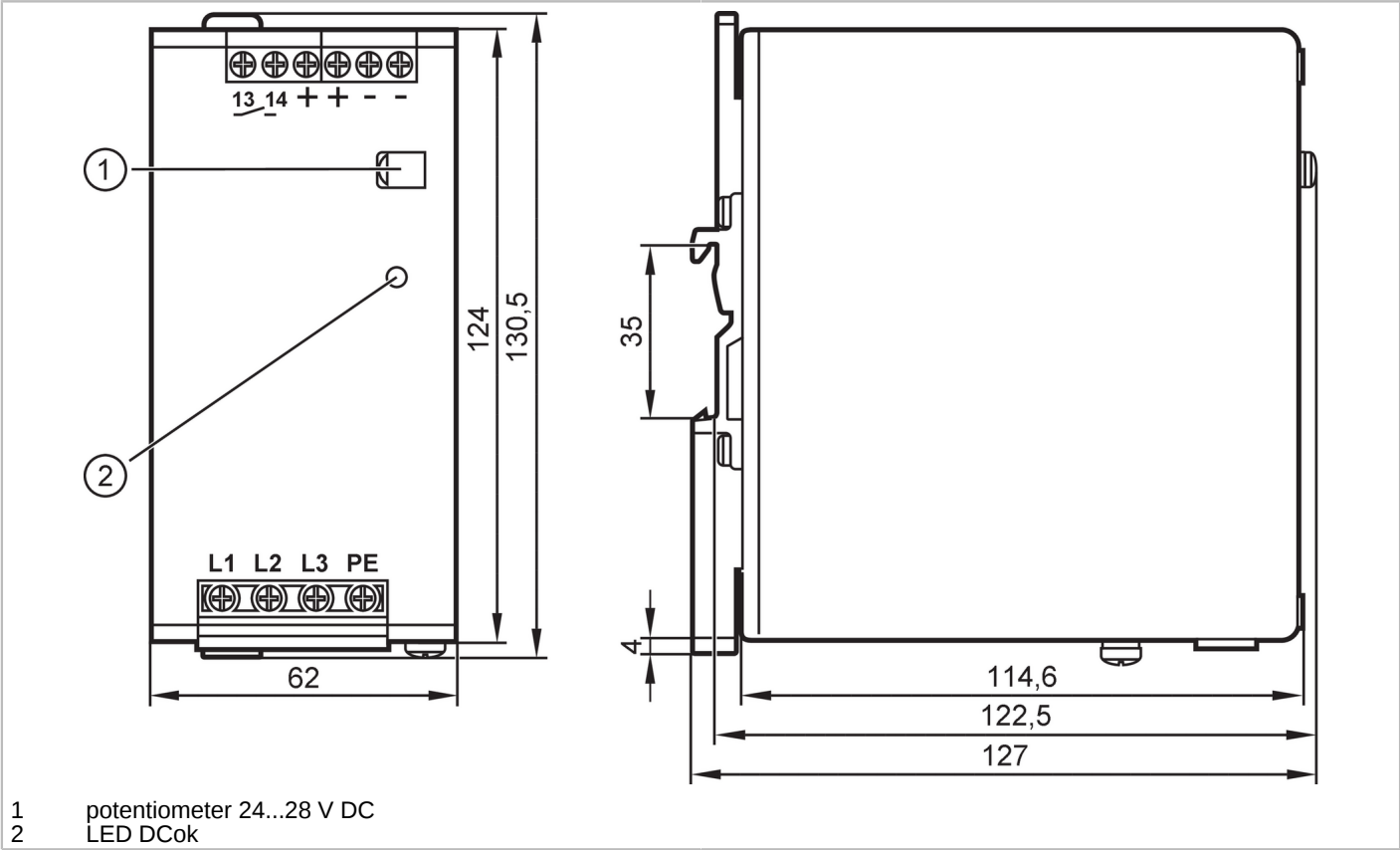


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Switched-mode power supply 24 V DC

PSU-3AC/24VDC-10A



Application

Design

housing for DIN rail mounting

Electrical data

Frequency AC	[Hz]	47...64
Nominal voltage AC	[V]	< 400
Input voltage range AC	[V]	380...480; (-15 % / +20 %)
Output voltage DC	[V]	24...28
Protection class		I; (IEC 61140)
Overvoltage protection		yes; (< 32 DC)
Output voltage	[V]	adjustable; output voltage to SELV, PELV
Max. output current at min. output voltage	[A]	10
Max. output current at max. output voltage	[A]	8.6
Max. output current peak at min. output voltage	[A]	12
Max. output current peak at max. output voltage	[A]	10.3
Output power (permanent)	[W]	240
Output power (peak)	[W]	288
Note on output power (peak)	[W]	≤ 45 °C permitted continuously; > 45 °C < 1 minute every 10 minutes
Power factor (nominal voltage 400 V AC / 50 Hz)		0.53



