

DC Power Distribution Unit

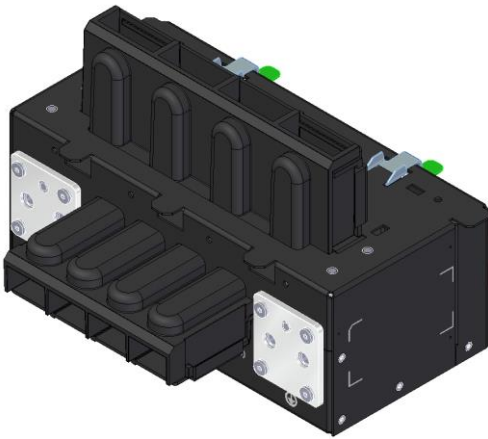
YSU.00225

for SPSPFF3-01

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)

1. ORDERING INFORMATION

MODEL	DESCRIPTION
YSU.00225	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

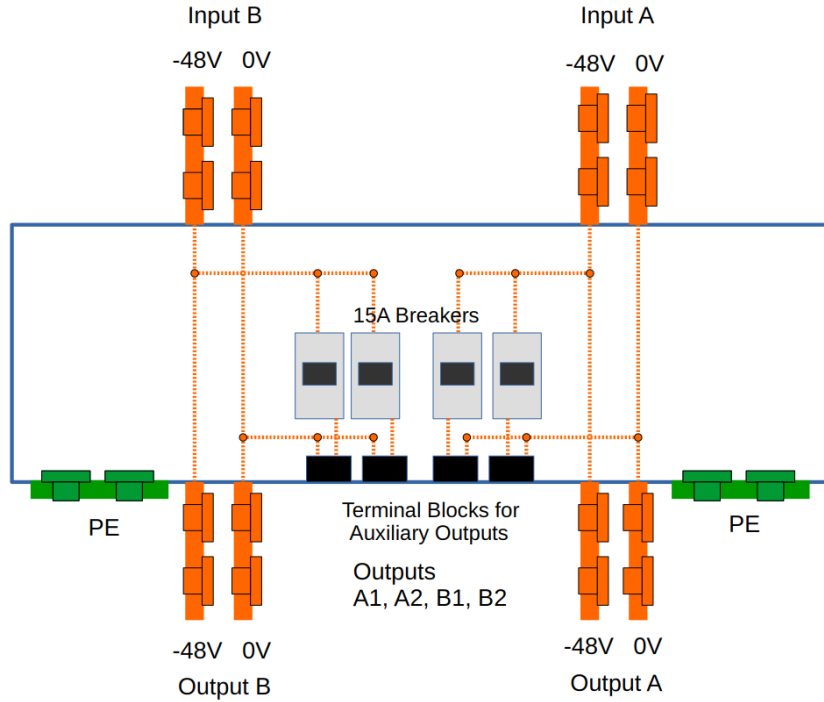


Figure 1. Electrical Schematic

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°)	00 AWG / 67 mm ² UL Style UL10070 or Equivalent	11.3 Nm
			Burndy YA26L-2TC38 (straight)		
			Panduit LCD2/0-38D-X (straight) Or Equivalent (need to be UL Listed)		
Input Connectors	InputA, InputB	Busbar with dual hole	Burndy YA28L-2TC38-90 (90°)	4/0 AWG / 107 mm ² UL Style UL10070 or Equivalent	
			Burndy YA28L-2TC38 (straight)		
			Burndy YAV29L2NT38FX (straight)		
			Burndy YAZV282NT38FX (straight)		
			Burndy YAV28L2NT38FX-45 (45°)		
			Burndy YAV29I2NT38FX-90 (90°)		
Input Connectors	InputA, InputB	Busbar with dual hole	Panduit LCD4/0-38D-X (straight)	350 kcmil / 177 mm ² UL Style UL10070 or Equivalent	
			Or Equivalent (needs to be UL Listed)		
			Burndy YA31L-2TC38-90 (90°)		
			Burndy YA31L-2TC38 (straight)		
			Burndy YAZ342NT38FX (straight)		
			Burndy YAZ342NT38FX-45 (45°)		
Input Connectors	InputA, InputB	Busbar with dual hole	Burndy YAZ342NT38FX-90 (90°)	350 kcmil / 177 mm ² UL Style UL10070 or Equivalent	
			Panduit LCD350-38D-X (straight)		
			Or Equivalent (needs to be UL Listed)		

