

Technical data sheet

Power supply · Compact Economy, 120 W

Primary switchmode power supply, PFC, Single-phase

Input: wide-range input AC 90–264 V, DC 110–345 V

Output: DC 48 V, 2.5 A



Identification

Type	CPSB1-120-48R
Part No.	722784

Product version

Datasheet version	01
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Input

Number of phases	1
Rated voltage U_N	AC 120/230 V
Operation voltage range	AC 90–264 V / DC 110–370 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	2.1 A @ AC 115 V / 1.2 A @ AC 230 V
Inrush current	≤ 30 A / 0.72 A ² s
Internal fuse	T3, 15 A/AC 250 V
External protection	Mini-circuit breaker: C 6 A / Fusible link: T 10 A
Power factor correction P.F.C.	>0.6

Output

Output voltage/current	DC 48 V/2.5 A
Rated voltage U_N	DC 48 V
Rated current I_N	2.5 A
Max. output current	3.7 A, 5 s
Short-circuit current	30 A
Power Dissipation	19 W
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 45–55 V

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Part No. [722784](#) • Datasheet version: 01

page 1 of 4

Technical data sheet

Power supply · Compact Economy, 120 W

Load regulation	<1.5 %
Ripple and noise	60 mV
Hold up time	>10 ms @ AC 120 V / 50 ms @ AC 230 V
Parallel / redundant mode	Yes / decoupling diode contained internally
Efficiency	>86 %
Overtemperature protection	Yes
Over voltage protection	Yes
Rated over load protection	Yes
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	≥43.2 V
Status indication DC LOW LED red	≤43.2 V

Monitoring

DC ON Control (Rdy)	N/O contact
Switching voltage	AC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 500 V

General

Switching frequency	Approx. 110 kHz
Insulation voltage input / output	DC 4.2 kV
Insulation voltage input / ground	DC 2.2 kV
Insulation voltage output / ground	DC 750 V
Derating	>60 °C: -2.4 W/°C
Cooling	Air convection, 50 mm distance top/bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
MTBF	>500000 h: SN29500 / >600000 h: MIL HDBK 217F
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Weight/unit	0.45 kg
Connection type	Screw terminal 0,20 mm ² – 2,5 mm ² plug-in
Dimensions (w × h × d)	40.0 mm × 115.0 mm × 134.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-40 °C ... +70 °C (UL approved up to +60 °C)
Storage temperature range	-40 °C ... +80 °C

Technical data sheet

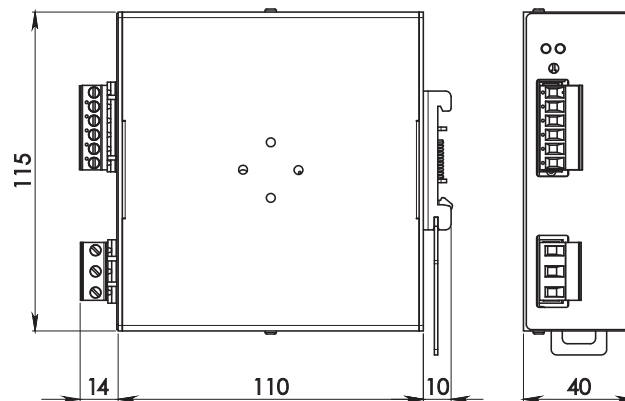
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Over voltage category	III
Degree of pollution	2
Relative air humidity	5 – 95 % RH, non-condensing
Vibration resistance	5 – 17.8 Hz: ± 1.6 mm, 17.8 – 500 Hz: 2 g 2 hours/axes X,Y,Z, IEC 60068-2-6
Shock resistance	30 g 6 ms, 20 g 11 ms, 3 shocks/direction, 18 shocks in total, IEC60068-2-27

Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 61010-2-201 IEC/EN 60950 EN 55011 (CISPR11) Class A EN 55022 (CISPR22) Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 3 EN 61000-4-5 Level 3 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinusoidal), 5-17.8 Hz: ± 1.6 mm, 17.8-500 Hz: 2 g 2 hours / axis (X,Y,Z) IEC 60068-2-27 (Shock), 30 g 6 ms, 20 g 11 ms, 3 bumps / direction, 18 bumps total

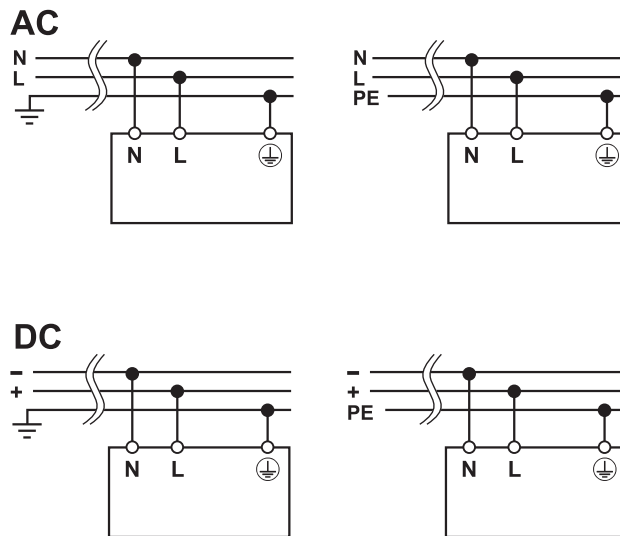
Dimensions



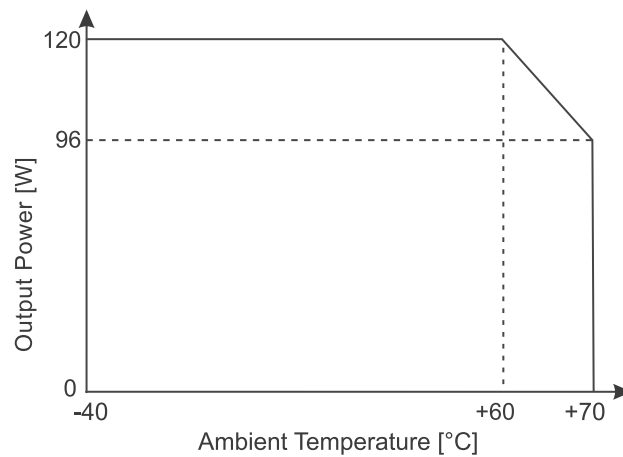
Technical data sheet

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PIN assignment



Derating



Short circuit characteristics

Hiccup

