

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 24 V, 20 A



Identification

Type	CPSB3-480-24
Part No.	722823

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 24 V/20 A
------------------------	--------------

United Kingdom: LÜTZE Ltd.

Unit 3, Sandy Hill Park
Sandy Way, Amington • GB-Tamworth, Staffs B77 4DU
Tel. +44 (0)1827 31333-0 • Fax +44 (0)1827 31333-2
www.lutze.com • sales.gb@lutze.co.uk

Germany: Friedrich Lütze GmbH

Postfach 12 24 (PLZ 71366) • Bruckwiesenstraße 17-19 • D-71384 Weinstadt
Tel. +49 (0)7151 6053-0 • Fax +49 (0)7151 6053-277(-288)
www.luetze.de • info@luetze.de

05.02.2024 • Subject to technical modification

Part No. [722823](#) • Datasheet version: 00

page 1 of 5

Technical data sheet

Power supply · Compact, 3-phase, 480 W

Rated voltage U_N	DC 24 V
Rated current I_N	20 A
Courant de sortie max. (boost1)	30 A / 5 s
Max. output current (boost2)	30 A / 7 s
Power Dissipation	<25.8 W, <3.2 W stand-by
Setting range $U_{out\ min.}/U_{out\ max.}$	DC 22.5–29 V
Load regulation	max. 0.4 % AC 350 ... 550 V max. 2.9 % AC 350 ... 550 V, parallel mode
Ripple and noise	<30 mV pp
Hold up time	min. 24 ms
Parallel / redundant mode	Max. 3 devices / via external decoupling diodes e.g. 722999
Efficiency	95.1 % @ AC 400 V / 94.9 % @ AC 500 V
Over voltage protection	<DC 32.9 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: -12 W/°C
Cooling	Air convection, 15 mm distance right/left, 40 mm top, 20 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: >148 000 h @ AC 400 V / >124 000 h @ AC 500 V
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I (IEC 61140)
Weight/unit	1.05 kg

Technical data sheet

Power supply · Compact, 3-phase, 480 W

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

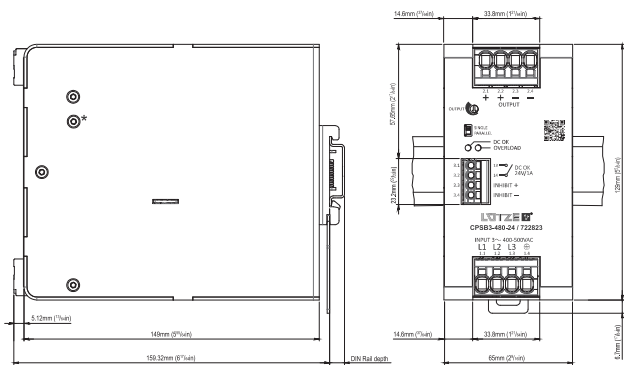
General ambient conditions

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)

