



Power Supplies - Switching CPS ECO Series 1-Phase



CPSB1-120-24E

Overview

LUTZE ECO series power supplies were developed with technical innovations in mind. The Compact economy series power supplies are efficiently sized and offer up to 91% power conversion efficiency. Adjustable voltage outputs and DC Ok contacts are standard.

Features

- Compact footprint
- Aluminum housing
- 35mm DIN rail mount
- IP20
- 5 year warranty



Power Supplies - Switching CPS ECO Series 1-Phase Selection Chart

Part Number	Price	Output Voltage	Output Current	Output Power	Input Voltage	Power Boost	Dimensions (W x H x D)	Drawing Link
CPSB1-120-24E	\$97.00	24VDC	5A	120W	120/240 VAC	140% for 5s	40 x 115 x 110mm [1.57 x 4.52 x 4.33 in]	PDF
CPSB1-240-24E	\$150.00		10A	240W		135% for 30s	63 x 140 x 139mm [2.48 x 5.51 x 5.47 in]	PDF
CPSB1-480-24E *	\$275.00		20A	480W	200/240 VAC	140% for 5s	73 x 140 x 149mm [2.87 x 5.51 x 5.86 in]	PDF

* Requires an external fuse.

Power Supplies - Switching CPS ECO Series 1-Phase Input Specifications

Part Number	CPSB1-120-24E	CPSB1-240-24E	CPSB1-480-24E
Operation Voltage Range	85–264 VAC 110–345 VDC	90–132 VAC 187–264 VAC 270–345 VDC	187–264 VAC 250–375 VDC
Frequency Range	47-63Hz		
Rated Current	2.1 A @ 120VAC 1.2 A @ 240VAC	4A @ 120VAC 2A @ 240VAC	2.9 A @ 200VAC 2.5 A @ 240 VAC
Inrush Current	≤ 30A / 0.72 A ² s	< 40A	≤ 29A / 0.61 A ² s
Power Factor Correction	> 0.6	> 0.6	> 0.90 enabled
Recommended Circuit Breaker	C-curve 6A	C-curve 10A	C-curve 6A or D-curve 4A

Power Supplies - Switching CPS ECO Series 1-Phase Output Specifications

Part Number	CPSB1-120-24E	CPSB1-240-24E	CPSB1-480-24E
Overload Limit In Constant Current Mode	–	–	50A
Max. Output Current	7A, 5s	13.5 A, 30s	28A 5s @ Hiccup mode
Power Dissipation	< 18W	< 35W	< 48W
Setting Range	23-28 VDC	23-27.5 VDC	23-28 VDC
Load Regulation	< 1%	< 1%	≤ 1%
Ripple And Noise	60mV	< 100mV pp	≤ 50mV rms
Hold-Up Time	> 20ms @ 120VAC 50ms @ 230VAC	> 60ms @ 120VAC 70ms @ 230VAC	≥ 50ms @ 230VAC
Parallel / Redundant Mode	Yes via external decoupling diode		
Efficiency (Typical)	> 87% @ 120VAC	> 87% @ 120VAC	> 91% @ 240VAC
Short-Circuit	Hiccup mode		
MTBF	–	–	500,000 h @ 25°C ambient full load

Power Supplies - Switching CPS Series

Power Supplies - Switching CPS 3-Phase Series General Specifications				
Series	ECO Series 1-Phase	Ultra Series 1-Phase	Universal Series - 1/2/3 Phase	3-Phase Series
Overvoltage Protection	≤ 33VDC			CPSB3-120-24 <32V CPSB3-240-24 <32V CPSB3-960-24 <33VDC
Overtemperature Protection	Yes			
Status Indicators	DC ON LED (green): ≥ 21.6 V DC LOW LED (red): ≤ 21.6 V		CPSB-123-240-24 DC ON LED (green): ≥ 21.6 V DC LOW LED (red): ≥ 21.6 V CPSB-123-480-24 DC ON LED (green): ≥ 21.6 V DC LOW LED (red): $I_{out} > 1.1I_n$	CPSB3-120-24 CPSB3-240-24 DC OK LED (green) ON $U_{out} > 95\% U_{set}$ OFF $U_{out} > 90\% U_{se}$ CPSB3-960-24 DC ON LED (green): ≥ 21.6 V DC LOW LED (red): ≥ 21.6 V
Humidity	5 to 95%, non-condensing			
Vibration	IEC 60068-2-6			
Shock	IEC 60068-2-27			
Protection Rating	IP20			
Mounting	35mm DIN rail (vertical)			
Housing Material	Aluminum (enclosed)			
Agency Approval	CE, UKCA, cULus E249179			

Additional Data							
Part Number	Weight kg [lb]	Operating Temperature	Storage Temperature	Terminal Type	Solid Wire Size*		Tightening Torque
					Output	Input	
<u>CPSB1-120-24E</u>	0.45 [0.99]	-40 to 70°C [-40 to 158°F]	-40 to 80°C [-40 to 176°F]	Screw	0.20 – 2.5mm ² [AWG 24-14]	0.20 – 2.5mm ² [AWG 24-14]	0.5 – 0.6 N•m [4.42 – 5.30 lb•ft]
<u>CPSB1-240-24E</u>	0.75 [1.65]						
<u>CPSB1-480-24E</u>	1 [2.20]						
<u>CPS2B1-120-24</u>	0.45 [0.99]	-35 to 70°C [-31 to 158°F]	-40 to 80°C [-40 to 176°F]	Screw	0.20 – 2.5mm ² [AWG 24-14]	0.20 – 2.5mm ² [AWG 24-14]	0.5 – 0.6 N•m [4.42 – 5.30 lb•ft]
<u>CPS2B1-240-24</u>	0.75 [1.65]						
<u>CPS2B1-480-24</u>	1.1 [2.42]						
<u>CPSB-123-240-24</u>	0.65 [1.43]	-40 to 70°C [-40 to 158°F]	-40 to 80°C [-40 to 176°F]	Screw	0.20 – 2.5mm ² [AWG 30-12]	0.20 – 2.5mm ² [AWG 30-12]	0.5 – 0.6 N•m [4.42 – 5.30 lb•ft]
<u>CPSB-123-480-24</u>	1 [2.20]				0.20 – 2.5mm ² [AWG 24-14]	0.20 – 2.5mm ² [AWG 24-14]	
<u>CPSB3-120-24</u>	0.66 [1.45]	-25 to 70°C [-13 to 158°F]	-40 to 85°C [-40 to 185°F]	Push-in	0.20 – 2.5mm ²	0.20 – 2.5mm ²	–
<u>CPSB3-240-24</u>	0.78 [1.71]				0.20 – 2.5mm ²	0.20 – 2.5mm ²	–
<u>CPSB3-960-24</u>	1.3 [2.86]	-40 to 70°C [-40 to 158°F]	-40 to 80°C [-40 to 176°F]	Screw	0.20 – 10mm ² [AWG 24-14]	0.20 – 10mm ² [AWG 24-14]	max. 62 N•m

* For other types of wire please see the insert.