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



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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	Approved to the latest revision of the following standards: UL/CSA62368-1, EN62368-1 and IEC62368-1	Approved
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
				10000	ft
	Non-Operating (without derating)			15000	m
				49000	ft
Operating Ambient Temperature		-5		+45	°C
Storage Temperature		-40		+70	°C
Transportation Temperature	short term storage, 72 hours	-55		+85	°C
Relative Humidity	Operating: Non-condensing	10		90	%
	Non-operating: 38.7°C maximum wet bulb temperature with no cosmetic damage	5		95	
Shock	Operating : 11 ms, 3 half-sine wave shocks, 3 axes			5	g
	Non-Operating: 2 ms, 6 half-sine wave shocks, 3 axes			140	
Sinusoidal Vibration	Operating: zero to peak, 10 to 500 Hz, 0.25 oct/min			0.25	g
	Non-Operating : zero-to-peak, 10 to 500 Hz, 0.5 oct/min			0.75	

6. MECHANICAL SPECIFICATIONS

PARAMETER	CONDITIONS / DESCRIPTION	MIN	NOM	MAX	UNITS
Dimensions	Width		248		mm
	Height		94		mm
	Depth		121		mm
Weight			2.6		kg

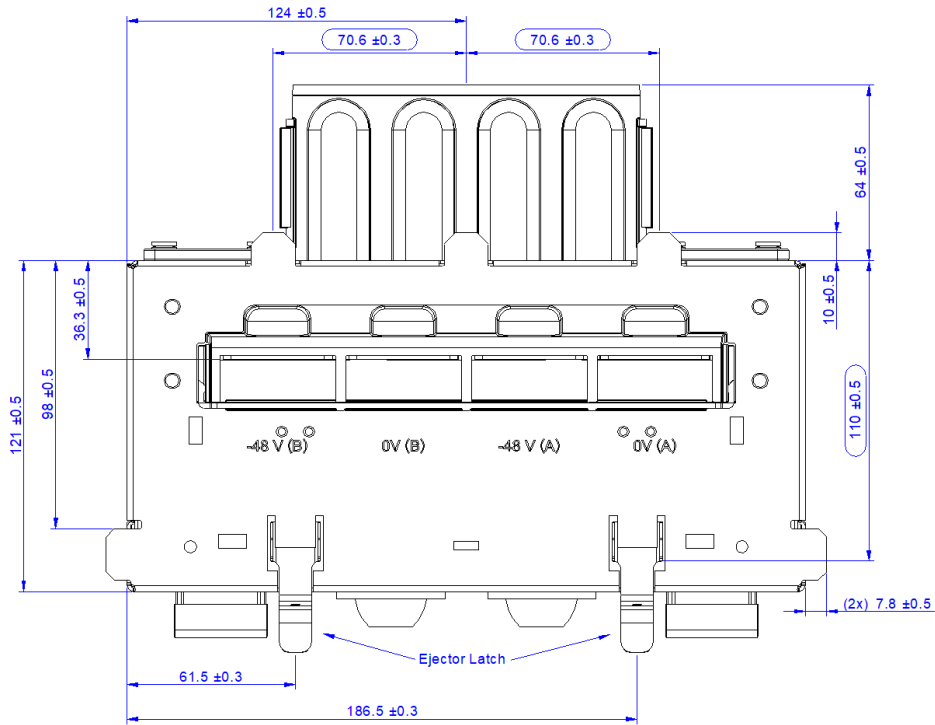


Figure 2. Dimension Drawing DC PDU (Top View)

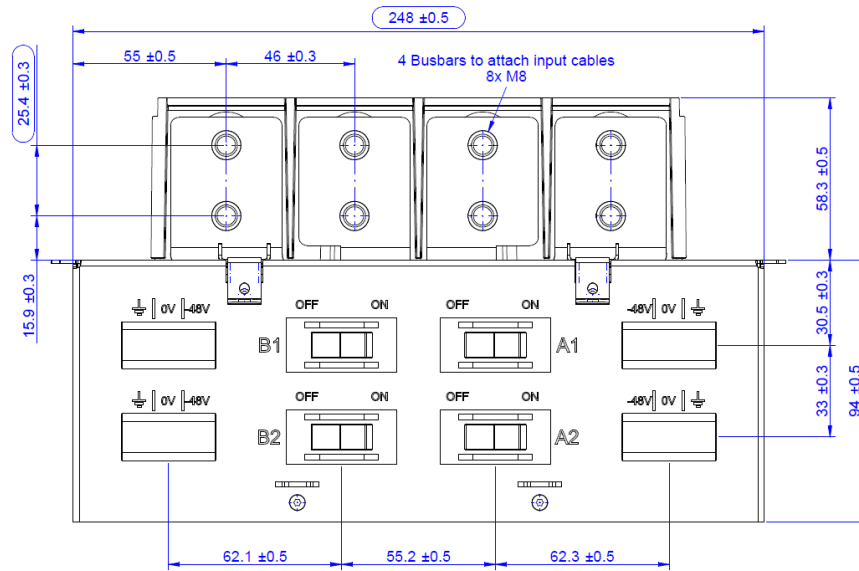


Figure 3. Dimension Drawing DC PDU (Front View)

