DCDU-12B

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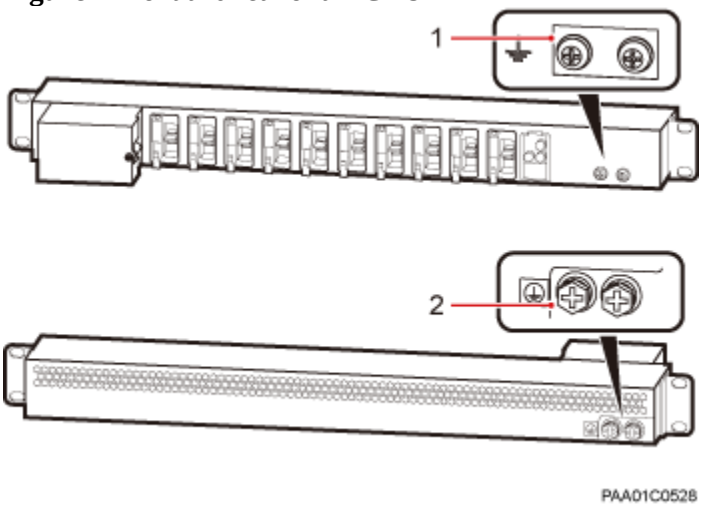
A direct current distribution unit-12B (DCDU-12B) provides -48 V DC power for other components in a cabinet. A DCDU-12B is 1 U high and can be installed in a BTS3900 (Ver.D) cabinet, BTS3900L (Ver.D) cabinet, BTS3900 (Ver.D_A) cabinet, BTS3900 (Ver.D_B) cabinet, BTS3900L (Ver.D_B) cabinet, RFC (Ver.D), RFC (Ver.E), RFC (Ver.D_A1), RFC (Ver.D_A2), RFC (Ver.D_B), BTS3012 (Ver.D_Z) cabinet, BTS3012AE (Ver.D_Z) cabinet, TMC11H (Ver.D), TMC11H (Ver.E), BTS3900AL (Ver.A) cabinet, IMB03, or IMS06.

Exterior

The following figure shows the front and rear of a DCDU-12B.

Figure 1 Front and rear of a DCDU-12B



(1) Equipotential ground points (2) Ground points

NOTE:
A DCDU-12B uses ground points and equipotential ground points in the following scenarios:

- Scenario 1: A DCDU-12B is installed on an open rack. In this scenario, an equipotential cable connects the equipotential ground point near the mounting ear on the DCDU-12B to the ground bar on the open rack.

- Scenario 2: A DCDU-12B is installed on a wall as a standalone power distribution device. In this scenario, the ground points at the rear of the DCDU-12B are connected to the ground bar in the equipment room.

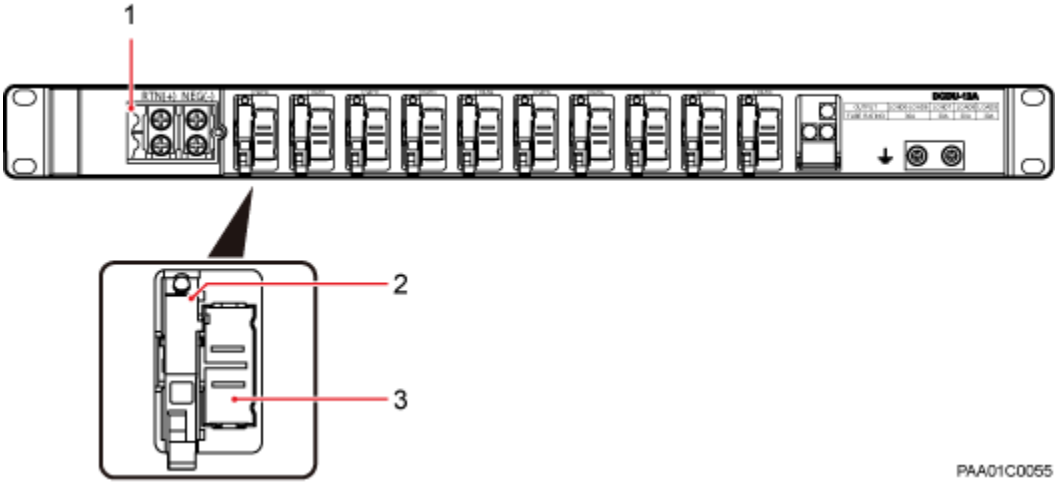
Function

The DCDU-12B provides ten -48 V DC outputs using the same fuse configurations to meet the power distribution requirements of indoor and outdoor macro base stations, micro base stations, and distributed base stations.

Port and Terminal

The following figure shows the ports and terminals on a DCDU-12B.

Figure 2 Ports and terminals on a DCDU-12B



The following table describes the ports and terminals on a DCDU-12B.

