

Technical data sheet

Power supply · 3-phase, regulated, 120 W

Power supply unit, primary switched 3-phase

Input: wide range input AC 350–575 V

Output: DC 24V, 5A, (22,5–29 V)



Identification

Type	CPSB3-120-24
Part No.	722818

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	0.35 A @ AC 400 V / 0.3 A @ AC 500 V
Inrush current	30 A @ AC 400 V / 39 A @ AC 500 V
External fuse	3 × B 6 A
Power factor correction P.F.C.	> 0.5

Output

Rated voltage U_N	DC 24 V
Rated current I_N	5 A

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Max. output current (limited current)	7,5 A
Max. output current (HICCUP, 2 sec)	6 A
Heat dissipation	<11.5 W, < 2.1 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	>23 ms @ AC 400 V / >43 ms @ AC 500 V
Parallel / redundant mode	Max. 3 devices / via external decoupling diodes e.g. 722999
Efficiency	max. 91.3 % @ AC 400 V / max. 91.2 % @ AC 500 V
Over voltage protection	<32 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: $U_{out} < 90\ %\ U_{set}$
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Monitoring

DC ON Control (DC OK)	N/O contact open: $U_{out} < 90\ %\ U_{set}$ closed: $U_{out} > 95\ %\ U_{set}$
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	0.8 W/°C
Operation temperature range	-25 °C ... +70 °C (Derating > 55 °C)
Storage temperature range	-40 °C ... +85 °C
Relative air humidity	20 – 95 % RH, not condensing
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	min. 5.7 Mio. h, Service lifetime: >184 000 h @ AC 400 V / >162 000 h @ AC 500 V
Shock resistance	30 g / 11 ms ± 5 ms, 3 bumps/direction, 9 bumps total non-operating, mounted on DIN-Rail (IEC 60068-2-27)

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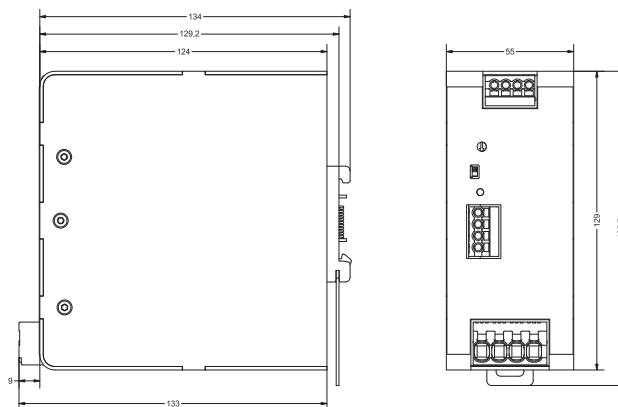
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Vibration resistance	2 g / 10 - 500 Hz, 1 hour/direction X,Y,Z non-operating, mounted on DIN-Rail (IEC 60068-2-6)
Degree of protection	IP20 (IEC 529 / EN 60529)
Protection class	I (IEC 61140)
Over voltage category	III (IEC 61010-1)
Degree of pollution	2 (IEC 60664-1, IEC 62477-1)
Weight/unit	0.66 kg
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 Wiring table
Dimensions (w × h × d)	55.0 mm × 129.0 mm × 133.0 mm

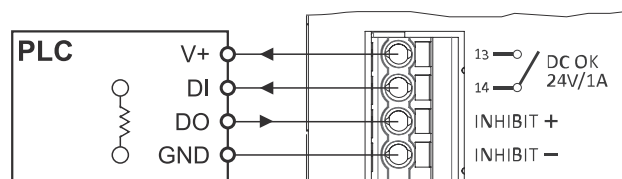
Certifications/Standards

Certifications	cULus (E249179)
Standards	IEC/EN 61010-1:2010 IEC/EN 61010-2-201:2018 EN 62368-1:2014/AC:2015 IEC/EN 60950 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