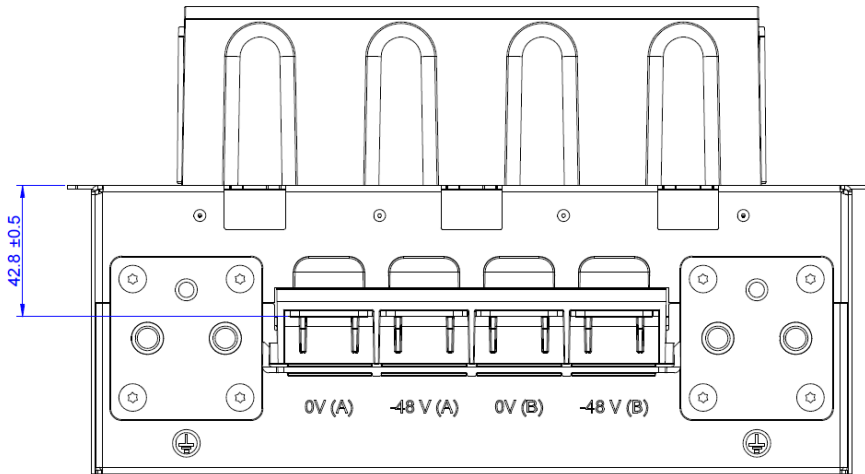


Figure 4. Dimension Drawing DC PDU (Back View)

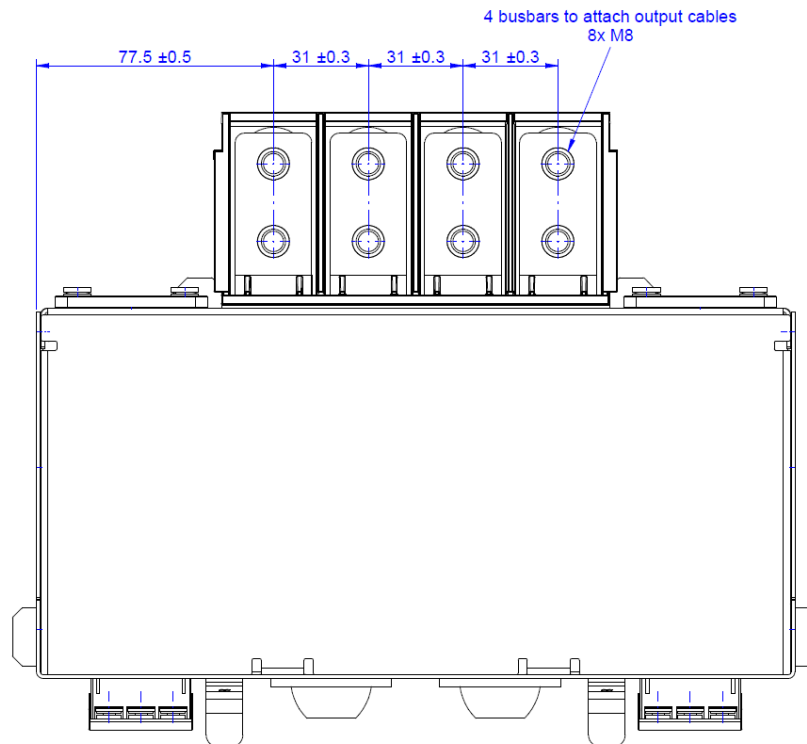


Figure 5. Dimension Drawing DC PDU (Bottom View)

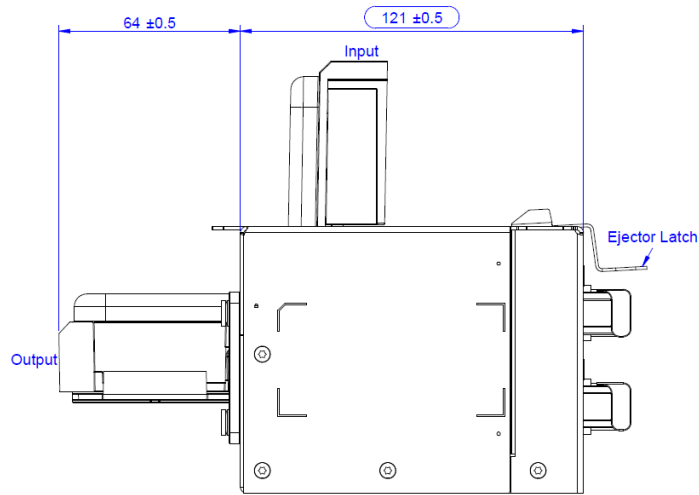


Figure 6. Dimension Drawing DC PDU (Side View)

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 shelf	ZLH.U1C00.0	belfuse.com/power-solutions

8. REFERENCE DOCUMENTS

DOCUMENT NUMBER	DESCRIPTION
BCM.00568	YSU.00225 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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