Technical data sheet

Power supply · Compact, 3-phase, 480 W

Power supply unit, primary switched 3-phase
Input: wide range input AC 350–575 V
Output: DC 48 V, 10 A

Identification

Type	CPSB3-480-48
Part No.	722824

Product version

Datasheet version	00

Description

Description	Parallel operation with active load balancing, Push-in technology, status output, remote input On/Off (Inhibit)

Input

Number of phases	3
Rated voltage U_N	3 × AC 400–500 V
Operation voltage range	max. 3 × AC 350–575 V
Frequency range	47 Hz – 63 Hz
Rated current I_N	0.80 A @ AC 400 V 0.65 A @ AC 500 V
Inrush current	17 A @ AC 400 V 22 A @ AC 500 V <200 µs
External protection	3 × B 6 A
Power factor correction P.F.C.	>0.92

Output

Output voltage/current	DC 48 V/10 A

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www.luetze.de • info@luetze.de

Rated voltage U_N	DC 48 V
Rated current I_N	10 A
Courant de sortie max. (boost1)	15 A / 5 s
Max. output current (boost2)	15 A / 7 s
Power Dissipation	<24.7 W, <3.3 W stand-by
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 45–56 V
Load regulation	max. 0.2 % AC 350 … 550 V max. 2.9 % AC 350 … 550 V, parallel mode
Ripple and noise	<40 mV pp
Hold up time	min. 24 ms
Parallel / redundant mode	Max. 3 devices / via external decoupling diodes e.g. 722999
Efficiency	95.3 % @ AC 400 V / 95.1 % @ AC 500 V
Over voltage protection	<DC 59.3 V
Rated over load protection	> 80°C, autoreset
Short circuit	Current limit Hiccup

Status indication

Status indication DC OK LED green	ON: U_{out} > 95 % U_{set} OFF: U_{out} < 85 % U_{set}

Monitoring

DC ON Control (DC OK)	N/O contact closed: U_{out} > 95 % U_{set} open: U_{out} < 85 % U_{set}
Switching voltage	AC 300 V / DC 150 V
Switching current	AC/DC 1 A
Switching capacity	300 VA / 30 W
Isolation voltage	AC 1.39 kV
Remote input (inhibit) ON/OFF	ON threshold typ. 6 V, OFF threshold typ. 4 V, Restart delay max. 5 s

General

Insulation voltage input / output	AC 3.51 kV
Insulation voltage input / ground	AC 2.21 kV
Insulation voltage output / ground	AC 1.39 kV
Derating	>55 °C: -9.6 W/°C
Cooling	Air convection, 15 mm distance right/left, 40 mm top, 30 mm bottom
Housing material	Aluminum
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Vertical
MTBF	Service life MTBF: min. 4.4 Mio. h @ AC 400 V / min. 0.86 Mio. h @ AC 500 V, Service lifetime: >157 000 h @ AC 400 V / >119 000 h @ AC 500 V
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I (IEC 61140)
Weight/unit	1.05 kg

Connection type	Push-In 0.20 mm² – 6.0 mm² max. 0.62 Nm Input: 0,2 – 10 mm² Output/Signalisation 0.2 – 2.5 mm²
Dimensions (w × h × d)	65.0 mm × 129.0 mm × 159.3 mm

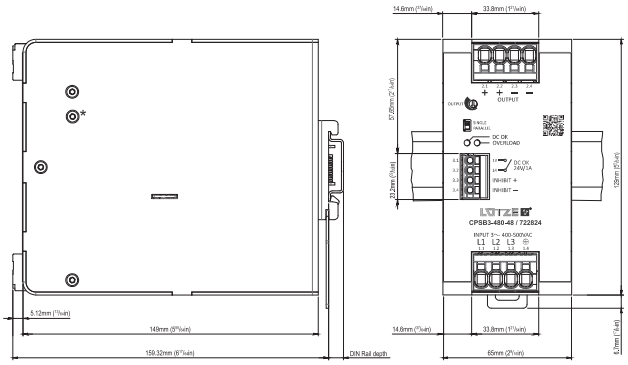
General ambient conditions

Operation temperature range	-25 °C … +70 °C (Derating > 55 °C)
Storage temperature range	-40 °C … +85 °C
Over voltage category	III (IEC 61010-1)
Degree of pollution	2 (IEC 60664-1, IEC 62477-1)
Relative air humidity	20 – 95 % RH, not condensing
Vibration resistance	2 g / 10 - 500 Hz, 1 hour/direction X,Y,Z non-operating, mounted on DIN-Rail (IEC 60068-2-6)
Shock resistance	30 g / 11 ms ± 5 ms, 3 bumps/direction, 9 bumps total non-operating, mounted on DIN-Rail (IEC 60068-2-27)