Table 1 Ports and terminals on a DCDU-12B

No.	Port/Terminal	Silkscreen	Connector and Cable	Description
(1)	DC input terminals	NEG(-)	Two one-hole OT terminals (M6). If one group of power cables are used, the maximum cross-sectional area of each power cable is 35 mm^2 (0.054 $in.^2$). If two groups of power cables are used, the maximum cross-sectional area of each power cable is 25 mm^2 (0.039 $in.^2$).	Negative power input terminal
		RTN(+)		Positive power input terminal

Table 1 Ports and terminals on a DCDU-12B

No.	Port/Terminal	Silkscreen	Connector and Cable	Description
(2)	Fuse block	LOAD0 to LOAD9	-	It controls the LOAD0 to LOAD9 ports, and therefore controls the power supply to modules such as BBUs, fan assemblies, and transmission equipment. The indicator on the fuse block indicates the status of the fuse. • When the indicator is steady on, the fuse is faulty and must be replaced. • When the indicator is steady off, the fuse is working properly.
(3)	DC output ports	LOAD0 to LOAD9	• Figure 3 shows the exterior of an EPC5 connector which applies to any of the LOAD0 to LOAD5 ports. The cross-sectional area of the cable supported ranges from 3.3 mm^2 (0.005 $in.^2$) to 10 mm^2 (0.016 $in.^2$). • Figure 4 shows the exterior of an EPC4 connector which applies to any of the LOAD6 to LOAD9 ports. The cross-sectional area of the cable supported ranges from 1.5 mm^2 (0.0023 $in.^2$) to 4 mm^2 (0.006 $in.^2$). **NOTE:** EPC4 and EPC5 connectors must be connected to cables onsite.	For the specifications of DC outputs, see Table 2.
(4)	Spare fuse box	-	-	It contains three 30 A spare fuses.

NOTE:
A fuse block and a DC power output port are jointly called a fuse terminal block.

Figure 3 Exterior of an EPC5 connector

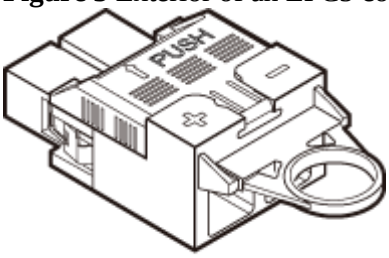


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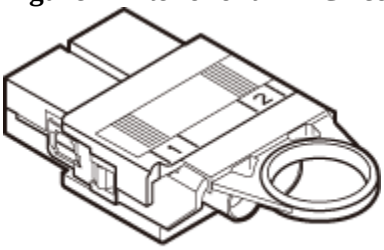
Figure 4 Exterior of an EPC4 connector



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The following table describes the power distribution of the DC power output ports on a DCDU-12B.

Table 2 Power distribution of the DC power output ports on a DCDU-12B

Base Station	Application Scenario	DC Output Port	Power-Consuming Device	Fuse Specifications
DBS3900	• Power cabinet TMC11H (Ver.D) or TMC11H (Ver.E) in a DBS3900 • DBS3900 where the BBU is installed on a wall, 19-inch rack, or IMB03	LOAD0 to LOAD5 ports	RRU	10x30 A
		LOAD6 and LOAD7 ports	Transmission equipment, BBU, or RRU[a]	
		LOAD8	Transmission equipment or RRU[a]	
		LOAD9	FAN 02D or FAN 02E	
BTS3900AL (Ver.A)		LOAD0 to LOAD8 ports	RRU 0 to RRU 8	10x30 A

Table 2 Power distribution of the DC power output ports on a DCDU-12B

Base Station	Application Scenario	DC Output Port	Power-Consuming Device	Fuse Specifications
	BTS3900AL (Ver.A) configured with RFUs and RRUs	LOAD9	Reserved	
• BTS3900A (Ver.D) • BTS3900A (Ver.E) • BTS3900 (Ver.D) • BTS3900L (Ver.D) • BTS3012AE (Ver.D_Z) • BTS3012 (Ver.D_Z)	• RFC (Ver.D) in a BTS3900A (Ver.D) configured with RFUs and RRUs • RFC (Ver.E) in a BTS3900A (Ver.E) configured with RFUs and RRUs • Cabinet in a BTS3900 (Ver.D) configured with RFUs and RRUs • Cabinet in a BTS3900L (Ver.D) configured with RFUs and RRUs • Cabinet in a BTS3012AE (Ver.D_Z) configured with RFUs and RRUs • Cabinet in a BTS3012 (Ver.D_Z) configured with RFUs and RRUs	LOAD0 to LOAD8 ports	RRU 0 to RRU 8	10x30 A
		LOAD9	Reserved	

a: When six or fewer RRUs are configured, connect the RRUs preferentially to power ports LOAD0 to LOAD5. Ports LOAD6 to LOAD8 only supply power to the seventh to ninth RRUs when more than six RRUs are configured.

Technical Specifications

The following table lists the technical specifications of a DCDU-12B.

Table 3 Technical specifications of a DCDU-12B

Item	Specifications
Dimensions (H x W x D)	A DCDU-12B is 1 U high and can be installed in a 19-inch cabinet or rack. Its dimensions are as follows:

Table 3 Technical specifications of a DCDU-12B	
Item	**Specifications**
	• 42 mm x 442 mm x 65 mm (1.65 in. x 17.40 in. x 2.56 in.) (without mounting ears) • 42 mm x 482.6 mm x 65 mm (1.65 in. x 19 in. x 2.56 in.) (with mounting ears)
Input voltage and current	Input voltage: -48 V DC Input current: 160 A
Surge protection specifications	Surge voltage on the -48 V DC power port • Differential mode: 2 kV (1.2/50 μs) • Common mode: 4 kV (1.2/50 μs)
	Surge current on the -48 V DC power port • Differential mode: 10 kA (8/20 μs) • Common mode: 20 kA (8/20 μs)

Parent Topic: DCDU

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