

Technical data sheet

Power supply · Compact Economy, 480 W

Primary switchmode power supply, PFC, Single-phase

Input: AC 187–264 V, DC 250–375 V

Output: DC 24 V, 20 A



Identification

Type	CPSB1-480-24E
Part No.	723701

Product version

Datasheet version	01
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Use/Application/Properties

Properties	• High efficiency and extremely compact dimensions • Only 73 mm wide aluminium housing • Active PFC (Power factor correction) • Overload 150 % • Constant current or hiccup mode, user definable • Easy to connect in parallel to increase performance • Up to 45 °C operating temperature without derating
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Input

Number of phases	1
Rated voltage U_N	AC 200–240 V (UL certified)
Operation voltage range	AC 187–264 V / DC 250–375 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	2.9 A @ AC 200 V / 2.5 A @ AC 240 V
Inrush peak current	≤ 29 A / 0.61 A ² s
Touch current (leakage current)	≤ 0.5 mA
Internal fuse	No internal fuse, an external fuse must be provided.
External protection	6,3AT or MCB 6A C-curve or 4A D-curve
Power factor correction P.F.C.	>0,90, enabled

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18.09.2024 • Subject to technical modification

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Output

Output voltage/current	DC 24 V/20 A
Rated voltage U_N	DC 24 V
Rated current I_N	20 A
Overload limit in constant current mode	50 A
Max. output current	28 A, 5 s @ Hiccup Mode
Power Dissipation	<48 W
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 23–28 V
Load regulation	$\leq 1\%$
Ripple and noise	$\leq 50\text{ mV pp}$
Hold up time	$\geq 50\text{ ms @ AC 240 V}$
Parallel / redundant mode	Yes/via external decoupling diode e.g. Part-No. 722999
Efficiency	>91 % @ AC 240 V
Overtemperature protection	Yes
Over voltage protection	$\geq \text{DC } 33\text{ V } (U_A=24\text{ V})$
Short circuit	Hiccup Mode

Status indication

Status indication DC ON LED green	$\geq 21.6\text{ V}$
Status indication DC LOW LED red	$\leq 21.6\text{ V}$

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	>45 °C: -10 W/°C @ AC 240 V
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, >500000 h at 25 °C ambient full load
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I
Weight/unit	1 kg
Connection type	Screw terminal 0,20 mm ² – 2,5 mm ² / AWG 24–14

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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)	73.0 mm × 140.0 mm × 149.0 mm
PU (units)	1

General ambient conditions

Operation temperature range	-40 °C ... +70 °C UL approved up to 45 °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	65'496 h (7.4 years) at 25 °C ambient full load
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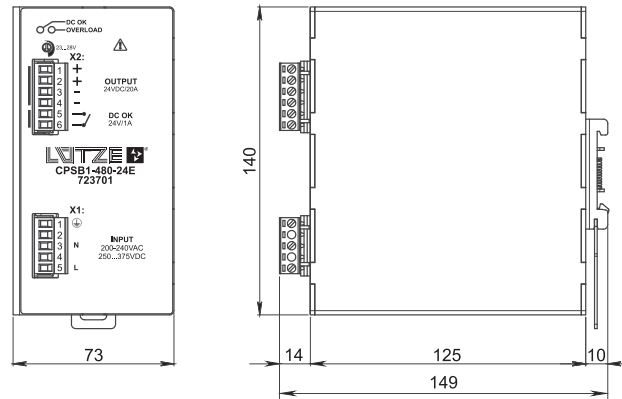
Certifications/Standards

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 61000-3-2 Class A EN 61000-4-2 Level 3 EN 61000-4-3 Level 3 EN 61000-4-4 Level 4 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

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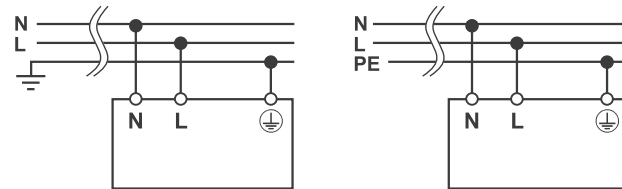
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Dimensions

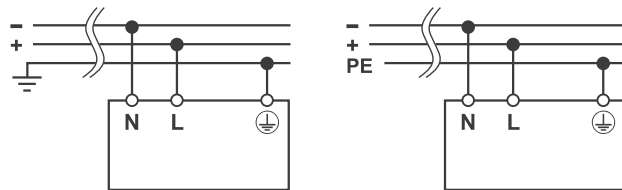


PIN assignment

AC Line



DC Line



Derating

