

DC Power Distribution Unit

for SPSPFF3-01 Power Shelf

Bel Power Solutions DC Power Distribution Unit (PDU) is used for 48 VDC power distribution in an OCP rack.

This device has been designed to supply a SPSPFF3-01 shelf (48 VDC input shelf). Two separate output circuits supply two separate inputs of the shelf. Four connectors, protected with 15 A circuit breakers provide input voltage to auxiliary equipment in the OCP rack.

The main power is fed into two separate 48 VDC inputs each of them with positive and negative copper busbars.



Key Features & Benefits

- Input voltage range from 40 to 72 VDC
- Power busbar and power distribution cables connected with dual-hole terminal lugs
- Two separate VDC inputs
- Two high current (250 A) output VDC outputs
- Four output connectors protected with 15 A breakers
- UL approved in conjunction with the upstream protection circuit breakers (specified in UL file)
- Two PE power connections (dual-hole terminal lugs)



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1. ORDERING INFORMATION

MODEL	DESCRIPTION
YSD.00273	Two -48 VDC inputs Two -48 VDC 250 A outputs Two PE contacts Four overcurrent protected -48 VDC 15 A auxiliary outputs The PDU includes screws and covers for the power connections. The PDU does not include mating lugs/cables

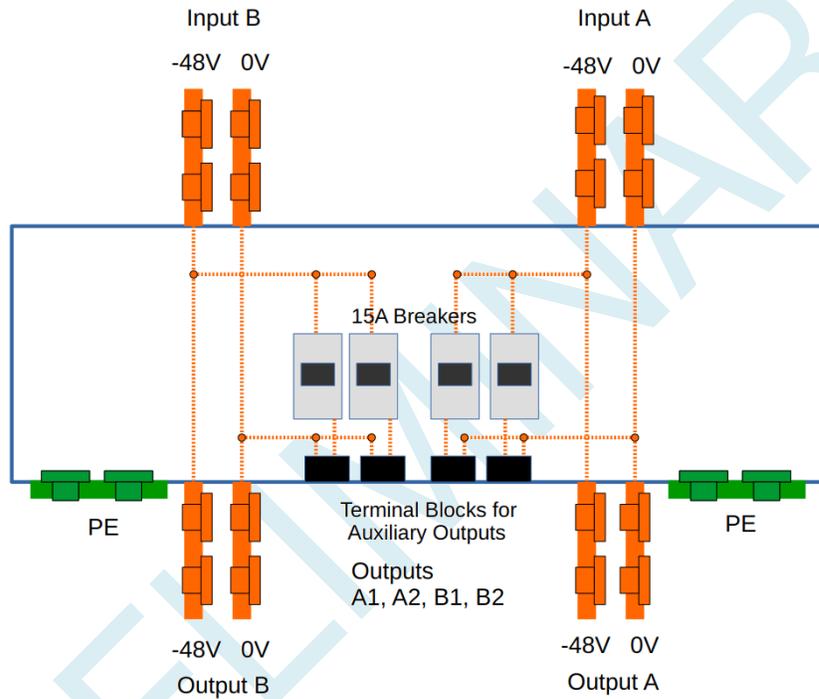


Figure 1. Electrical Schematic

2. INPUT SPECIFICATIONS

The PDU can handle 7.5 kW of input power and a maximum of 250 A for each input circuit. In total 15 kW and 500 A.

PARAMETER	CONDITIONS / DESCRIPTION	MIN	NOM	MAX	UNITS
Nominal DC Input Voltage			48		VDC
Input Voltage Range		40		72	VDC
Input Current per input circuit	Max busbar current			250	A

2.1 INPUT CONNECTIONS

DESCRIPTION	REFERENCE DESIGNATOR	TYPE	MATING PART MPN	RECOMMENDED CABLING	TORQUE
Input Connectors	InputA, InputB	Busbar with dual hole	Burndy YA26L-2TC38-90 (90° version) Burndy YA26L-2TC38 (straight version) Panduit LCD2/0-38D-X (straight version) Or Equivalent (need to be UL Listed)	00 AWG / 67 mm ² UL Style UL10070 or Equivalent	11.3 Nm

2.2 PROTECTIVE EARTH CONNECTION

DESCRIPTION	REFERENCE DESIGNATOR	TYPE	MATING PART MPN	RECOMMENDED CABLING	TORQUE
PE	PE 	Copper plate with dual hole	Burndy YA26L-2TC38 Panduit LCD2/0-38D-X Or Equivalent (need to be UL Listed)	00 AWG / 67 mm ² UL Style UL10070 or Equivalent	11.3 Nm

There are two copper plates for the connection of PE. It is sufficient if one is connected. Either of them can be used to ground the PDU. It is not allowed to ground other devices via the other plate.