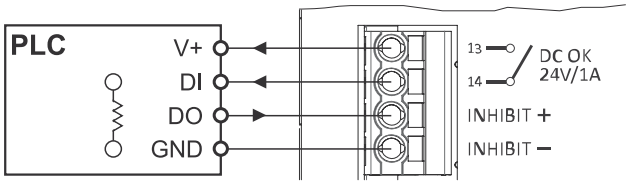
Certifications/Standards

Certifications	CE UKCA cULus (E249179)
Standards	IEC/EN 61010-1 IEC/EN 61010-2-201 IEC EN 62368-1 (Ed.2) IEC/EN 60950 UL 61010-1 UL 61010-2-201 EN 55011 (CISPR11) Class A EN 61000-4-2 Level 3 (Air), Level 2 (Contact) EN 61000-4-3 Level 3 (80–1000 MHz), Level 2 (1.4 – 6 GHz) EN 61000-4-4 Level 3 EN 61000-4-5 Level 3 EN 61000-4-6 Level 3 EN 61000-4-8 Level 4 EN 61000-4-11 Level 2

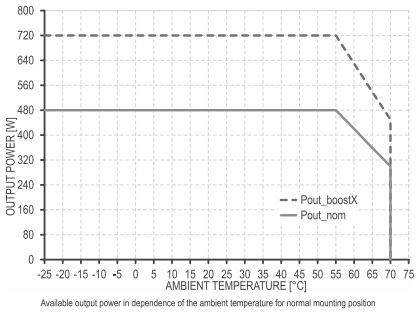
Dimensions



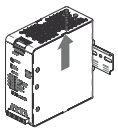
PIN assignment

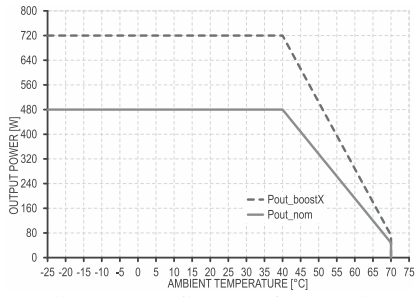


Derating

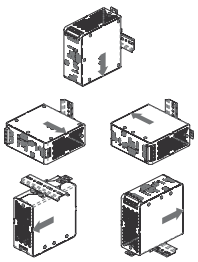


Available output power in dependence of the ambient temperature for normal mounting position





Available output power in dependence of the ambient temperature for rotated mounting positions



Signal connection

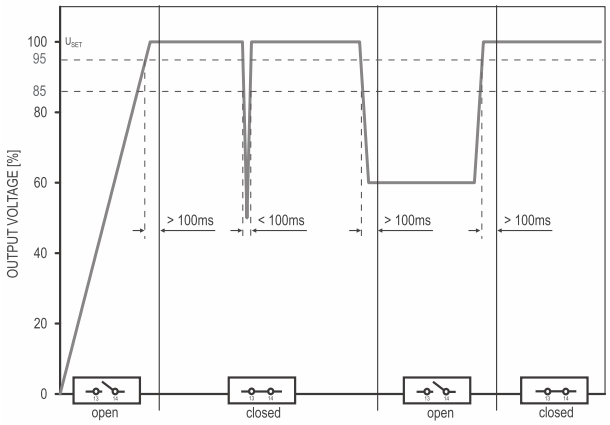
Signaling & Control

DC OK

Type		Relay contact	
Characteristic		N/O	
Closing		U_{out} > 95% U_{set}	duration min. 100ms
Opening		U_{out} < 85% U_{set}	duration min. 100ms
Resistive load	*nom.*	1A	24V$_{DC}$
	max.	0.5A	60V$_{DC}$
Trigger hysteresis	*typ.*	0.6V	

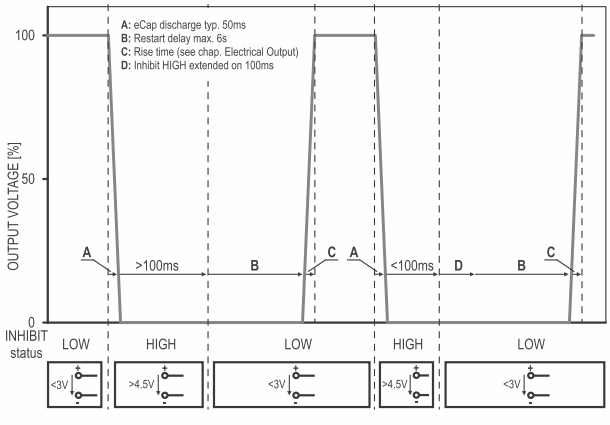
Remote ON/OFF

Type		Electrical contact
Characteristic		Inhibit
ON threshold	*max.*	3V
OFF threshold	*min.*	4.5V
Restart delay	*max.*	6s
Input voltage	*max.*	30V
Input current	*max.*	10mA
Reference potential		Isolated
Parallel connection		yes
Active discharging		no



DC-OK relay characteristic in dependence of output voltage changes

OFF mode



Control of the output voltage in dependence of the inhibit relay status.