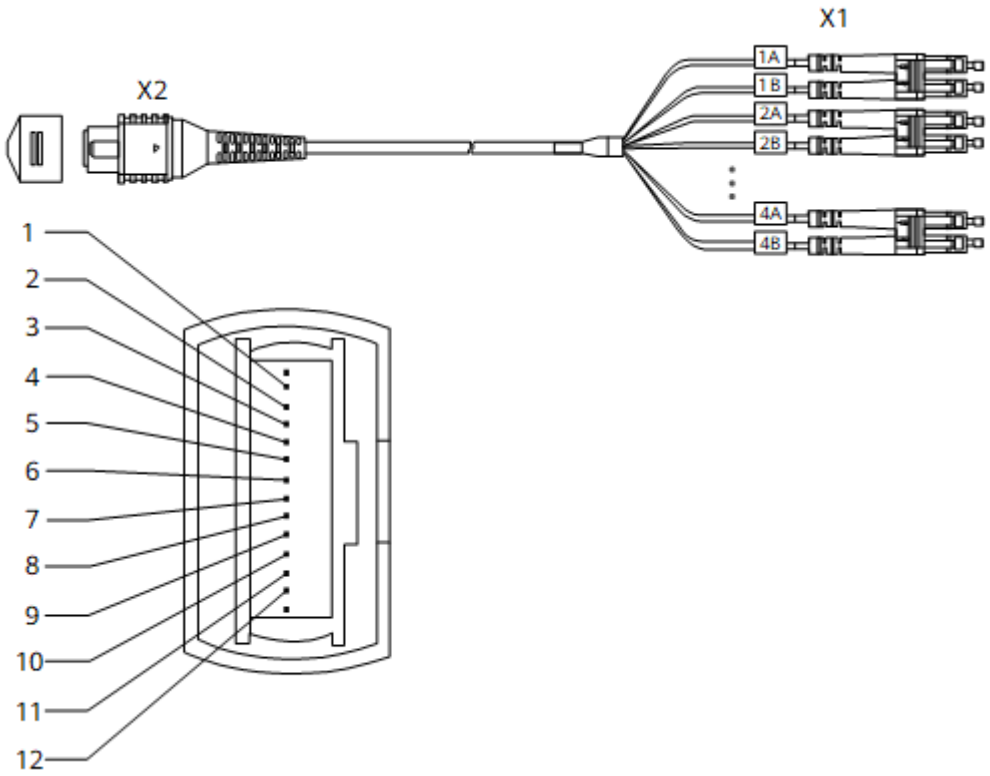


Figure 9-17 shows the structure of an MPO-2*MPO fiber jumper.

Figure 9-17 Structure of an MPO-2*MPO fiber jumper

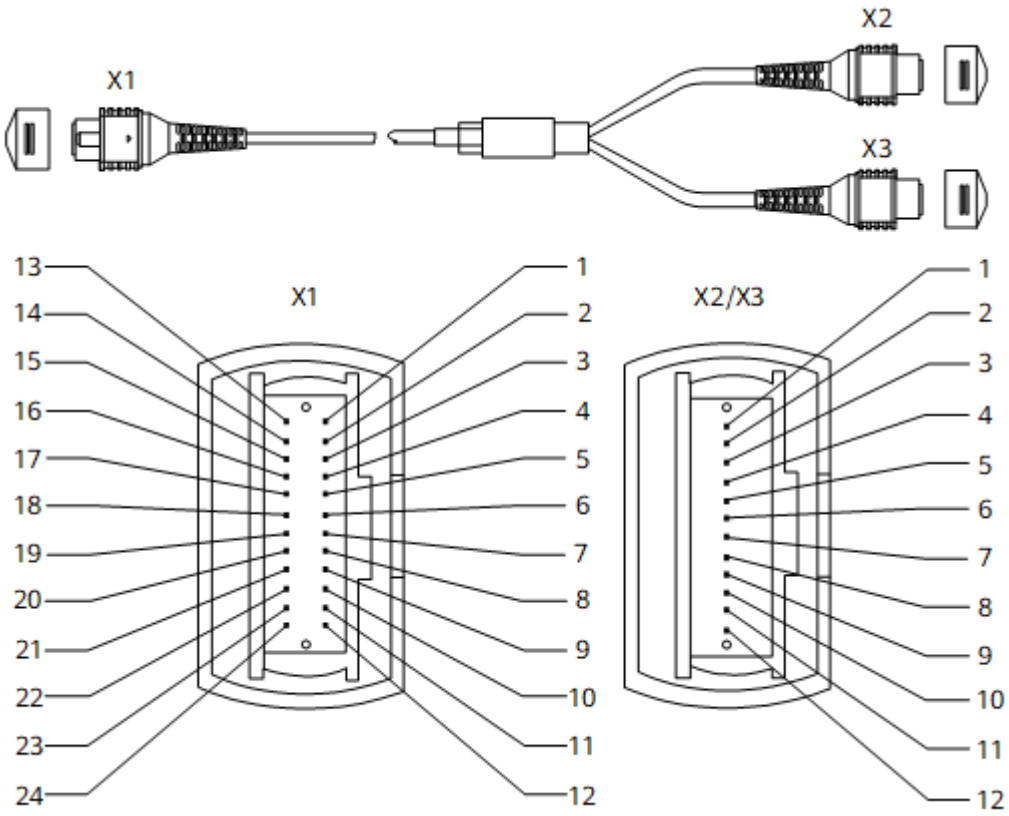


Figure 9-18 shows the structure of an MPO-10*DLC fiber jumper.

Figure 9-18 Structure of an MPO-10*DLC fiber jumper

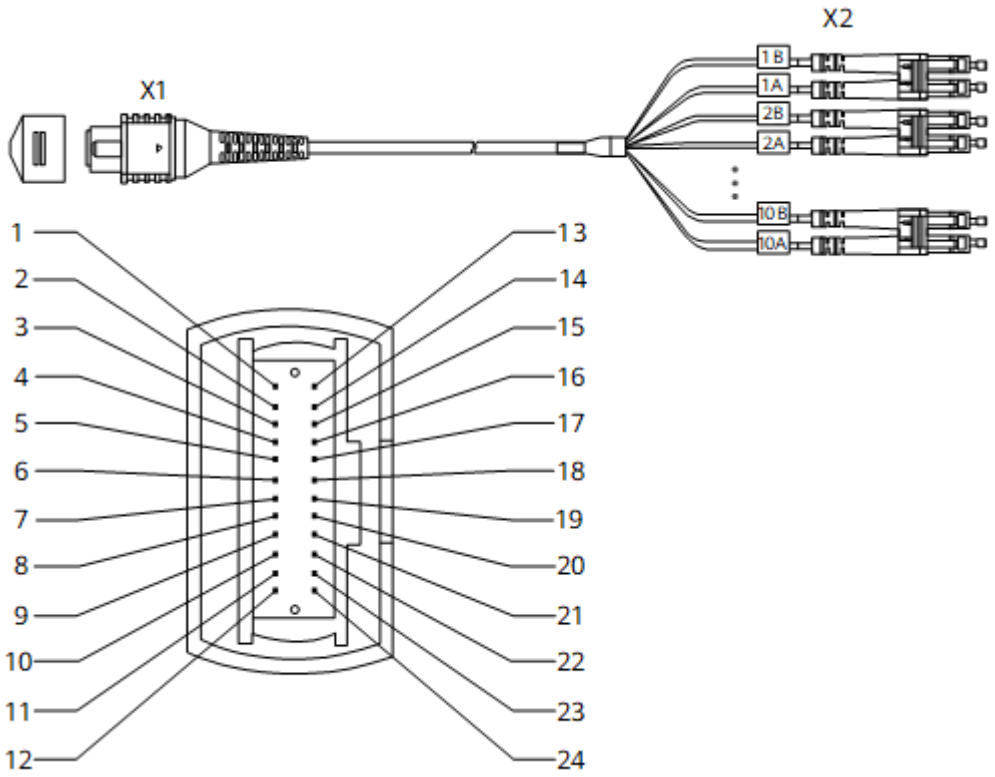


Table 9-4 lists the pin assignments of an 8-strand MPO-MPO fiber jumper.

Table 9-4 Pin assignments of an 8-strand MPO-MPO fiber jumper

X1 Pin	X2 Pin
1	12
2	11
3	10
4	9
NA	NA
NA	NA
NA	NA
NA	NA
9	4
10	3
11	2

X1 Pin	X2 Pin
12	1

Table 9-5 lists the pin assignments of a 12-strand MPO-MPO fiber jumper.

Table 9-5 Pin assignments of a 12-strand MPO-MPO fiber jumper

X1 Pin	X2 Pin
1	12
2	11
3	10
4	9
5	8
6	7
7	6
8	5
9	4
10	3
11	2
12	1

Table 9-6 lists the pin assignments of a 24-strand MPO-MPO fiber jumper.

Table 9-6 Pin assignments of a 24-strand MPO-MPO fiber jumper

X1 Pin	X2 Pin	X1 Pin	X2 Pin
1	24	13	12
2	23	14	11
3	22	15	10
4	21	16	9
5	20	17	8
6	19	18	7
7	18	19	6

X1 Pin	X2 Pin	X1 Pin	X2 Pin
8	17	20	5
9	16	21	4
10	15	22	3
11	14	23	2
12	13	24	1

Table 9-7 lists the pin assignments of an MPO-4*DLC fiber jumper.

Table 9-7 Pin assignments of an MPO-4*DLC fiber jumper

X2 Pin	X1 Pin
1	1A
2	2A
3	3A
4	4A
9	4B
10	3B
11	2B
12	1B

Table 9-8 lists the pin assignments of an MPO-2*MPO fiber jumper.

Table 9-8 Pin assignments of an MPO-2*MPO fiber jumper

X1 Pin	X2 Pin	X3 Pin
2	12	NA
3	11	NA
4	10	NA
5	9	NA
7	NA	12
8	NA	11
9	NA	10

X1 Pin	X2 Pin	X3 Pin
10	NA	9
14	1	NA
15	2	NA
16	3	NA
17	4	NA
19	NA	1
20	NA	2
21	NA	3
22	NA	4

Table 9-9 lists the pin assignments of an MPO-10*DLC fiber jumper.

