

Technical data sheet

Power supply · Compact, 3-phase, 240 W

Power supply unit, primary switched 3-phase

Input: wide range input AC 350–575 V

Output: DC 48 V, 5 A



Identification

Type	CPSB3-240-48
Part No.	722822

Product version

Datasheet version	00
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Description

Description	Parallel operation with active load balancing, Push-in technology, status output, remote input On/Off (Inhibit)
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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	0.58 A @ AC 400 V 0,49 A @ AC 500 V
Inrush current	25 A @ AC 400 V 30 A @ AC 500 V
External protection	3 × B 6 A
Power factor correction P.F.C.	>0.6

Output

Output voltage/current	DC 48 V/5 A
Rated voltage U_N	DC 48 V

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Rated current I_N	5 A
Courant de sortie max. (boost1)	6 A / 300 s
Max. output current (boost2)	7.5 A / 60 s
Power Dissipation	<15.3 W, < 2.3 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. 2.8 % AC 350 ... 550 V, parallel mode
Ripple and noise	<20 mV pp
Hold up time	>20 ms @ AC 400 V >40 ms @ AC 500 V
Parallel / redundant mode	Max. 3 devices / via external decoupling diodes e.g. 722999
Efficiency	max. 93.8 % @ AC 400 V / max. 94 % @ AC 500 V
Over voltage protection	<59.2 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: $U_{out} < 85\% U_{set}$
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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. 3 V, Restart delay max. 6 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: -2.6 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	min. 5,7 Mio. h, Service lifetime: >149 000 h @ AC 400 V / >164 000 h @ AC 500 V
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I (IEC 61140)
Weight/unit	0.78 kg

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Connection type	Push-In
	0.20 mm ² – 6.0 mm ²
	Input: 0,2 – 10 mm ²
	Output/Signalisation 0.2 – 2.5 mm ²
Wiring table	
Dimensions (w × h × d)	55.0 mm × 129.0 mm × 138.2 mm

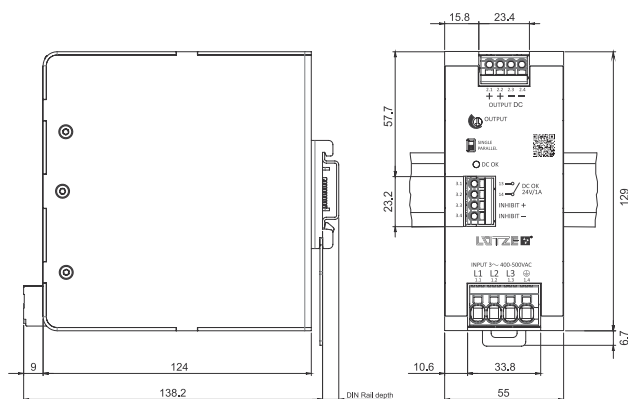
General ambient conditions

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	5 – 95 % RH, non-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)

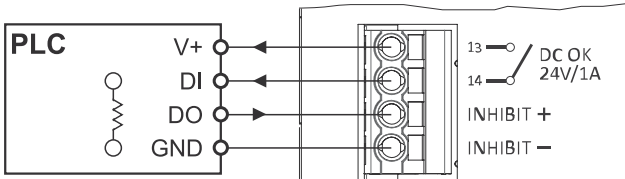
Certifications/Standards

Certifications	CE
	UKCA
Standards	cULus (E249179)
	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