3. OUTPUT SPECIFICATIONS

The PDU can handle 7.5 kW of out power and a maximum of 250 A for each main output circuit. In total 15 kW and 500 A (for the main outputs).

The PDU provides four auxiliary outputs (terminal blocks). Each of this output is protected by a 15 A circuit breaker.

PARAMETER	CONDITIONS / DESCRIPTION	MIN	NOM	MAX	UNITS
Nominal DC Input Voltage	All outputs		48		VDC
Output Voltage Range	All outputs	40		72	VDC
Output Current	Main outputs			250	A
Auxiliary outputs	4 Aux outputs			15	A

3.1 OUTPUT CONNECTIONS

DESCRIPTION	REFERENCE DESIGNATOR	TYPE	MATING PART MPN	RECOMMENDED CABLING	TORQUE
Output Connectors	OutputA, OutputB	Busbar with dual hole	Burndy YA26L-2TC38-90 or Equivalent (need to be UL Listed)	00 AWG / 67 mm ² UL Style UL10070 or Equivalent	11.3 Nm
Auxilliary Output Connector	Output A1, A2, B1, B2	Terminal Block M4	M4 Ring Terminal	AWG 14, UL10070	1.37 Nm

4. SAFETY, REGULATORY AND EMC SPECIFICATIONS

PARAMETER	CONDITIONS / DESCRIPTION	CRITERION
Agency Approvals	UL/CSA 60950-1 CE Mark RoHS Compliant	
Isolation Strength	Input to case (PE)	Basic
Isolation Strength Test	Input to case	According to safety standard

5. ENVIRONMENTAL SPECIFICATIONS

PARAMETER	CONDITIONS / DESCRIPTION	MIN	NOM	MAX	UNITS
Altitude	Operating			3000	m
	Non-Operating (without derating)			10000	ft
Operating Ambient Temperature				15000	m
				49000	ft
Storage Temperature		-5		+45	°C
Transportation Temperature	Short term storage, 72 hours	-40		+70	°C
Relative Humidity	Operating: Non-condensing	-55		+85	°C
	Non-operating: 38.7°C maximum wet bulb temperature with no cosmetic damage	10		90	%
Shock	Operating: 11 ms, 3 half-sine wave shocks, 3 axes	5		95	%
	Non-Operating: 2 ms, 6 half-sine wave shocks, 3 axes			5	g
Sinusoidal Vibration	Operating: zero to peak, 10 to 500 Hz, 0.25 oct/min			140	g
	Non-Operating: zero-to-peak, 10 to 500 Hz, 0.5 oct/min			0.25	g
				0.75	g

6. MECHANICAL SPECIFICATIONS

PARAMETER	CONDITIONS / DESCRIPTION	MIN	NOM	MAX	UNITS
Dimensions (W x H x D)			248 x 94 x 121		mm
Weight			TBD		kg