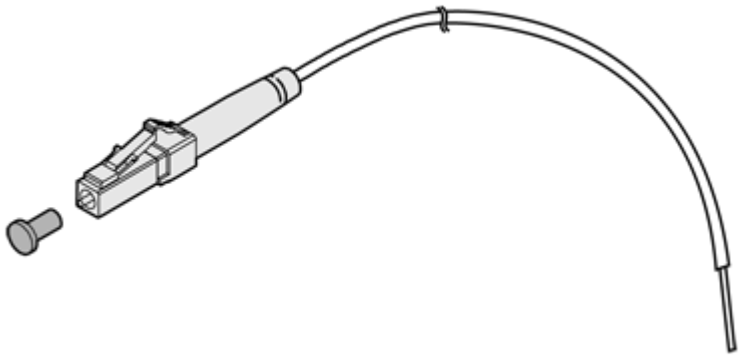
Table 9-9 Pin assignments of an MPO-10*DLC fiber jumper

X1 Pin	X2 Pin	X1 Pin	X2 Pin
2	1A	14	1B
3	2A	15	2B
4	3A	16	3B
5	4A	17	4B
6	5A	18	5B
7	6A	19	6B
8	7A	20	7B
9	8A	21	8B
10	9A	22	9B
11	10A	23	10B

Fiber Pigtail

A fiber pigtail is an optical fiber that has an optical connector at one end and a piece of exposed fiber at the other end. The exposed fiber can be fused to another optical fiber. Fiber pigtails are commonly used to connect optical fibers to optical modules in fiber terminal boxes (optical couplers and jumpers are also used). Figure 9-19 shows the structure of a fiber pigtail.

Figure 9-19 Structure of a fiber pigtail



Fiber pigtails are classified into single-mode and multimode fiber pigtails and are used for short-distance connections.

Optical Fiber, Optical Connector, and Fiber Adapter

Optical Fiber

Optical fibers are classified into single-mode fibers and multimode fibers.

- Single-mode fibers have a diameter of 5-10 μm and transmit laser in one mode under a specified wavelength. These fibers support a wide frequency band and a large transmission capacity, so they are used for long-distance transmission. Most single-mode fibers are yellow, as shown in **Figure 9-7**.
- Multimode fibers have a diameter of 50 μm or 62.5 μm and transmit laser light in multiple modes under a specified wavelength. These fibers have a lower transmission capacity than single-mode fibers and are used for short-distance transmission. Modal dispersion occurs during transmission over multimode fibers.

  In the latest cabling infrastructure of ISO/IEC 11801, multimode fibers are classified into four categories: OM1, OM2, OM3, and OM4.

  - OM1: traditional 62.5/125 μm multimode fibers. OM1 fibers have a large core diameter and numerical aperture, and provide high light gathering ability and bending resistance.
  - OM2: traditional 50/125 μm multimode fibers. OM2 fibers have a small core diameter and numerical aperture. Compared with OM1 fibers, OM2 fibers provide higher bandwidth because they significantly reduce the modal dispersion. When transmitting data at 1 Gbit/s with 850 nm wavelength, OM1 and OM2 fibers support maximum link lengths of 220 m and 550 m, respectively. OM1 and OM2 fibers can provide sufficient bandwidth within a distance of 300 m. Generally, OM1 and OM2 fibers are orange, as shown in **Figure 9-8**.
  - OM3: new-generation multimode fibers, with longer transmission distances than OM1 and OM2 fibers.
  - OM4: laser optimized multimode fibers with 50 μm core diameter. OM4 is an improvement to OM3 and only increases the modal bandwidth. OM4 fibers provide 4700 MHz*km of modal bandwidth, whereas OM3 fibers provide only 2000 MHz*km of modal bandwidth. Generally, OM3

and OM4 fibers are light green. You can identify OM3 and OM4 fibers by their labels or printed marks.

MPO fibers are used for 40G and 100G optical modules. An MPO fiber consists of multiple multi-mode fiber strands, and each multi-mode fiber strand provides one laser transmission channel. Some fiber suppliers produce 8-strand MPO optical fibers, while some suppliers produce 12-strand or 24-strand MPO fibers.

- A 40G optical module uses four channels to transmit laser and four channels to receive laser. That is, a total of eight channels are required for a 40G optical module. 8-strand and 12-strand MPO fibers use the same definition of fiber channels. Therefore, they are equivalent in functionality when connecting to 40G optical modules.
- When 100G optical modules are used, choose MPO fibers according to the following rules:
  - For CFP optical modules, choose 24-strand fibers for the CFP-100G-SR10 module and 8-strand or 12-strand fibers for other modules.
  - Choose 8-strand or 12-strand fibers for QSFP28 modules.

Optical Connector

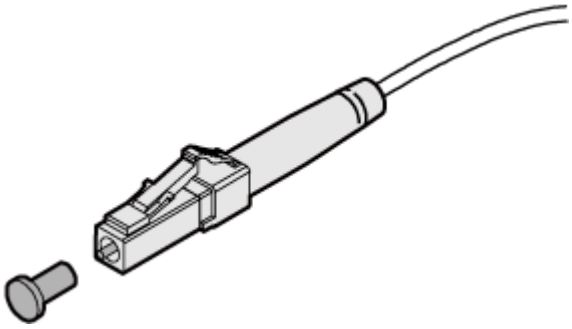
Optical connectors are used to connect optical fibers of the same type. **Table 9-10** lists common optical connectors.

Table 9-10 Common optical connectors

Connector Type	Optical Connector			
Square connector	SC/PC connector 	LC/PC connector 	MTRJ/PC connector 	MPO connector 
Round connector	FC/PC connector 	ST/PC connector 	-	-

Figure 9-20 shows an LC/PC optical connector.

Figure 9-20 LC/PC optical connector



NOTICE

When connecting or removing an LC/PC optical connector, align the connector with the optical port and do not rotate the fiber. Pay attention to the following points:

- To connect a fiber, align the optical connector with the optical port and gently insert the optical fiber into the port.
- To remove a fiber, press the clip on the connector and pull the fiber out.

Fiber Adapter

A fiber adapter (also called a flange) is a fiber connection component. Two fiber connectors need to be connected using a fiber adapter. Fiber adapters are widely used in optical distribution frames (ODFs), fiber transmission equipment, and optical instruments.

9.4 Ethernet Cable

Types of Ethernet Cables

An Ethernet cable connects a maintenance terminal to the console port on the device for local or remote maintenance.

Ethernet cables are classified into straight-through cables and crossover cables.

- Straight-through cable: The twisted pairs in the RJ45 connectors at both ends are crimped in the same sequence. A straight-through cable connects two devices of different types, for example, a PC and a switch.
- Crossover cable: The twisted pairs in the RJ45 connectors at two ends are crimped in different sequences. A crossover cable connects two devices or interfaces of the same type, for example, two PCs.

Crossover and straight cables only differ in wire sequences, and function the same when transmitting data.

Huawei S series models support both straight-through and crossover cables and their ports are adaptive to the cable types.

Use shielded Ethernet cables when devices complying with EN 50121-4 are used in environments that meet EN 50121-4 requirements.

Appearance and Structure

NOTE

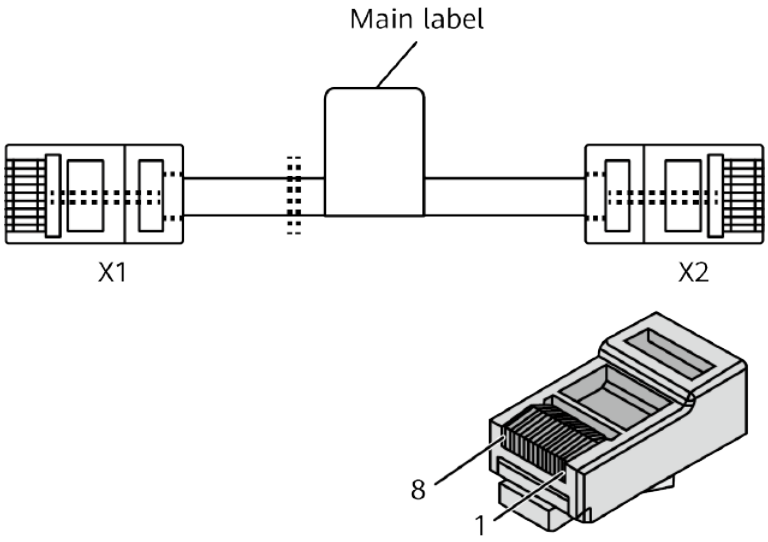
The straight-through cable and the crossover cable have the same appearance and use the RJ45 connector.

Figure 9-21 shows the appearance of an Ethernet cable.

Figure 9-21 Appearance of an Ethernet cable

Figure 9-22 shows the structure of an Ethernet cable.

Figure 9-22 Structure of an Ethernet cable



Pin Assignments

Table 9-11 lists pin assignments of a straight-through cable.

Table 9-11 Pin assignments of a straight-through cable

Connector X1	Connector X2	Color	Relationship
X1.2	X2.2	Orange	Twisted pair
X1.1	X2.1	White/Orange	
X1.6	X2.6	Green	Twisted pair
X1.3	X2.3	White/Green	
X1.4	X2.4	Blue	Twisted pair
X1.5	X2.5	White/Blue	
X1.8	X2.8	Brown	Twisted pair
X1.7	X2.7	White/Brown	

Table 9-12 lists pin assignments of a crossover cable.

Table 9-12 Pin assignments of a crossover cable

Connector X1	Connector X2	Color	Relationship
X1.6	X2.2	Orange	Twisted pair
X1.3	X2.1	White/Orange	
X1.2	X2.6	Green	Twisted pair
X1.1	X2.3	White/Green	
X1.4	X2.4	Blue	Twisted pair
X1.5	X2.5	White/Blue	
X1.8	X2.8	Brown	Twisted pair
X1.7	X2.7	White/Brown	

NOTE

To achieve the best electrical transmission performance, ensure that the wires connected to pins 1 and 2 and to pins 3 and 6 are twisted pairs.

9.5 DC Power Cable (with OT and Cord End Terminals)

Types of DC Power Cables

DC power cables include a -48 V power return cable and a -48 V power cable. The -48 V power return cable is connected to a terminal marked RTN (+), and the -48 V power cable is connected to a terminal marked NEG (–).

Appearance and Structure

Figure 9-24 and **Figure 9-24** show the appearance and structure of the -48 V power return cable and -48 V power cable.

Figure 9-23 Appearance of a -48 V power return cable

Figure 9-24 Appearance of a -48 V power cable

NOTE

A -48 V power return cable is black and is connected to the RTN(+) terminal of the DC power supply. A -48 V power cable is blue and is connected to the NEG(-) terminal of the DC power supply.

Pin Assignments

Table 9-13 Pin assignments of the power cable

X1	X2	Length	Conductor Cross-Sectional Area
OT	Cord end terminal	3 m	1 mm^2 (18AWG)

Connection

A DC power cable (with OT and cord end terminals) is connected to a DC power module with OT terminals as follows:

- The OT terminal is connected to the input port on the DC power module of the device.
- The cord end terminal is connected to an external power module.

9.6 DC Power Cable (with Quick-Connect and Cord End Terminals)

Appearance and Structure

DC power cables consist of the power cable for a 180 W/260 W/350 W/650 W DC power module and the power cable for a 1000 W DC power module.

Figure 9-25 shows the appearance of the power cable for a 180 W/260 W/350 W/650 W DC power module.

