



Switching Power Supplies

1-Phase CPS ECO Series

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



CPSB1-120-24E



Switching Power Supplies 1-Phase

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.

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 A²s	< 40A	≤ 29A / 0.61 A²s
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

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

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): $I_{out} > 1.1 I_n$	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	
CPSB1-120-24E	0.45 [0.99]	-40 to 70°C [-40 to 158°F]	-40 to 80°C [-40 to 176°F]	Screw	0.20 – 2.5 mm² [AWG 24-14]	0.20 – 2.5 mm² [AWG 24-14]	0.5 – 0.6 N•m [4.42 – 5.30 lb•ft]
CPSB1-240-24E	0.75 [1.65]						
CPSB1-480-24E	1 [2.20]						
CPS2B1-120-24	0.45 [0.99]	-35 to 70°C [-31 to 158°F]	-40 to 80°C [-40 to 176°F]	Screw	0.20 – 2.5 mm² [AWG 24-14]	0.20 – 2.5 mm² [AWG 24-14]	0.5 – 0.6 N•m [4.42 – 5.30 lb•ft]
CPS2B1-240-24	0.75 [1.65]						
CPS2B1-480-24	1.1 [2.42]						
CPSB-123-240-24	0.65 [1.43]	-40 to 70°C [-40 to 158°F]	-40 to 80°C [-40 to 176°F]	Screw	0.20 – 2.5 mm² [AWG 30-12]	0.20 – 2.5 mm² [AWG 30-12]	0.5 – 0.6 N•m [4.42 – 5.30 lb•ft]
CPSB-123-480-24	1 [2.20]				0.20 – 2.5 mm² [AWG 24-14]	0.20 – 2.5 mm² [AWG 24-14]	
CPSB3-120-24	0.66 [1.45]	-25 to 70°C [-13 to 158°F]	-40 to 85°C [-40 to 185°F]	Push-in	0.20 – 2.5 mm²	0.20 – 2.5 mm²	–
CPSB3-240-24	0.78 [1.71]				0.20 – 2.5 mm²	0.20 – 2.5 mm²	–
CPSB3-960-24	1.3 [2.86]	-40 to 70°C [-40 to 158°F]	-40 to 80°C [-40 to 176°F]	Screw	0.20 – 10mm² [AWG 24-14]	0.20 – 10mm² [AWG 24-14]	max. 62 N•m

* For other types of wire please see the insert.