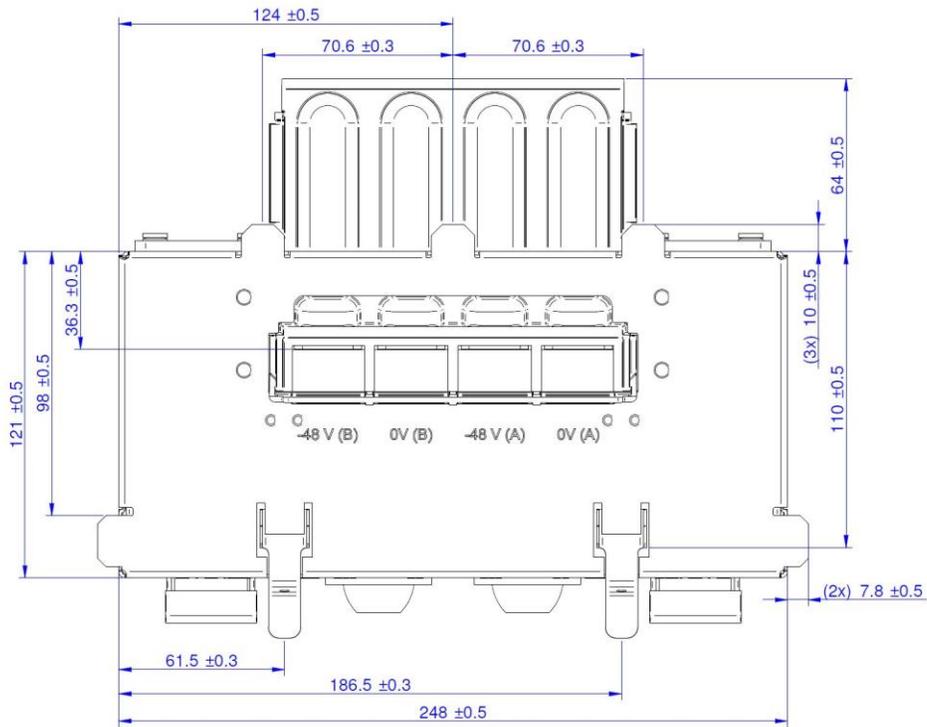


Figure 2. Dimension Drawing DC PDU (Top View)

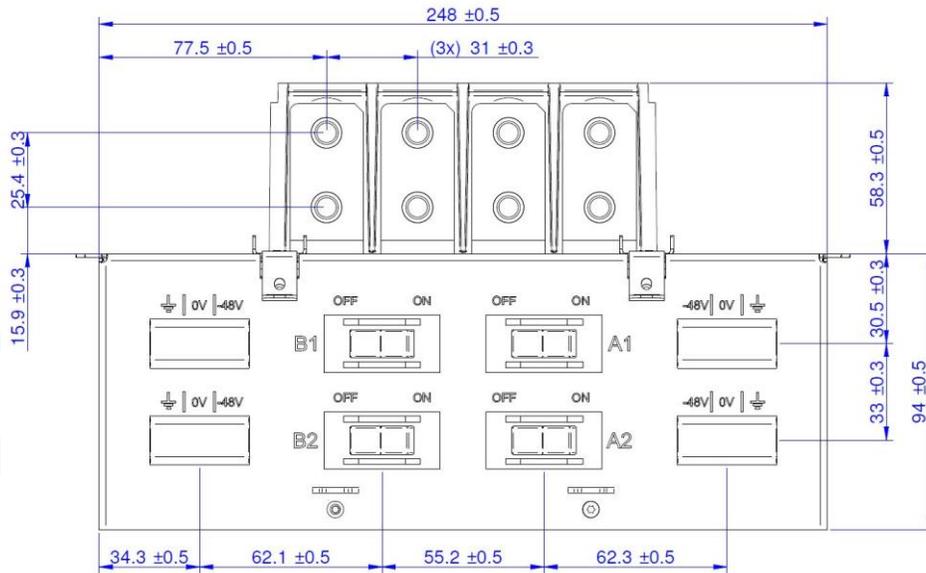


Figure 3. Dimension Drawing DC PDU (Front View)

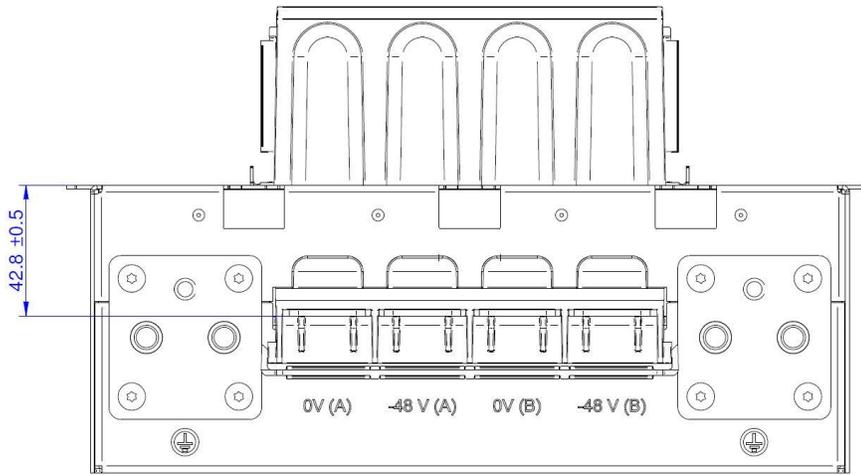


Figure 4. Dimension Drawing DC PDU (Back View)