Figure 9-25 Appearance of the power cable for a 180 W/260 W/350 W/650 W DC power module

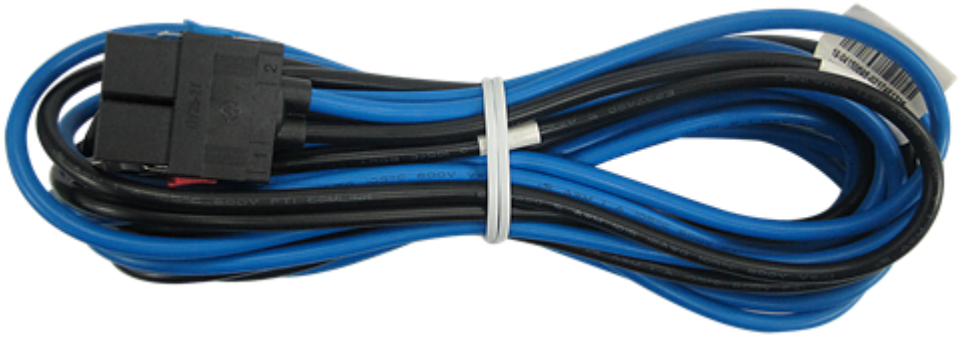


Figure 9-26 shows the structure of the power cable for a 180 W/260 W/350 W/650 W DC power module.

Figure 9-26 Structure of the power cable for a 180 W/260 W/350 W/650 W DC power module

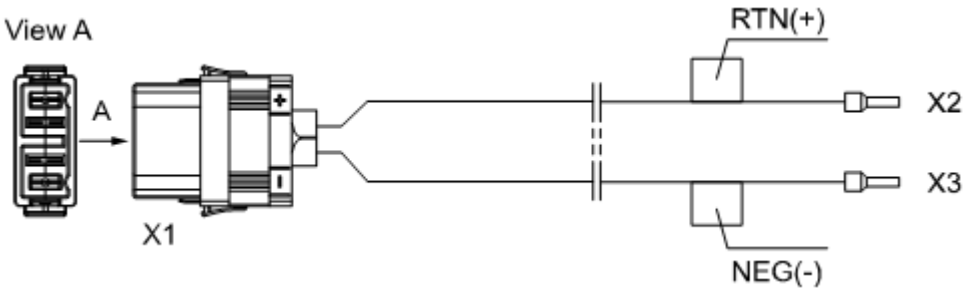
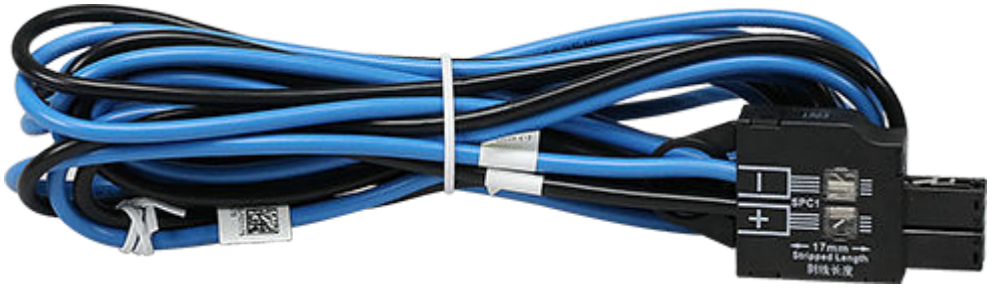


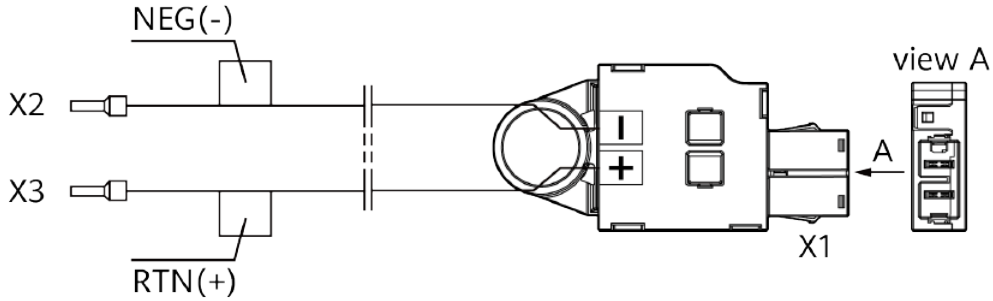
Figure 9-27 shows the appearance of the power cable for a 1000 W DC power module.

Figure 9-27 Appearance of the power cable for a 1000 W DC power module



[Figure 9-28](#) shows the structure of the power cable for a 1000 W DC power module.

Figure 9-28 Structure of the power cable for a 1000 W DC power module



Pin Assignments

[Table 9-14](#) lists the pin assignments of the power cable for a 180 W/260 W/350 W/650 W DC power module.

Table 9-14 Pin assignments of the power cable for a 180 W/260 W/350 W/650 W DC power module

X1	X2	X3	Length	Conductor Cross-Sectional Area
2 female	Cord end terminal 4^2 gray	Cord end terminal 4^2 gray	3 m	3.332 mm^2 (12AWG)

[Table 9-15](#) lists the pin assignments of the power cable for a 1000 W DC power module.

Table 9-15 Pin assignments of the power cable for a 1000 W DC power module

X1	X2	X3	Length	Conductor Cross-Sectional Area
2 female	Cord end terminal 4^2 gray	Cord end terminal 4^2 gray	3 m	4 mm^2 (14AWG)

Connection

A DC power cable connects to the DC power module of the device:

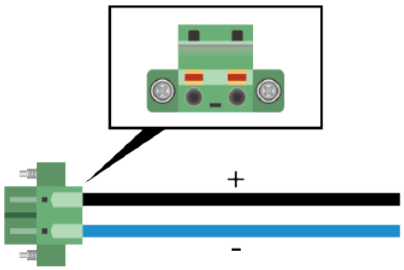
- X1 connector connects to the input port on the DC power module.
- X2/X3 cord end terminal connects to an external power module.

9.7 2-Pin DC Power Cable (Phoenix Connector)

Appearance and Structure

Figure 9-29 shows the appearance and structure of the 2-pin DC power cable and the Phoenix connector.

Figure 9-29 Structure of a 2-pin DC power cable and Phoenix connector



Specifications

Table 9-16 lists the specifications of the 2-pin DC power cable.

Table 9-16 Specifications of a 2-pin DC power cable

Minimum Conductor Cross-Sectional Area (for the Power Cable Delivered with the Switch)	Maximum Conductor Cross-Sectional Area
0.75 mm^2 or 18 AWG	3 mm^2 or 12 AWG

Connection

One end of the 2-pin DC power cable is used with the Phoenix connector and connected to the DC input port of the S5720I-SI. The other end needs to be made onsite. You can make the power cables according to site requirements and connect the cables to the DC power supply system.

9.8 AC Power Cable

Appearance and Structure

Figure 9-30 C13 straight female to PI straight male AC power cable (used in China)

Figure 9-31 C7 straight female to PG curving male AC power cable (used in Britain)

Figure 9-32 C13 straight female to C14 straight male AC power cable (China)

Figure 9-33 Appearance of a power adapter

NOTE

The AC power cables used in different countries and regions have different connector types. **Figure 9-30** and **Figure 9-31** use Chinese and Britain AC power cables as examples. The power cable and plug delivered with the chassis can only be used on this chassis, and cannot be used on other devices.

Types of AC Power Cables

Select AC power cables based on the power supply system in your equipment room. Standard and country-specific AC power cables can be directly connected to power modules.

- Standard power cables: used to transmit power from a PDU. **Figure 9-34** shows the structure of a C14 straight male to C13 straight female AC power cable.
- Country-specific power cables: used to transmit power from a country-specific power strip. The cables are delivered in compliance with standards of the destination country or region. For example, PI straight male to C13 straight female AC power cable (**Figure 9-35**) is used in China.

- The AC power cables connected to a power distribution box must have cord end terminals. **Figure 9-36** shows the structure of a cord end to C13 straight female AC power cable.

Figure 9-34 Structure of a C14 straight male to C13 straight female AC power cable

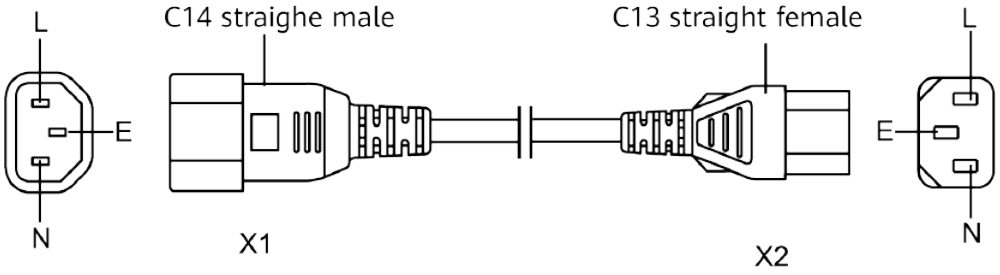


Figure 9-35 Structure of a PI straight male to C13 straight female AC power cable (used in China)

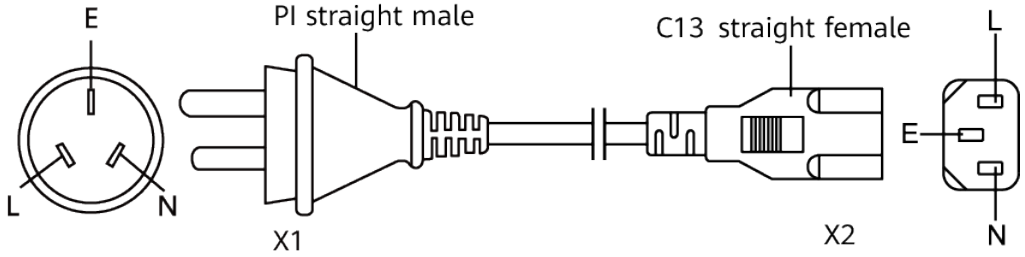
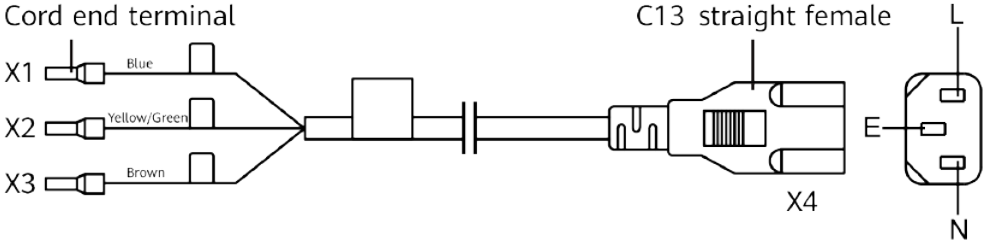


Figure 9-36 Structure of a Cord end to C13 straight female AC power cable (used in China)



Connection

Table 9-17 shows connections of various AC power cables.