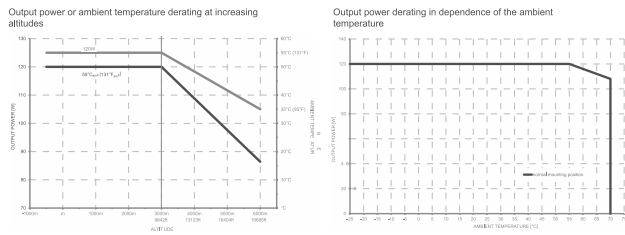
Dimensions



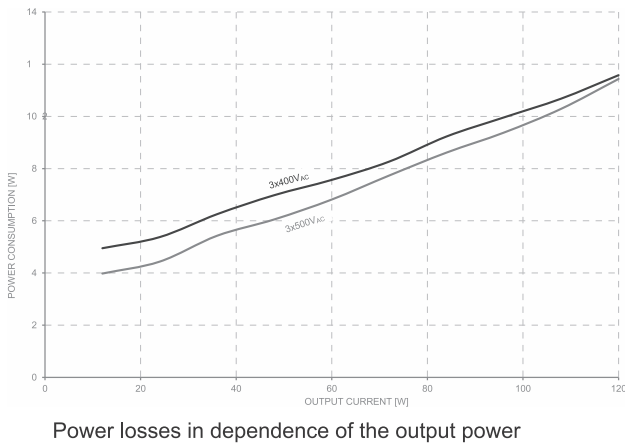
PIN assignment



Derating



Load limit curve



Power losses in dependence of the output power

Signal connection

Signaling & Control 1/2		
DC OK	Relay contact	
Type	N/O	
Characteristic	$U_{out} > 95\% U_{set}$	duration min. 100ms
Closing	$U_{out} < 90\% U_{set}$	duration min. 100ms
Opening		
Resistive load	max. 1A	
Trigger hysteresis	typ. 1.2V	24V _{DC}

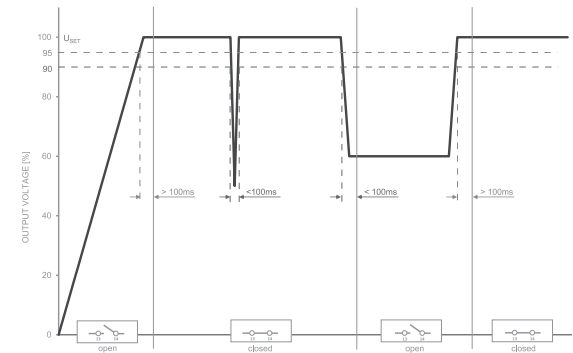


Fig.: DC-OK relay characteristic in dependence of output voltage changes

Signal connection

Signaling & Control 2/2

Remote ON/OFF		Electrical contact
Type		Inhibit
Characteristic		Inhibit
ON threshold	typ. 6V	
OFF threshold	typ. 4V	
Restart delay	max. 5s	
Open circuit voltage	max. 30V	OFF mode
Current	max. 10mA	ON mode
Reference potential	DC-	
Parallel connection	yes	
Active discharging	no	OFF mode

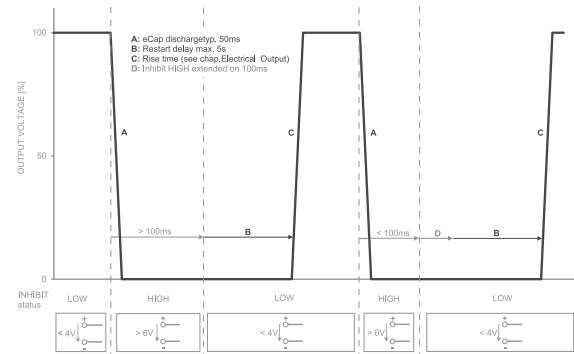


Fig.: Control of the output voltage in dependence of the inhibit relay status.