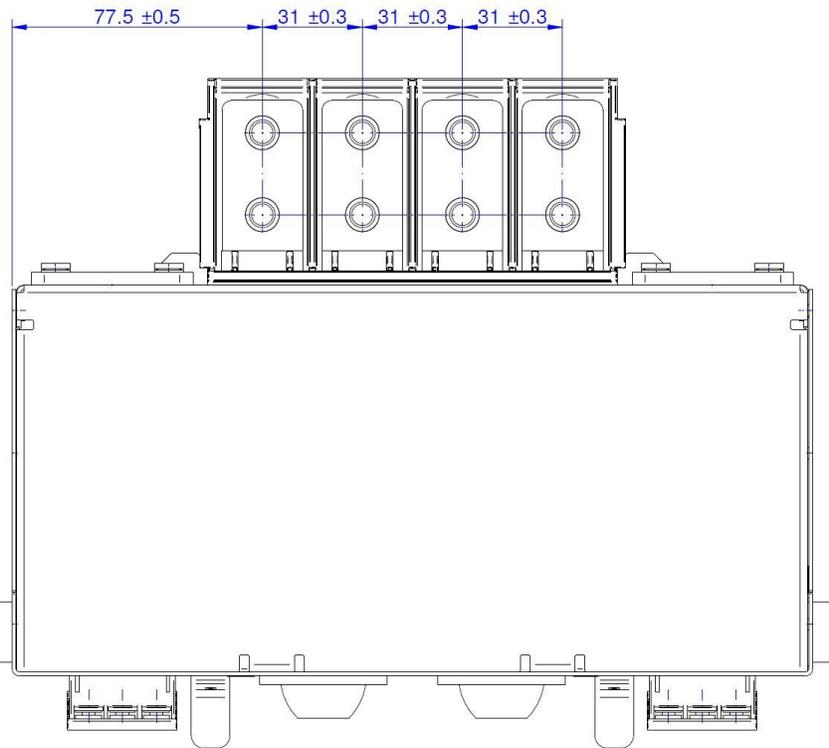


Figure 5. Dimension Drawing DC PDU (Bottom View)

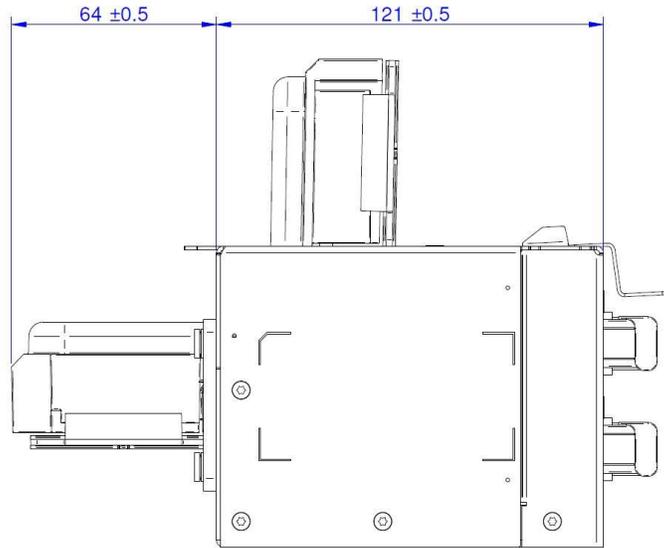


Figure 6. Dimension Drawing DC PDU (Side View)

7. ACCESSORIES

ITEM	DESCRIPTION	ORDERING PN	SOURCE
	Output wiring harness Set of 4 cable (2 long, 2 short) including lugs for the connection of the PDU to the	ZLH.U1C00.0	belfuse.com/power-solutions

8. REFERENCE DOCUMENTS

DOCUMENT NUMBER	DESCRIPTION
BCM.00459	YSD.00273 Installation Instruction
BCD.00887	SPSPFF3-01 Datasheet

For more information on these products consult: tech.support@psbel.com

NUCLEAR AND MEDICAL APPLICATIONS - Products are not designed or intended for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems.

TECHNICAL REVISIONS - The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.



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