Table 9-17 Connections of AC power cables

Power Cable Type	Connector Type and Connection	
C14 straight male to C13 straight female AC power cable	C14 straight male connector: connected to a PDU	C13 straight female connector: connected to the AC power

Power Cable Type	Connector Type and Connection	
PI straight male to C13 straight female AC power cable (used in China)	PI straight male connector: connected to a country-specific power strip	socket on the switch. The current rating of the power cable is 10 A.
Cord end to C13 straight female AC power cable (used in China)	Cord end terminal: connected to a power distribution box or power distribution frame. Connect the brown wire to the L terminal, blue wire to the N terminal, and the yellow/green wire to the ground terminal. Different AC power cables may be delivered in compliance with local regulations or customer requirements.	

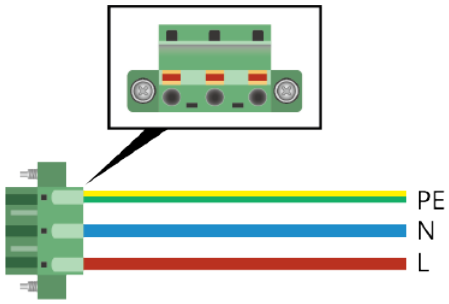
Power Cable Type	Connector Type and Connection	
C7 straight female to PG curving male AC power cable (used in Britain)	PG curving male connector: connected to a country-specific power strip	C7 straight female connector: connected to the power input port on the power adapter. **NOTE** The power adapters of the S5735-L8P4S-QA1, S5731-L, and S5731S-L use C7 straight female AC power cables.

9.9 3-Pin AC Power Cable (Phoenix Connector)

Appearance and Structure

Figure 9-37 shows the appearance and structure of the 3-pin AC power cable and the Phoenix connector.

Figure 9-37 Structure of a 3-pin AC power cable and Phoenix connector



DANGER

There is a risk of electric shock when handling the Phoenix connector. To avoid electric shock, ensure that wires are connected in the following sequences: red wire (live wire) connects to L; blue wire (neutral wire) connects to N; yellow/green wire (ground cable) connects to PE. In special circumstances, comply with local regulations or customer requirements.

The power cable and Phoenix connector need to be connected onsite. Ensure that there are no exposed metal parts after the power cable is connected to the Phoenix connector.

Specifications

Table 9-18 lists the specifications of the 3-pin AC power cable.

Table 9-18 Specifications of a 3-pin AC power cable

Minimum Conductor Cross-Sectional Area (for the Power Cable Delivered with the Switch)	Maximum Conductor Cross-Sectional Area
0.75 mm^2 or 18 AWG **NOTE** The minimum conductor cross-sectional area for the S5720I-28X-PWH-SI-AC series switches is 1.25 mm^2 or 16 AWG.	3 mm^2 or 12 AWG

Connection

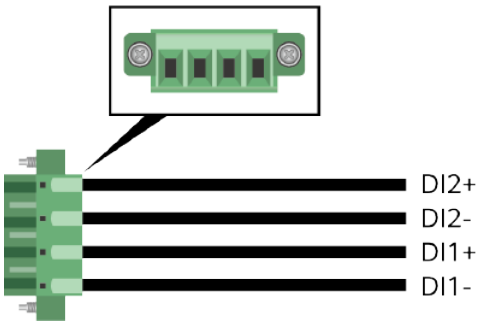
One end of the 3-pin AC power cable is used with the Phoenix connector and connected to the AC input port of the S5720I-SI. The other end needs to be made onsite. You can make the power cables according to site requirements and connect the cables to the AC power supply system.

9.10 Monitoring Port Cable (Phoenix Connector)

Appearance and Structure

Figure 9-38 shows the structure of the monitoring port cable and the Phoenix connector.

Figure 9-38 Structure of a monitoring port cable and Phoenix connector



The monitoring ports provide two input lines, which can be used to monitor two types of devices that support output voltage monitoring. DI1+ is the input high level of line 1 and DI1- is the input low level of line 1. Similarly, DI2+ is the input high level of line 2 and DI2- is the input low level of line 2.

Specifications

The monitoring port must be used with the Phoenix connector (included in the installation accessory package) and the monitoring port cable (purchased separately). The monitoring port cable must be a conductive cable. **Table 9-19** lists the specifications of the monitoring port cable.

Table 9-19 Specifications of a monitoring port cable

Minimum Conductor Cross-Sectional Area	Maximum Conductor Cross-Sectional Area
0.08 mm^2 or 28 AWG	1.5 mm^2 or 16 AWG

Connection

One end of the monitoring port cable is used with the Phoenix connector and connected to the monitoring port of the S5720I-SI. The other end needs to be made onsite. You can make the power cables according to site requirements and connect the cables to external devices to be monitored.

9.11 RPS1800 Power Cable

Appearance and Structure

Figure 9-39 shows the appearance of the RPS1800 AC power cable.

Figure 9-39 Appearance of the RPS1800 AC power cable

NOTE

The PRS AC power cable used by the RPS1800 has the same appearance as a common AC power cable. However, the RPS AC power cable and common AC power cable connect to different connectors.

Connection

An RPS1800 AC power cable connects to the following:

- An AC power input port on the RPS1800 chassis
- The mains supply

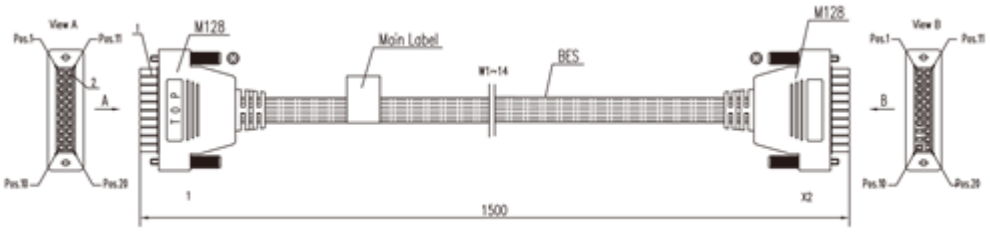
9.12 RPS Cable

Appearance and Structure

Figure 9-40 and Figure 9-41 show the appearance and structure of an RPS cable.

Figure 9-40 Appearance of an RPS cable

Figure 9-41 Structure of an RPS cable



Pin Assignment

WIRE	STARTPT	ENDPT
W1	X1.1	X2.1
W2	X1.2	X2.2
W3	X1.3	X2.3
W4	X1.4	X2.4
W5	X1.7	X2.7
W6	X1.8	X2.8
W7	X1.9	X2.9

Pin Assignment

WIRE	STARTPT	ENDPT
W8	X1.10	X2.10
W9	X1.11	X2.11
W10	X1.12	X2.12
W11	X1.13	X2.13
W12	X1.17	X2.17
W13	X1.19	X2.19

Pin Assignment

WIRE	STARTPT	ENDPT	COLOR	RELATION
W14	X1.5	X2.5	Orange	Pair
	X1.15	X2.15	White/Orange	
	X1.6	X2.6	Green	Pair
	X1.16	X2.16	White/Green	
	X1.14	X2.14	Blue	Pair
	X1.18	X2.18	White/Blue	
	X1.20	X2.20		Shield

Connection

An RPS cable connects an RPS1800 power module to a switch so that the RPS1800 provides power to the switch. An RPS power cable connects to the following:

- A DC power output port on the RPS1800 chassis
- A switch to which power is provided

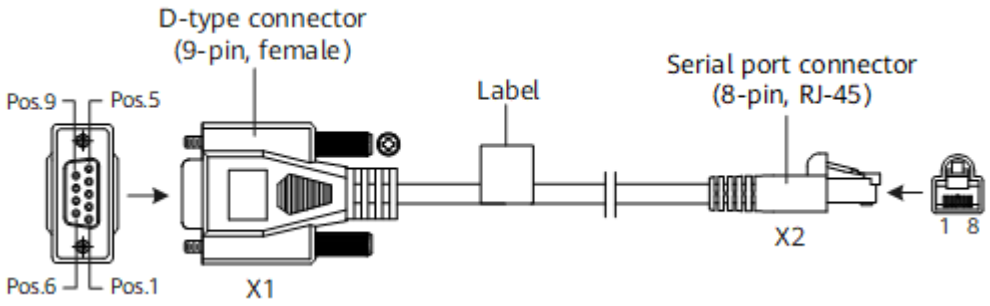
9.13 Console Cable

Appearance and Structure

Figure 9-42 and **Figure 9-43** show the appearance and structure of a console cable.

Figure 9-42 Appearance of a console cable

Figure 9-43 Structure of a console cable



Pin Assignments

Table 9-20 lists the pin assignments of console cable connectors.

Table 9-20 Pin assignments of console cable connectors

Connector	X1 (DB9)	X2 (RJ45)
Pin assignment	2	3
	3	6
	5	5

Connection

A console cable connects the console port of the device to the serial port of an operation terminal to transmit configuration data. A shielded cable or an unshielded cable can be used according to the onsite situation.

A console cable connects the device and terminal as follows:

- The 8-pin RJ45 connector is inserted into the console port of the device.
- The DB9 connector is inserted into the terminal serial port.

9.14 Dedicated Stack Cable

Types of Dedicated Stack Cables

Dedicated stack cables are also copper cables, which are used for device stacking. Stacking using stack cables removes the need of configurations.

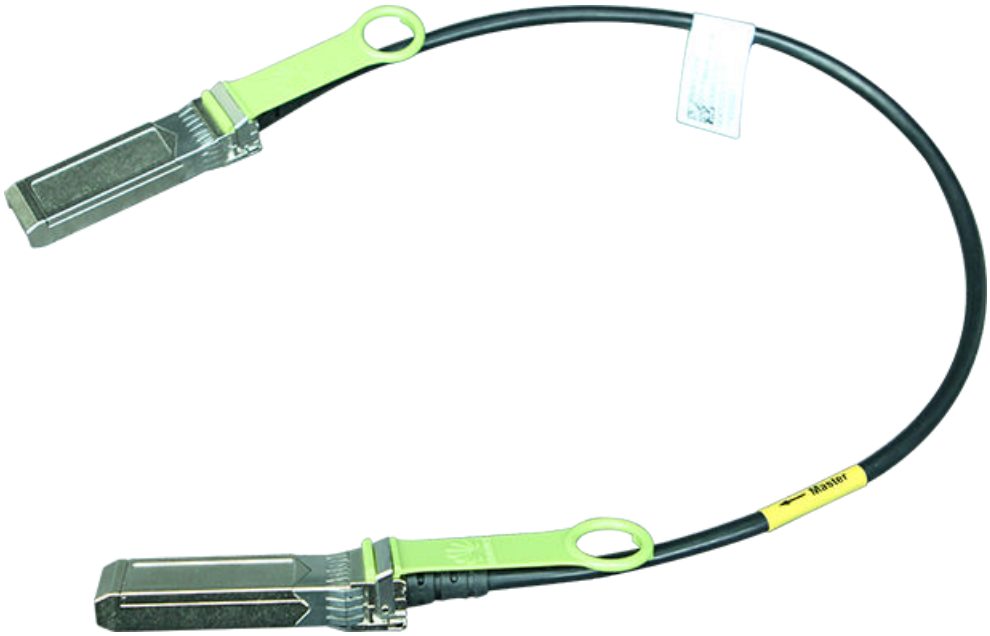
Table 9-21 lists the applicable dedicated stack cables.