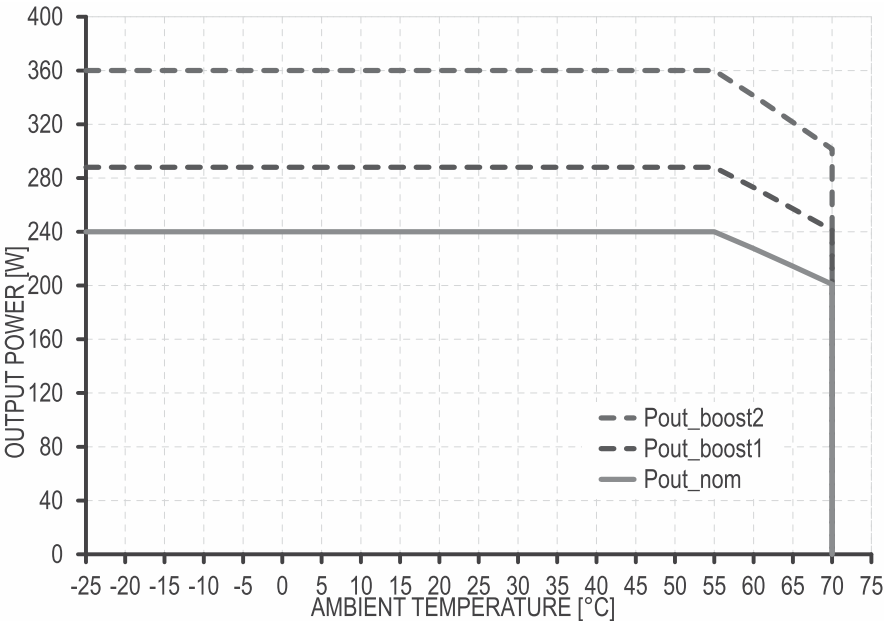
Dimensions



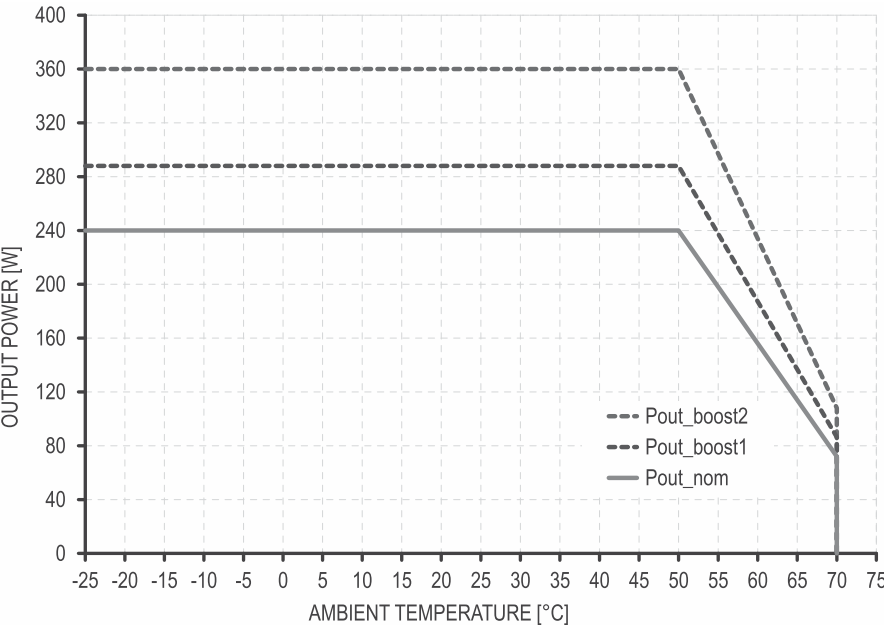
PIN assignment



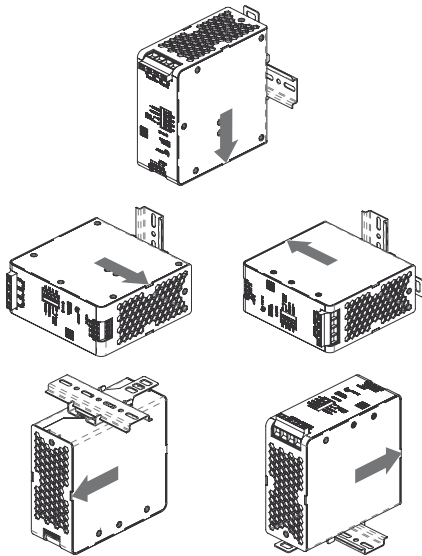
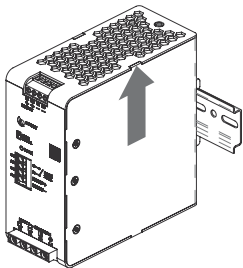
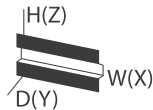
Derating



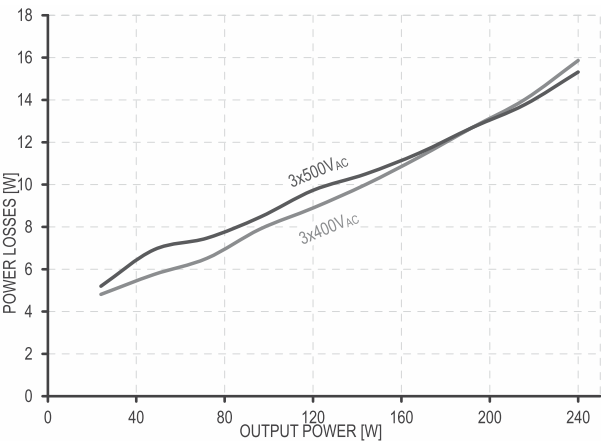
Available output power in dependence of the ambient temperature for normal mounting position



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



Load limit curve



Power losses in dependence of the output power

Signal connection

Signaling & Control

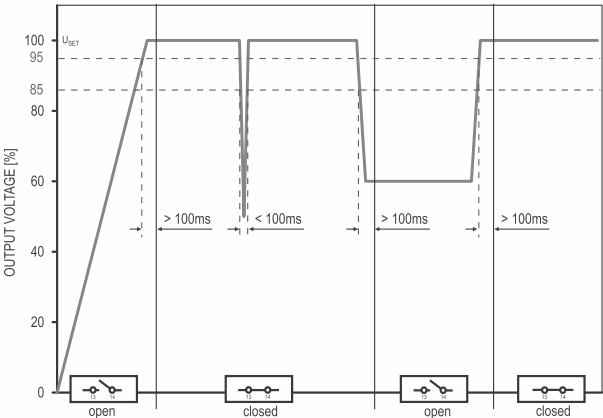
DC OK

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	

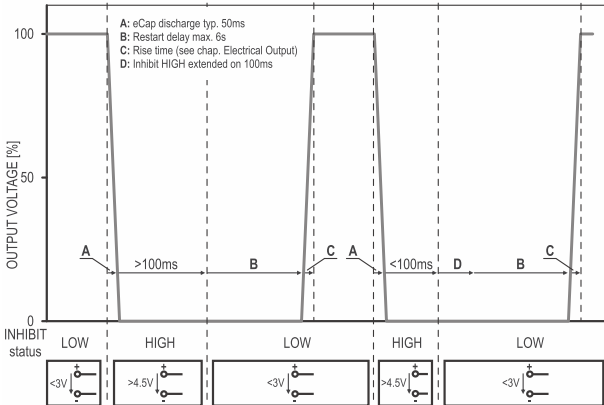
Remote ON/OFF

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

OFF mode



DC-OK relay characteristic in dependence of output voltage changes



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