Technical data sheet

Power supply · Compact Ultra, 240 W

Primary switchmode power supply, PFC
Input: AC 90–264 V, DC 110–345 V
Output: DC 48 V, 5 A

Identification

Type	CPS2B1-240-48
Part No.	723621

Product version

Datasheet version	02

Use/Application/Properties

Properties

- High efficiency and extremely compact dimensions
- Only 40 mm wide aluminium housing
- Active PFC (Power factor correction)
- Overload 150 %
- Constant current or hiccup mode, user definable
- Wide output voltage range
- Easy to connect in parallel to increase performance
- Up to 70 °C operating temperature without derating

Input

Number of phases	1
Rated voltage U_N	AC 120/240 V (UL certified)
Operation voltage range	AC 90–264 V / DC 110–345 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	2.4 A @ AC 120 V / 1.2 A @ AC 240 V
Inrush peak current	≤34 A / 0.66 A²s
Touch current (leakage current)	≤0.6 mA
Internal fuse	T6,3 A (non-replaceable)
External protection	10AT or MCB 10A C-curve

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Power factor correction P.F.C.	>0,90, enabled

Output

Output voltage/current	DC 48 V/5 A
Rated voltage U_N	DC 48 V
Rated current I_N	5 A
Overload limit in constant current mode	7 A
Max. output current	8.5 A, 5 s @ Hiccup Mode
Power Dissipation	<17 W
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 45–55 V
Load regulation	≤1 %
Ripple and noise	≤400 mV pp
Hold up time	≥20 ms @ AC 240 V
Parallel / redundant mode	Yes/via external decoupling diode e.g. Part-No. 722999 NOTE: Be sure to set the current limiting mode jumper when connecting multiple devices in parallel.
Efficiency	>93.5 % @ AC 240 V
Overtemperature protection	Yes
Over voltage protection	≥DC 68 V
Short circuit	Adjustable: Hiccup, C.C. 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/DC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 500 V

General

Insulation voltage input / output	DC 4.2 kV, 1 min.
Insulation voltage input / ground	DC 2.2 kV, 1 min.
Insulation voltage output / ground	DC 750 V, 1 min.
Derating	No derating
Cooling	Air convection, 100 mm distance top/bottom, 20 mm side
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
MTBF	MIL-HDBK-217F, >600000 h at 25 °C ambient full load
Degree of protection	IP20 (IEC 529 / EN 60529)

Protection class	I
Weight/unit	0.75 kg
Connection type	Screw terminal 0,20 mm² – 2,5 mm² / AWG 24–14
Strip length	6.0 - 7.5 mm / 0.24 - 0.30 in
Screwdriver	3,0 × 0,5 mm
Tightening torque	0.5 – 0.6 Nm / 4.42 – 5.30 lbf in
Dimensions (w × h × d)	40.0 mm × 115.0 mm × 133.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-40 °C … +70 °C UL approved up to 70 °C
Storage temperature range	-40 °C … +80 °C
Over voltage category	III (EN 50178)
Degree of pollution	2 (IEC 60664-1)
Relative air humidity	5 – 95 %, non-condensing

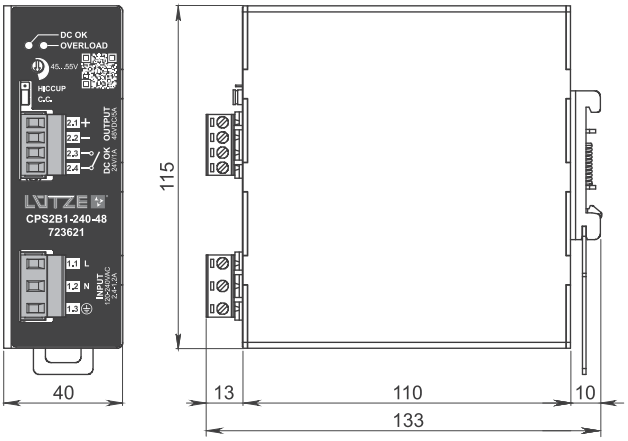
Interface

Life-cycle expectancy	221’288 h (25.2 years) at 25 °C ambient full load

Certifications/Standards

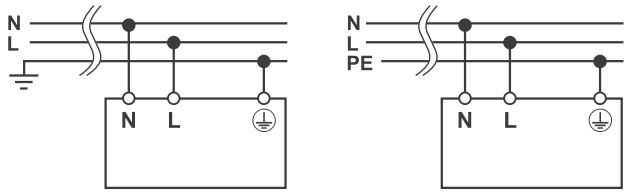
Certifications	CE UKCA cULus (E249179)
Standards	UL 508 IEC/EN 61010-1 IEC/EN 60950 IEC/EN 61010-2-201 EN 55011 (CISPR11) Class B (EMC Emission) EN 61000-3-2 Class A EN 55022 (CISPR22) Class B (EMC Emission) EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 EN 61000-4-5 Level 4 EN 61000-4-11 Level 2 IEC 60068-2-6 (Vibration sinuosoidal), 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

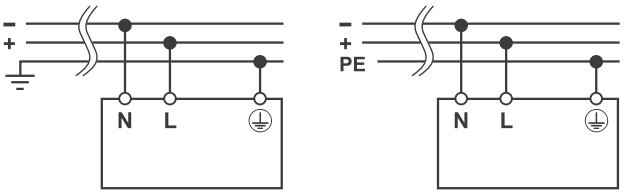


PIN assignment

AC Line



DC Line



Short circuit characteristics