Table 9-21 Dedicated stack cables

Model	Length	Electrical Attribute	Bend Radius	Connector Type	Part Number
SFP+STACK-CU0M5	0.5 m	Passive	25 mm	SFP+ to SFP+	02311VGK
SFP+STACK-CU1M5	1.5 m	Passive	25 mm	SFP+ to SFP+	02311VGN
QSFP-100G-CU2M	2 m	Passive	45 mm	QSFP28 to QSFP28	02313HVK

Appearance and Structure

Figure 9-44 Dedicated stack cable appearance



The two ends of a dedicated stack cable are the master end with the Master tag and the slave end without any tag. The device connected to the master end of a dedicated stack cable assumes the master role and the device connected to the slave end assumes the slave role only after you perform operations as required.

Figure 9-45 shows the structure of a dedicated stack cable.

Figure 9-45 Dedicated stack cable structure

Stack Setup

Dedicated stack cables can only be used to connect the same sub-series switch models, enabling them to set up a stack without manual configuration.

Before setting up a stack, confirm the stack connection mode supported by the member switches, as well as the hardware and software requirements. For details, see "Determining the Stack Connection Support and Mode" under "Typical Stack Configuration of Fixed Switches" in the *Typical Configuration Examples*.

9.15 Copper Cable

Types of Copper Cables

A copper cable, also known as the Direct Attach Copper (DAC) cable, consists of connectors and copper wires and is easy to use. It can directly connect to an optical port on a device. The difference between copper cables and AOC cables is that copper cables use copper wires to transmit signals, whereas AOC cables use optical fibers to transmit signals.

Table 9-22 shows the types of copper cables.

Table 9-22 Types of copper cables

Model	Length	Electrical attribute	Bend Radius	Connector Type	Part Number
SFP-10G-CU1M	1 m	Passive	25 mm	SFP+ to SFP+	02310MUN
SFP-10G-CU2M	2 m	Passive	25 mm	SFP+ to SFP+	02311JFJ
SFP-10G-CU3M	3 m	Passive	25 mm	SFP+ to SFP+	02310MUP
SFP-10G-CU5M	5 m	Passive	30 mm	SFP+ to SFP+	02310QPR
SFP-10G-AC10M	10 m	Active	25 mm	SFP+ to SFP+	02310MUQ
QSFP-40G-CU1M	1 m	Passive	35 mm	QSFP+ to QSFP+	02310MUG
QSFP-40G-CU3M	3 m	Passive	40 mm	QSFP+ to QSFP+	02310MUH
QSFP-40G-CU5M	5 m	Passive	45 mm	QSFP+ to QSFP+	02310MUJ
QSFP-4SFP10G-CU1M	1 m	Passive	25 mm	QSFP+ to 4*SFP+	02310MUK

Model	Length	Electrical attribute	Bend Radius	Connector Type	Part Number
QSFP-4SFP10G-CU3M	3 m	Passive	25 mm	QSFP+ to 4*SFP+	02310MUL
QSFP-4SFP10G-CU5M	5 m	Passive	30 mm	QSFP+ to 4*SFP+	02310MUM
QSFP28-100G-CU1M	1 m	Passive	70 mm	QSFP28 to QSFP28	02311KNW
QSFP28-100G-CU3M	3 m	Passive	70 mm	QSFP28 to QSFP28	02311KNX
QSFP28-100G-CU5M	5 m	Passive	70 mm	QSFP28 to QSFP28	02311KNY
SFP-25G-CU1M	1 m	Passive	35 mm	SFP28 to SFP28	02311NKS
SFP-25G-CU3M	3 m	Passive	35 mm	SFP28 to SFP28	02311NKV
SFP-25G-CU3M-N	3 m	Passive	40 mm	SFP28 to SFP28	02311MNV
SFP-25G-CU5M	5 m	Passive	40 mm	SFP28 to SFP28	02311MNW

NOTICE

The two ends of a copper cable must be covered by electrostatic discharge (ESD) caps.

Copper cables can be used to connect Huawei S switches of the same subseries. AOC optical cables or optical modules can be used to connect to all Huawei S switches.

- The SFP-10G-CU1M and SFP-10G-CU2M copper cable can connect the S6730-H28Y4C or S6730-H24X4Y4C to the S5700-28C-HI-24S (used the LS5D00X4SA00 card), S5720-28X-LI-AC, S5720-28X-LI-24S-AC, S5720-28X-LI-24S-DC, S5700-28X-LI-24S-AC, S5700-28X-LI-24S-DC, S5700-28X-LI-AC, and S5701-28X-LI-24S-AC. The SFP-10G-CU2M can only be used for interconnection between the preceding devices.

Appearance and Structure

Figure 9-46 shows the appearance of an SFP/SFP+/SFP28 copper cable.

Figure 9-46 Appearance of an SFP/SFP+/SFP28 copper cable

Figure 9-47 shows the appearance of a QSFP+/QSFP28 copper cable.

Figure 9-47 Appearance of a QSFP+/QSFP28 copper cable

Figure 9-48 shows the appearance of a QSFP+ to 4*SFP+ copper cable.

Figure 9-48 Appearance of a QSFP+ to 4*SFP+ copper cable

Figure 9-49 shows the structure of an SFP/SFP+/SFP28 copper cable.

Figure 9-49 Structure of an SFP/SFP+/SFP28 copper cable

Figure 9-50 shows the structure of a QSFP+/QSFP28 copper cable.

Figure 9-50 Structure of a QSFP+/QSFP28 copper cable

Front view:

Rear view:

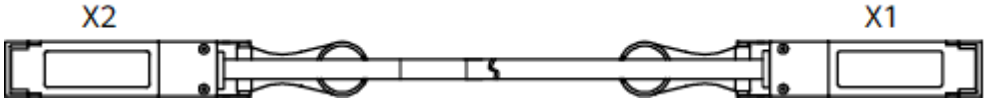
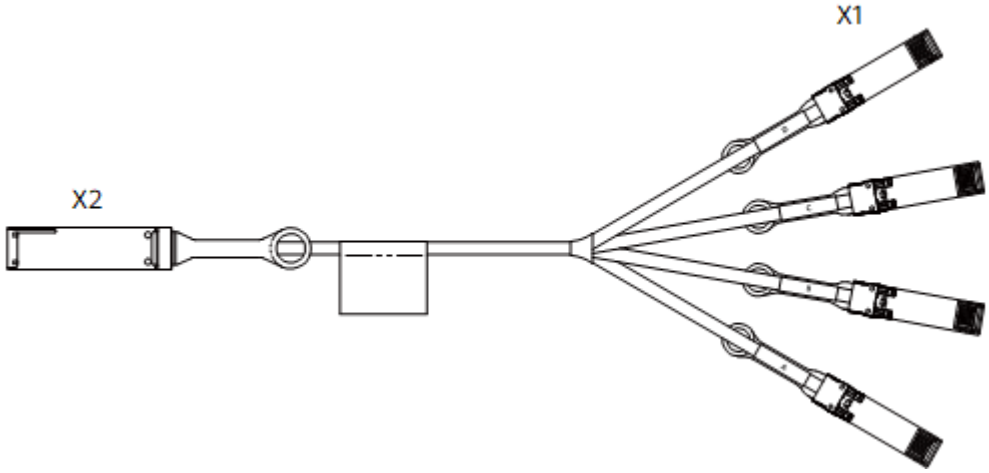


Figure 9-51 shows the structure of a QSFP+ to 4*SFP+ copper cable.

Figure 9-51 Structure of a QSFP+ to 4*SFP+ copper cable



Stack Description

In addition to data transmission, copper cables can be used for stack connection.

Before setting up a stack, familiarize yourself with the device-supported stack connection modes and software and hardware requirements. For details, see "Determining the Stack Connection Support and Mode" under "Typical Stack Configuration of Fixed Switches" in the *Typical Configuration Examples*.

9.16 Lead-Acid Battery Temperature Sensor

A lead-acid battery temperature sensor monitors ambient temperature of a lead-acid battery in real time to provide charge temperature compensation.

NOTE

Due to the negative temperature feature of a lead-acid battery, the charge voltage must be adjusted based on the ambient temperature. The battery charger must provide higher charge voltage when the temperature is low and provide lower charge voltage when the temperature is high, so that the lead-acid battery can be fully charged. The PBB-12AHA module can control the charge voltage for the lead-acid battery based on the temperature collected by the temperature sensor. Using a temperature sensor can prolong the life time of the lead-acid battery.

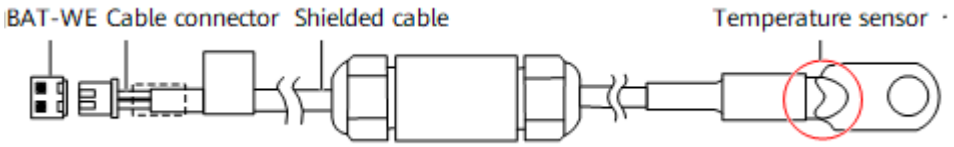
Appearance and Structure

Figure 9-52 shows the appearance of a lead-acid battery temperature sensor.

Figure 9-52 Appearance of a lead-acid battery temperature sensor

Figure 9-53 shows the structure of a lead-acid battery temperature sensor.

Figure 9-53 Structure of a lead-acid battery temperature sensor



Connection

Follow these instructions when using a lead-acid battery temperature sensor:

- Connect the cable connector to the SENSOR port on the PBB-12AHA lead-acid battery charger module.
- Place the temperature probe (with an OT terminal) where it can collect the most accurate ambient temperature of the lead-acid battery. You are advised to place the temperature probe near the lead-acid battery and bind the sensor cable with the power cables of the lead-acid battery. Do not connect the temperature probe to any other heating device. Hang the temperature probe in air and keep it away from any heating device.

9.17 First-Generation Hybrid Cable

Overview

The first-generation hybrid cable (hybrid cable 1.0) is composed of optical fibers and copper cores. It is mainly used to connect a hybrid optical-electrical switch to an AP or a remote unit so that the switch can supply PoE power and transmit data to the AP or remote unit.

The first-generation hybrid cables must be made onsite using the purchased bare wires, auxiliary material packages that contain RJ45 connectors, and auxiliary material packages used for mechanical or fusion splicing of optical fibers. **Table 9-23** lists the bare wires and auxiliary material packages.

