



# Power Supplies - Switching CPS Ultra Series - 1-Phase



CPS2B1-240-24

## Overview

The Compact Ultra series power supplies are approximately 50% smaller than standard industrial power supplies. These power supplies provide maximum efficiency to 93% in housings even smaller than the ECO line.

## Features

- Compact footprint
- Aluminum housing
- 35mm DIN rail mount
- IP20 rated
- Power Boost - 150% for 5s
- 5 year warranty



## Power Supplies - Switching CPS Ultra 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
<a href="#">CPS2B1-120-24</a>	\$155.00	24VDC	5A	120W	120/240 VAC	150% for 5s	35 x 103 x 126mm [1.37 x 4.05 x 4.96 in]	<a href="#">PDF</a>
<a href="#">CPS2B1-240-24</a>	\$210.00		10A	240W			40 x 115 x 133mm [1.57 x 4.52 x 5.23 in]	<a href="#">PDF</a>
<a href="#">CPS2B1-480-24</a>	\$335.00		20A	480W			56 x 140 x 139mm [2.20 x 5.51 x 5.57 in]	<a href="#">PDF</a>

## Power Supplies - Switching CPS Ultra Series 1 - Phase Input Specifications

Part Number	<a href="#">CPS2B1-120-24</a>	<a href="#">CPS2B1-240-24</a>	<a href="#">CPS2B1-480-24</a>
Operation Voltage Range		90–264 VAC 110–345 VDC	
Frequency Range		47-63Hz	
Rated Current	1.4 A @ 120VAC 0.7 A @ 240VAC	2.4 A @ 120VAC 1.2 A @ 240VAC	4.8 A @ 120VAC 2.4 A @ 240 VAC
Inrush Current	≤ 32A / 0.49 A <sup>2</sup> s	≤ 34A / 0.66 A <sup>2</sup> s	≤ 23A / 0.56 A <sup>2</sup> s
Power Factor Correction		> 0.90 enabled	
Recommended Circuit Breaker	C-curve 4A		C-curve 10A

## Power Supplies - Switching CPS Ultra Series 1-Phase Output Specifications

Part Number	<a href="#">CPS2B1-120-24</a>	<a href="#">CPS2B1-240-24</a>	<a href="#">CPS2B1-480-24</a>
Overload Limit In Constant Current Mode	7.5 A	11A	21A
Maximum Output Current	7.5 A 5s @ Hiccup mode	15A 5s @ Hiccup mode	30A 5s @ Hiccup mode 21A CC mode
Power Dissipation	< 13.5 W	< 19W	< 36.5 W
Setting Range	11.5-29 VDC	22-29 VDC	22-29 VDC
Load Regulation	≤ 1%	≤ 1%	< 1.5%
Ripple And Noise	60mV pp	≤ 260mV pp	< 150mV pp
Hold-Up Time	≥ 20ms @ 120VAC ≥ 30ms @ 240VAC	≥ 20ms @ 240VAC	> 25ms @ 240VAC
Parallel / Redundant Mode	Yes, via external decoupling diode		
Efficiency (Typical)	> 90% @ 240VAC	> 93% @ 240VAC	> 93% @ 240VAC
Short-Circuit	Hiccup mode/ Current limit	Hiccup mode/ Constant current	Adjustable, Hiccup, Constant Current
MTBF	500,000h @ 25°C ambient full load	600,000h @ 25°C ambient full load	600,000h @ 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 <sub>out</sub> > 1.1I <sub>n</sub>	CPSB3-120-24 CPSB3-240-24 DC OK LED (green) ON U <sub>out</sub> > 95% U <sub>set</sub> OFF U <sub>out</sub> > 90% U <sub>se</sub>  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 – 2.5 mm <sup>2</sup> [AWG 24-14]	0.20 – 2.5 mm <sup>2</sup> [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 – 2.5 mm <sup>2</sup> [AWG 24-14]	0.20 – 2.5 mm <sup>2</sup> [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 – 2.5 mm <sup>2</sup> [AWG 30-12]	0.20 – 2.5 mm <sup>2</sup> [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 – 2.5 mm <sup>2</sup> [AWG 24-14]	0.20 – 2.5 mm <sup>2</sup> [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 – 2.5 mm <sup>2</sup>	0.20 – 2.5 mm <sup>2</sup>	–
<u>CPSB3-240-24</u>	0.78 [1.71]				0.20 – 2.5 mm <sup>2</sup>	0.20 – 2.5 mm <sup>2</sup>	–
<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 <sup>2</sup> [AWG 24-14]	0.20 – 10mm <sup>2</sup> [AWG 24-14]	max. 62 N•m

\* For other types of wire please see the insert.