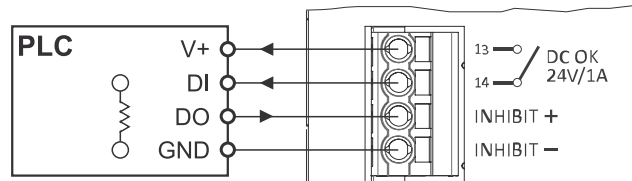
Certifications/Standards

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

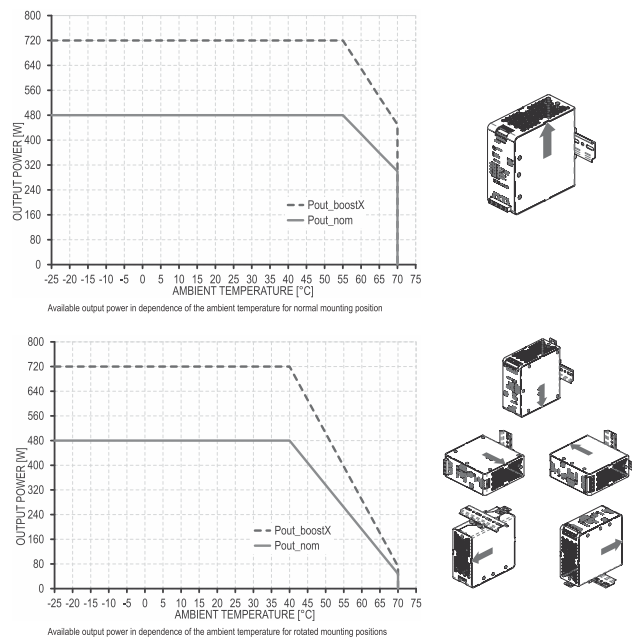
Dimensions



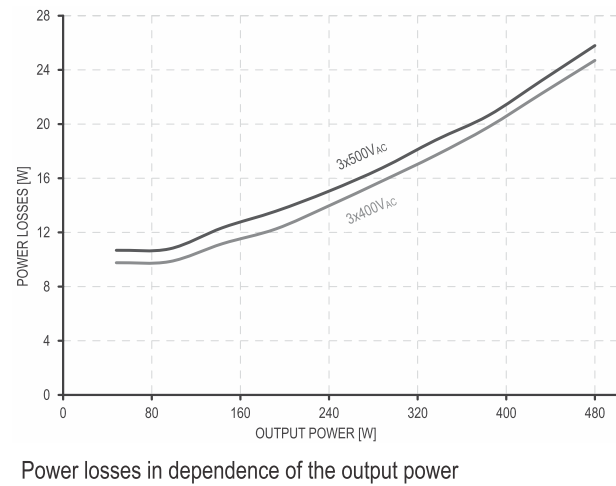
PIN assignment



Derating



Load limit curve



Signal connection

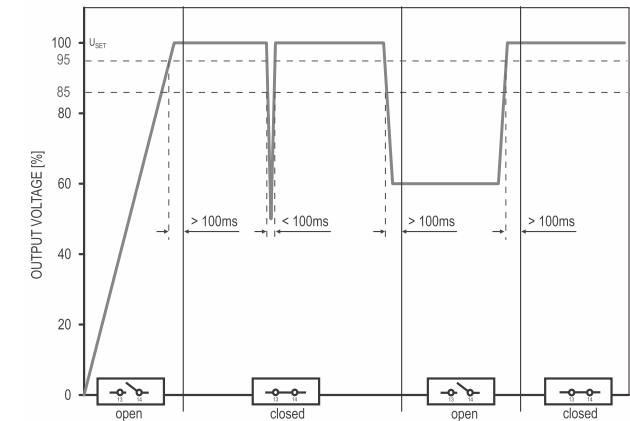
Signaling & Control

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	<i>nom.</i>	1A	24V _{DC}
	<i>max.</i>	0.5A	60V _{DC}
Trigger hysteresis	<i>typ.</i>	0.6V	

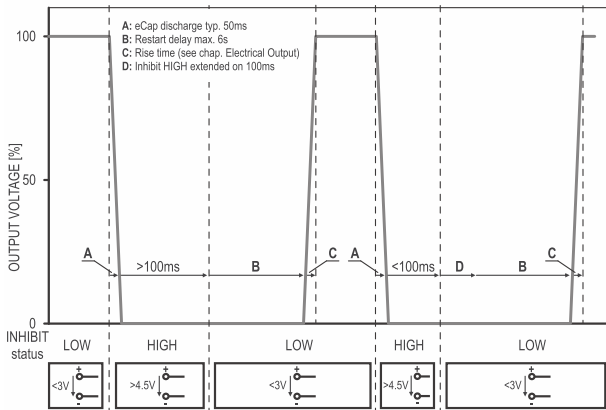
Remote ON/OFF

Type		Electrical contact	
Characteristic		Inhibit	
ON threshold	<i>max.</i>	3V	
OFF threshold	<i>min.</i>	4.5V	
Restart delay	<i>max.</i>	6s	
Input voltage	<i>max.</i>	30V	
Input current	<i>max.</i>	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.