Table 9-23 Bare wires and auxiliary material packages

Type	Description	Applicable Country /Region	Optical Fiber/ Connector Type	Part Number
Bare wire	hybrid cable, 1.5mm^2,2mm*1.6mm, Indoor,GDVV-2G.657A2(Bow-type)+2x1.5mm^2(RV),500V,Blue, Black,2 cores,Single mode,9/125	Southeast Asia, Africa, and other countries or regions	Single-mode, G.657A2	25090017
Bare wire	hybrid cable, 1.5mm^2,2mm*1.6mm, Indoor,GDVV-2G.657A2(Bow-type)+2x1.5mm^2(RV), 500V,Red,Blue,2 cores,Single mode,9/125	China	Single-mode, G.657A2	25090017-001
Bare wire	hybrid cable, 1.5mm^2,2mm*1.6mm, Indoor,LSZH,GDHH-2G.657A2(Bow-type) +2x1.5mm^2(H07Z-K), 450V,Red,Blue,2 cores,Single mode,9/125	China	Single-mode, G.657A2	25090018-002

Type	Description	Applicable Country /Region	Optical Fiber/ Connector Type	Part Number
Bare wire	hybrid cable, 1.5mm^2,2mm*1.6mm, Indoor,LSZH,For Europe,GDHH-2G.657A2(Bow-type)+2x1.5mm^2(H07Z-K), 450V,Brown,Blue,2 cores,Single mode,9/125	Europe	Single-mode, G.657A2	25090018
Auxiliary material package containing RJ45 connectors	MPE Site Materials Kit,Photoelectric Hybrid Cable installation Material Package about DC PoE RJ45	Worldwide, used to terminate copper cores	RJ45	02233FKX
Auxiliary material package for mechanical splicing of optical fibers	MPE Site Materials Kit,Photoelectric Hybrid Cable installation Material Package about LC mechanical splicing at both side,Fast Mountable-Mechanical-LC/UPC	Worldwide, used to terminate optical fibers	LC/UPC	02233FKY
Auxiliary material package for mechanical or fusion splicing of optical fibers	MPE Site Materials Kit,Photoelectric Hybrid Cable installation Material Package about LC mechanical splicing and Fiber splicing	Worldwide, used to terminate optical fibers	LC/UPC	02233FLA
Auxiliary material package for fusion splicing of optical fibers	MPE Site Materials Kit,Photoelectric Hybrid Cable installation Material Package about Fiber splicing at both side	Worldwide, used to terminate optical fibers	-	02233FLB

CAUTION

Bare wires are delivered by country or region where hybrid cables are used. The difference predominantly lies in the color of copper cores.

The first-generation hybrid cables can only be used indoors and cannot be connected to outdoor APs.

The connected ports cannot go up if a switch and an AP are connected only through copper cores in the first-generation hybrid cable.

It is recommended that optical fibers in the first-generation hybrid cables be fusion spliced onsite. If you assemble optical fibers in hybrid cables in mechanical splicing mode, only SFP-10G-iLR-S optical modules are supported.

Appearance and Structure

Figure 9-54, **Figure 9-55**, and **Figure 9-56** show the appearance and structure of the first-generation hybrid cable.

Figure 9-54 Cross section of the first-generation hybrid cable

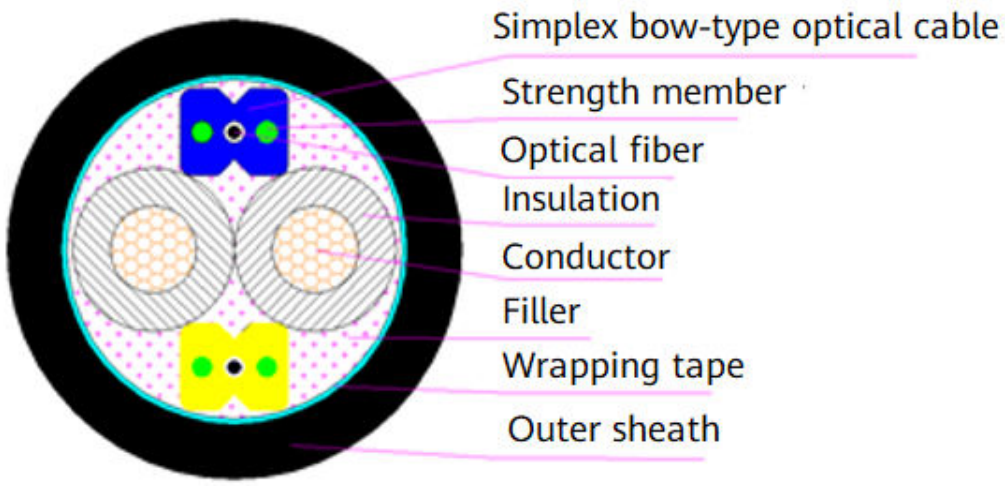
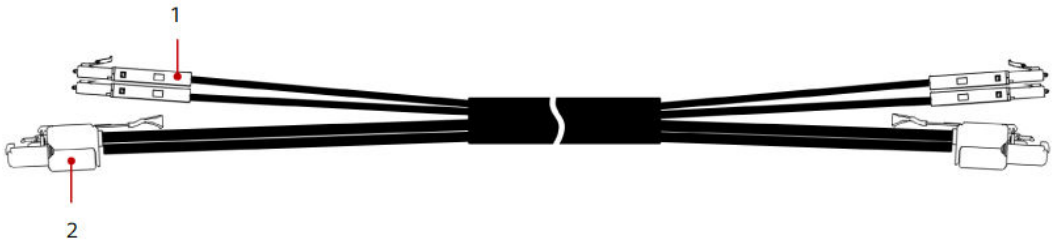


Figure 9-55 Structure of the first-generation hybrid cable



1. LC connector	2. RJ45 connector

Figure 9-56 Appearance of the first-generation hybrid cable

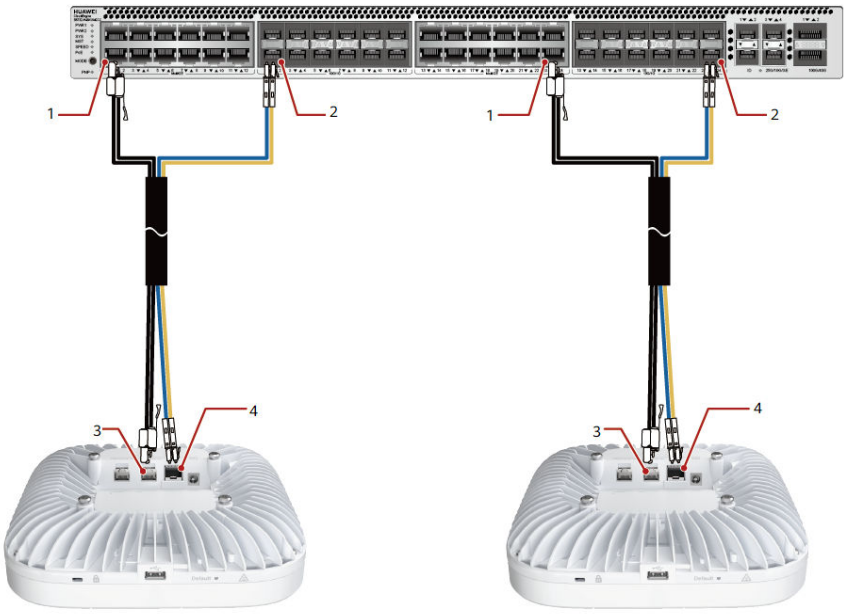
Cable Connection

The first-generation hybrid cable is typically used in the following scenario:

- The copper cores connect a multi-GE port of a switch to a PoE_IN port of an AP to allow the switch to supply power to the AP while no data is transmitted over this cable.
- The optical fibers connect an SFP+ port on the switch to an SFP+ port of the AP to transmit data.

Figure 9-57 shows how the first-generation hybrid cable connects a switch to an AP.

Figure 9-57 Connections of the first-generation hybrid cable



1. Multi-GE port on a switch	2. 10GE/GE SFP+ port on a switch
3. PoE_IN port on an AP	4. Uplink 10GE/GE SFP+ port on an AP

NOTE

Connectors at two ends of each optical fiber in a hybrid cable must be connected to the TX and RX ports on optical modules, one end to a TX port and the other end to an RX port.

Optical fibers in all hybrid cables must be connected according to the same rules. **Table 9-24** provides the recommended connection rules.

Table 9-24 Recommended optical fiber connections

Optical Fiber Color	Optical Module on a Switch	Optical Module on an AP
Blue	TX	RX
Yellow	RX	TX

9.18 Second-Generation Hybrid Cable

Overview

The second-generation hybrid cable (hybrid cable 2.0) is composed of optical fibers and copper cores. It is mainly used to connect a hybrid optical-electrical

switch to an AP or remote unit so that the switch can provide power and transmit data for the AP or remote unit.

Differences between the first-generation hybrid cable and second-generation hybrid cable:

- Cross-sectional area of the main cable:
  - First-generation hybrid cable: 1.5 mm^2
  - Second-generation hybrid cable: 17 AWG (1.04 mm^2) or 21 AWG (0.41 mm^2)
- Number of occupied device ports and type of the connector used on the port:
  - To connect the first-generation hybrid cable to a device, we need to connect the optical fibers with LC connectors to the common commercial optical module on the device's optical port and connect the copper wires with an RJ45 connector to the device's electrical port. The optical port is used for data transmission, while the electrical port is used for PoE power supply.
  - To connect the second-generation hybrid cable to a device, we only need to insert the PDLC connector on one end of the cable into the hybrid optical-electrical optical module on a hybrid optical-electrical port of the device. This port can be used for data transmission and PoE power supply at the same time.

Note that the pigtail or fiber jumper that can be fusion spliced to the main cable of the second-generation hybrid cable can also be fusion spliced to the main cable of the first-generation hybrid cable.

Appearance and Structure

Figure 9-58 Cross section of a hybrid cable 2.0

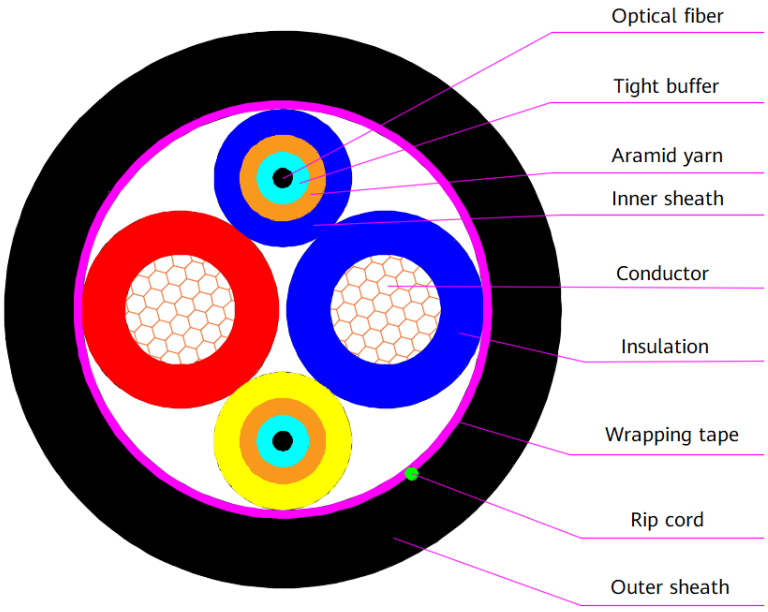


Figure 9-59 Structure of a hybrid cable 2.0

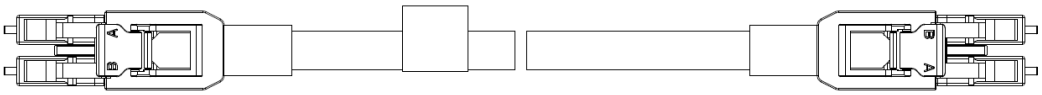


Figure 9-60 Appearance of a main cable

Figure 9-61 Appearance of a pigtail

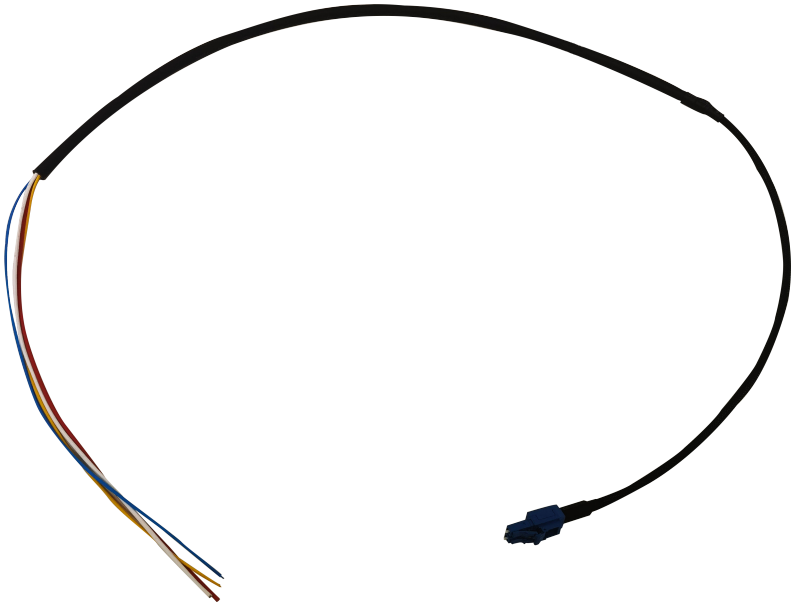


Figure 9-62 Appearance of a 1 m jumper

Cable Connection

A hybrid cable 2.0 is typically used in the following scenario:

- Direct connection scenario: One end of a hybrid cable 2.0 connects to a hybrid optical-electrical port of a switch, and the other end connects to a hybrid optical-electrical port of an AP or remote unit, as shown in **Figure 9-63**.
- HDF-based connection: Connect one end of the jumper to the hybrid optical-electrical port of the switch and the other end to the hybrid optical-electrical port of the HDF. Connect one end of the hybrid cable 2.0 to the hybrid optical-electrical port of the HDF and the other end to the hybrid optical-electrical port of the AP or remote unit, as shown in **Figure 9-64**.

Figure 9-63 Direct connection

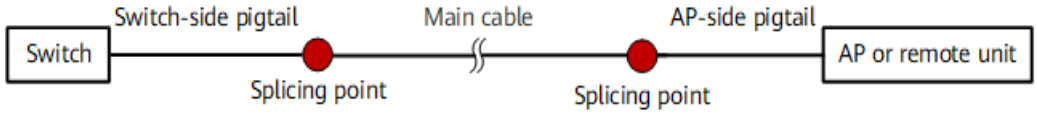
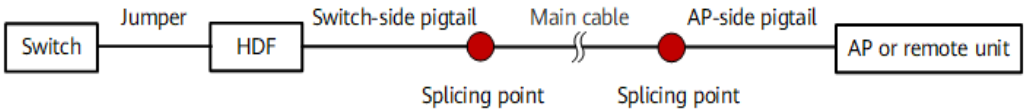


Figure 9-64 HDF-based connection



NOTE

- Hybrid cable pigtails are classified into switch-side pigtails and AP-side pigtails, which correspond to different cable part numbers. The internal sequence of the two types of pigtails is different. The pigtails of the same type cannot be used at both ends of a link. That is, switch-side pigtails are used on the switch, and AP-side pigtails are used on the AP or RU. Before splicing, identify the pigtail types by labels on the cables. When connecting hybrid cables and pigtails, ensure that the optical fibers and power cables of the same color are connected.
- The connector of a hybrid cable 2.0 cannot be inserted into a common optical module and must be used with a hybrid module (SFP-GE-Hybrid or SFP-10G-Hybrid).
- Connectors at two ends of each optical fiber in a hybrid cable 2.0 must be connected to the TX and RX ports on optical modules, one end to a TX port and the other end to an RX port. Optical fibers in all hybrid cables 2.0 must be connected according to the same rules. **Table 9-25** provides the recommended connection rules.
- The hybrid optical-electrical switch uses hybrid cables 2.0 to connect to and supply power to APs or remote units of specific models. (For details about the AP models to which hybrid cables can supply power, see the WLAN AP product documentation. The remote unit that supports hybrid cables is S5731-L4P2HW-RUA, S5731S-L4P2HW-RUA, S5731-L4P2HT-RUA, S5731S-L4P2HT-RUA, S5731-L8P2HT-RUA, and S5731S-L8P2HT-RUA.)
- The hybrid optical-electrical switch cannot be connected to devices other than remote units or APs using hybrid cables 2.0.

Table 9-25 Recommended optical fiber connections

Optical Fiber Color	Optical Module on a Switch	Optical Module on an AP or a Remote Unit
Blue	TX	RX
Yellow	RX	TX

Technical Specifications

Table 9-26 Technical specifications of the hybrid cable 2.0 and its components

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/ Region
Main cable	25090103	HYC-GDFJVV-17AWG-RB-SM	hybrid cable,Indoor,PVC,Black,GDFJVV-2G.657A2+2*17AWG(UL1569),17AWG,Red,Blue Sub-power cable,1.6mm,6.2mm,2cores,Single mode,9/125	-	-	IEC60332-1, ZC, CPR: Eca	31mm	-20°C to 75°C	China
	25090103-001	HYC-GDFJVV-17AWG-BB-SM	hybrid cable,Indoor,PVC,Black,GDFJVV-2G.657A2+2*17AWG(UL1569),17AWG,Black,Blue Sub-power cable,1.6mm,6.2mm,2cores,Single mode,9/125	-	-	IEC60332-1, ZC, CPR: Eca	31mm	-20°C to 75°C	Southeast Asia and other countries or regions
	25090104	HYC-GDFJVV-21AWG-RB-SM	hybrid cable,Indoor,PVC,Black,GDFJVV-2G.657A2+2*21AWG(UL1569),21AWG,Red,Blue Sub-power cable,1.6mm,5.7mm,2cores,Single mode,9/125	-	-	IEC60332-1, ZC, CPR: Eca	28.5mm	-20°C to 75°C	China

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/ Region
	25090104-001	HYC-GDFJVV-21AWG-BB-SM	hybrid cable,Indoor,PVC,Black,GDFJVV-2G.657A2+2*21AWG(UL1569),21AWG,Black,Blue Sub-power cable,1.6mm,5.7mm,2cores,Single mode,9/125	-	-	IEC 60332-1, ZC, CPR: Eca	28.5 mm	-20 °C to 75° C	Southeast Asia and other countries or regions
	25090105	HYC-GDFJHH-17AWG-RB-SM	hybrid cable,Indoor,LSZH,Black,GDFJHH-2G.657A2+2*17AWG(UL3385),17AWG,Red,Blue Sub-power cable,1.6mm,7.8mm,2cores,Single mode,9/125	-	-	IEC 60332-1, IEC 60332-3-24, GB 31247 B1, CPR: B2ca-s1, d1, a1	39 mm	-20 °C to 75° C	China

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/ Region
	25090105-001	HYC-GDFJHH-17AWG-RW-SM	hybrid cable,Indoor,LSZH,Black,GDFJHH-2G.657A2+2*17AWG(UL3385),17AWG,Red,White Sub-power cable,1.6mm,7.8mm,2cores,Single mode,9/125	-	-	IEC 60332-1, IEC 60332-3-24, GB 31247 B1, CPR: B2ca-s1, d1, a1	39 mm	-20 °C to 75° C	Europe
	25090106	HYC-GDFJHH-21AWG-RB-SM	hybrid cable,Indoor,LSZH,Black,GDFJHH-2G.657A2+2*21AWG(UL3385),21AWG,Red,Blue Sub-power cable,1.6mm,9.1mm,2cores,Single mode,9/125	-	-	IEC 60332-1, IEC 60332-3-24, GB 31247 B1, CPR: B2ca-s1, d1, a1	35.5 mm	-20 °C to 75° C	China

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/ Region
	25090106-001	HYC-GDFJHH-21AWG-RW-SM	hybrid cable,Indoor,LSZH,Black,GDFJHH-2G.657A2+2*21AWG(UL3385),21AWG,Red,White Sub-power cable,1.6mm,7.1mm,2cores,Single mode,9/125	-	-	IEC60332-1, IEC60332-3-24, GB31247 B1, CPR: B2ca-s1, d1, a1	35.5 mm	-20 °C to 75° C	Europe
Switch-side pigtail	04170005	PDLC-1.2m-ODF-CN	Hybrid Cable Assembly,1P1F,1.2m,PDLC/UPC,GDFJVV-2G.657A2+2*17AWG,/,Red,Blue,Switch	PDLC/UPC	1.2 m	IEC60332-3-24	31 mm	-20 °C to 75° C	China
	04170017	PDLC-1.2m-ODF-SEA	Hybrid Cable Assembly,1P1F,1.2m,PDLC/UPC,GDFJVV-2G.657A2+2*17AWG,/,Black,Blue,Switch	PDLC/UPC	1.2 m	IEC60332-3-24	31 mm	-20 °C to 75° C	Southeast Asia and other countries or regions

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/ Region
	04170024	PDLC-1.2m-ODF-EUR	Hybrid Cable Assembly,1P1F, 1.2m,PDLC/ UPC,GDFJHH-2G.657A2+2*17AWG,/,Red,White,Switch	PDLC/UPC	1.2m	IEC60332-3-24	39mm	-20°C to 75°C	Europe
	04170005-004	PDLC-0.8m-ODF-CN	Hybrid Cable Assembly,1P1F, 0.8m,PDLC/ UPC,GDFJVV-2G.657A2+2*17AWG,/,Red,Blue,Switch	PDLC/UPC	0.8m	IEC60332-3-24	31mm	-20°C to 75°C	China
	04170017-001	PDLC-0.8m-ODF-SEA	Hybrid Cable Assembly,1P1F, 0.8m,PDLC/ UPC,GDFJVV-2G.657A2+2*17AWG,/,Black,Blue,Switch	PDLC/UPC	0.8m	IEC60332-3-24	31mm	-20°C to 75°C	Southeast Asia and other countries or regions
	04170024-001	PDLC-0.8m-ODF-EUR	Hybrid Cable Assembly,1P1F, 0.8m,PDLC/ UPC,GDFJHH-2G.657A2+2*17AWG,/,Red,White,Switch	PDLC/UPC	0.8m	IEC60332-3-24	39mm	-20°C to 75°C	Europe
AP-side or remot	04170006-001	PDLC-0.4m-AP-CN	Hybrid Cable Assembly,1P1F, 0.4m,PDLC/ UPC,GDFJVV-2G.657A2+2*17AWG,/,Red,Blue,AP	PDLC/UPC	0.4m	IEC60332-3-24	31mm	-20°C to 75°C	China

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/ Region
eunit side pigtail	04170018-001	PDLC-0.4m-AP-SEA	Hybrid Cable Assembly,1P1F, 0.4m,PDLC/UPC,GDFJVV-2G.657A2+2*17AWG,/,Black,Blue,AP	PDLC/UPC	0.4m	IEC60332-3-24	31mm	-20°C to 75°C	Southeast Asia and other countries or regions
	04170023-001	PDLC-0.4m-AP-EUR	Hybrid Cable Assembly,1P1F, 0.4m,PDLC/UPC,GDFJHH-2G.657A2+2*17AWG,/,Red,White,AP	PDLC/UPC	0.4m	IEC60332-3-24	39mm	-20°C to 75°C	Europe
Jumper	04170003	PDLC-PDLC-0.3m-CN	Hybrid Cable Assembly,1P1F, 0.3m,PDLC/UPC,2G.657A2+2*17AWG,PDLC/UPC,Red,Blue,Switch	PDLC/UPC to PDLC/UPC	0.3m	IEC60332-3-24	20mm	-20°C to 75°C	China
	04170001	PDLC-PDLC-3.0m-CN	Hybrid Cable Assembly,1P1F, 3m,PDLC/UPC,GDFJVV-2G.657A2+2*17AWG,PDLC/UPC,Red,Blue,Switch	PDLC/UPC to PDLC/UPC	3.0m	IEC60332-3-24	31mm	-20°C to 75°C	China
	04170001-001	PDLC-PDLC-7.0m-CN	Hybrid Cable Assembly,1P1F, 7m,PDLC/UPC,GDFJVV-2G.657A2+2*17AWG,PDLC/UPC,Red,Blue,Switch	PDLC/UPC to PDLC/UPC	7.0m	IEC60332-3-24	31mm	-20°C to 75°C	China

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/ Region
	04170001-002	PDLC-PDLC-1.5m-CN	Hybrid Cable Assembly,1P1F, 1.5m,PDLC/UPC,GDFJVV-2G.657A2+2*17AWG,PDLC/UPC,Red,Blue,Switch	PDLC/UPC to PDLC/UPC	1.5 m	IEC60332-3-24	31 mm	-20 °C to 75° C	China
	04170004	PDLC-DLC+PRJ45-0.3m-CN	Hybrid Cable Assembly,1P1F, 0.3m,PDLC/UPC,2G.657A2+2*17AWG,PRJ45+DLC/UPC,Red,Blue,Switch	PDLC/UPC to PRJ45+DLC/UPC	0.3 m	IEC60332-3-24	20 mm	-20 °C to 75° C	China
	04170002	PDLC-DLC+PRJ45-3.0m-CN	Hybrid Cable Assembly,1P1F, 3m,PDLC/UPC,GDFJVV-2G.657A2+2*17AWG,PRJ45+DLC/UPC,Red,Blue,Switch	PDLC/UPC to PRJ45+DLC/UPC	3.0 m	IEC60332-3-24	31 mm	-20 °C to 75° C	China
	04170002-001	PDLC-DLC+PRJ45-7.0m-CN	Hybrid Cable Assembly,1P1F, 7m,PDLC/UPC,GDFJVV-2G.657A2+2*17AWG,PRJ45+DLC/UPC,Red,Blue,Switch	PDLC/UPC to PRJ45+DLC/UPC	7.0 m	IEC60332-3-24	31 mm	-20 °C to 75° C	China
	04170002-002	PDLC-DLC+PRJ45-1.5m-CN	Hybrid Cable Assembly,1P1F, 1.5m,PDLC/UPC,GDFJVV-2G.657A2+2*17AWG,PRJ45+DLC/UPC,Red,Blue,Switch	PDLC/UPC to PRJ45+DLC/UPC	1.5 m	IEC60332-3-24	31 mm	-20 °C to 75° C	China

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/ Region
	04170015	PDLC-PDLC-0.3m-SEA	Hybrid Cable Assembly,1P1F, 0.3m,PDLC/UPC,2G.657A2+2*17AWG,PDLC/ UPC,Black,Blue,Switch	PDLC/UPC to PDLC/UPC	0.3m	IEC60332-3-24	20mm	-20°C to 75°C	Southeast Asia and other countries or regions
	04170013-002	PDLC-PDLC-1.5m-SEA	Hybrid Cable Assembly,1P1F, 7m,PDLC/ UPC,GDFJVV-2G.657A2+2*17AWG,PDLC/ UPC,Black,Blue,Switch	PDLC/UPC to PDLC/UPC	1.5m	IEC60332-3-24	31mm	-20°C to 75°C	Southeast Asia and other countries or regions
	04170013-001	PDLC-PDLC-3.0m-SEA	Hybrid Cable Assembly,1P1F, 3m,PDLC/ UPC,GDFJVV-2G.657A2+2*17AWG,PDLC/ UPC,Black,Blue,Switch	PDLC/UPC to PDLC/UPC	3.0m	IEC60332-3-24	31mm	-20°C to 75°C	Southeast Asia and other countries or regions

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/ Region
	04170013	PDLC-PDLC-7.0m-SEA	Hybrid Cable Assembly,1P1F, 7m,PDLC/ UPC,GDFJVV-2G. 657A2+2*17AWG,PDLC/ UPC,Black,Blue,Switch	PDLC/UPC to PDLC/UPC	7.0 m	IEC60332-3-24	31 mm	-20 °C to 75° C	Southeast Asia and other countries or regions
	04170014-002	PDLC-DLC +PRJ45-1.5m-SEA	Hybrid Cable Assembly,1P1F, 1.5m,PDLC/ UPC,GDFJVV-2G. 657A2+2*17AWG,PRJ45+DLC/ UPC,Black,Blue,Switch	PDLC/UPC to PRJ45+DLC/ UPC	1.5 m	IEC60332-3-24	31 mm	-20 °C to 75° C	Southeast Asia and other countries or regions
	04170014-001	PDLC-DLC +PRJ45-3.0m-SEA	Hybrid Cable Assembly,1P1F, 3m,PDLC/ UPC,GDFJVV-2G. 657A2+2*17AWG,PRJ45+DLC/ UPC,Black,Blue,Switch	PDLC/UPC to PRJ45+DLC/ UPC	3.0 m	IEC60332-3-24	31 mm	-20 °C to 75° C	Southeast Asia and other countries or regions

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/ Region
	04170014	PDLC-DLC +PRJ45 -7.0m-SEA	Hybrid Cable Assembly,1P1F, 7m,PDLC/ UPC,GDFJVV-2G. 657A2+2*17AWG,PRJ 45+DLC/ UPC,Black,Blue,Switch	PDLC/UPC to PRJ45+DLC/ UPC	7.0 m	IEC60332-3-24	31 mm	-20 °C to 75° C	Southeast Asia and other countries or regions
	04170016	PDLC-DLC +PRJ45 -0.3m-SEA	Hybrid Cable Assembly,1P1F, 0.3m,PDLC/UPC,2G. 657A2+2*17AWG,PRJ 45+DLC/ UPC,Black,Blue,Switch	PDLC/UPC to PRJ45+DLC/ UPC	0.3 m	IEC60332-3-24	20 mm	-20 °C to 75° C	Southeast Asia and other countries or regions
	04170021	PDLC-PDLC-0.3m-EUR	Hybrid Cable Assembly,1P1F, 0.3m,PDLC/UPC,2G. 657A2+2*17AWG,PDLC/ UPC,Red,White,Switch	PDLC/UPC to PDLC/UPC	0.3 m	IEC60332-3-24	20 mm	-20 °C to 75° C	Europe
	04170019-002	PDLC-PDLC-1.5m-EUR	Hybrid Cable Assembly,1P1F, 1.5m,PDLC/ UPC,GDFJHH-2G. 657A2+2*17AWG,PDLC/ UPC,Red,White,Switch	PDLC/UPC to PDLC/UPC	1.5 m	IEC60332-3-24	39 mm	-20 °C to 75° C	Europe

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/ Region
	04170019-001	PDLC-PDLC-3.0m-EUR	Hybrid Cable Assembly,1P1F, 3m,PDLC/ UPC,GDFJHH-2G.657A2+2*17AWG,PDLC/ UPC,Red,White,Switch	PDLC/UPC to PDLC/UPC	3.0 m	IEC60332-3-24	39 mm	-20 °C to 75° C	Europe
	04170019	PDLC-PDLC-7.0m-EUR	Hybrid Cable Assembly,1P1F, 7m,PDLC/ UPC,GDFJHH-2G.657A2+2*17AWG,PDLC/ UPC,Red,White,Switch	PDLC/UPC to PDLC/UPC	7.0 m	IEC60332-3-24	39 mm	-20 °C to 75° C	Europe
	04170020-002	PDLC-DLC+PRJ45-1.5m-EUR	Hybrid Cable Assembly,1P1F, 1.5m,PDLC/ UPC,GDFJHH-2G.657A2+2*17AWG,PRJ45+DLC/ UPC,Red,White,Switch	PDLC/UPC to PRJ45+DLC/ UPC	1.5 m	IEC60332-3-24	39 mm	-20 °C to 75° C	Europe
	04170020-001	PDLC-DLC+PRJ45-3.0m-EUR	Hybrid Cable Assembly,1P1F, 3m,PDLC/ UPC,GDFJHH-2G.657A2+2*17AWG,PRJ45+DLC/ UPC,Red,White,Switch	PDLC/UPC to PRJ45+DLC/ UPC	3.0 m	IEC60332-3-24	39 mm	-20 °C to 75° C	Europe
	04170020	PDLC-DLC+PRJ45-7.0m-EUR	Hybrid Cable Assembly,1P1F, 7m,PDLC/ UPC,GDFJHH-2G.657A2+2*17AWG,PRJ45+DLC/ UPC,Red,White,Switch	PDLC/UPC to PRJ45+DLC/ UPC	7.0 m	IEC60332-3-24	39 mm	-20 °C to 75° C	Europe

Type	Part Number	Model	Description	Connector Type	Length	Flame Resistance Rating	Bend Radius	Operating Temperature	Applicable Country/ Region
	04170022	PDLC-DLC+PRJ45-0.3m-EUR	Hybrid Cable Assembly,1P1F, 0.3m,PDLC/UPC,2G.657A2+2*17AWG,PRJ45+DLC/UPC,Red,White,Switch	PDLC/UPC to PRJ45+DLC/UPC	0.3 m	IEC60332-3-24	20 mm	-20 °C to 75° C	Europe