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Note on power factor (nominal voltage 400 V AC / 50 Hz)	with symmetrical phase voltage
Power factor (nominal voltage 480 V AC / 50 Hz)	0.52
Note on power factor (nominal voltage 480 V AC / 50 Hz)	with symmetrical phase voltage
Power reserve [%]	20
Number of output circuits	1
Max. residual ripple [mV]	50
Switch-on peak current (nominal voltage 400 V AC / 60 Hz) [A]	4
Switch-on peak current (nominal voltage 480 V AC / 50 Hz) [A]	4
Inrush current limitation	yes
Efficiency (nominal voltage 400 V AC / 60 Hz) [%]	92.8
Efficiency (nominal voltage 480 V AC / 50 Hz) [%]	92.9
External input protection	$\geq B-6 A / \geq C-3 A$
Derating [W/K]	6 (60...70 °C)
Mains buffering time (nominal voltage 400 V AC / 60 Hz) [ms]	34
Mains buffering time (nominal voltage 480 V AC / 50 Hz) [ms]	54
Input current (nominal voltage 400 V AC / 60 Hz) [A]	0.7
Input current (nominal voltage 480 V AC / 50 Hz) [A]	0.6
Power loss (nominal voltage 400 V AC / 60 Hz) [W]	18.6
Power loss (nominal voltage 480 V AC / 50 Hz) [W]	18.3
Back feeding protection [V]	35
Outputs	
Short-circuit proof	yes
Overload protection	yes
Overload performance	constant output current
Type DC-OK signal	Relay output
Reliability of the DC OK signal	60 V DC (0.3 A) / 30 V DC (1 A) / 30 V AC (0.5 A)
Operating conditions	
Ambient temperature [°C]	-25...70
Note on ambient temperature	observe the free space for convection (see operating instructions)
Storage temperature [°C]	-40...85
Max. relative air humidity [%]	95; (IEC 60068-2-30)
Protection	IP 20; (EN 60529)

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Pollution degree	2; (IEC 62103: conductive soiling not permitted)
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Tests / approvals

EMC	EN 61000-6-1	
	EN 61000-6-2	
	EN 61000-6-3	
	EN 61000-6-4	
	EN 61000-3-2	class A
Vibration resistance	IEC 60068-2-6	±1,6 mm 2...17,8 Hz / 2 g 17,8...500 Hz
Shock resistance	IEC 60068-2-27	30 g 6 ms / 20 g 11 ms
MTTF [years]		111
Power Factor Correction (PFC)		met

Mechanical data

Weight [g]	891.6
Housing	rectangular
Type of mounting	Mounting on DIN rail; (TH35 (EN 60715))
Dimensions [mm]	124 x 62 x 122.5
Material	housing: steel sheet

Displays / operating elements

Display	DCok	1 x LED
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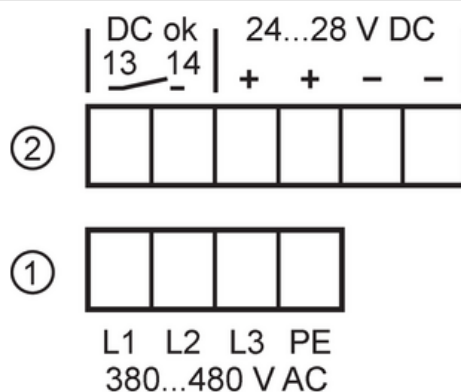
Remarks

Remarks	series connection of outputs only applies to identical units up to max. 150 V DC overall voltage
Pack quantity	1 pcs.

Electrical connection

screw terminals:

Connection



1: primary
2: secondary

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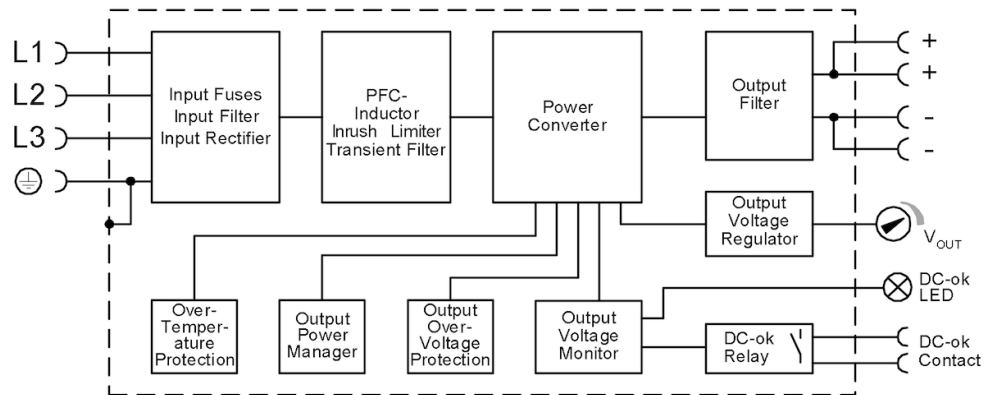


Switched-mode power supply 24 V DC

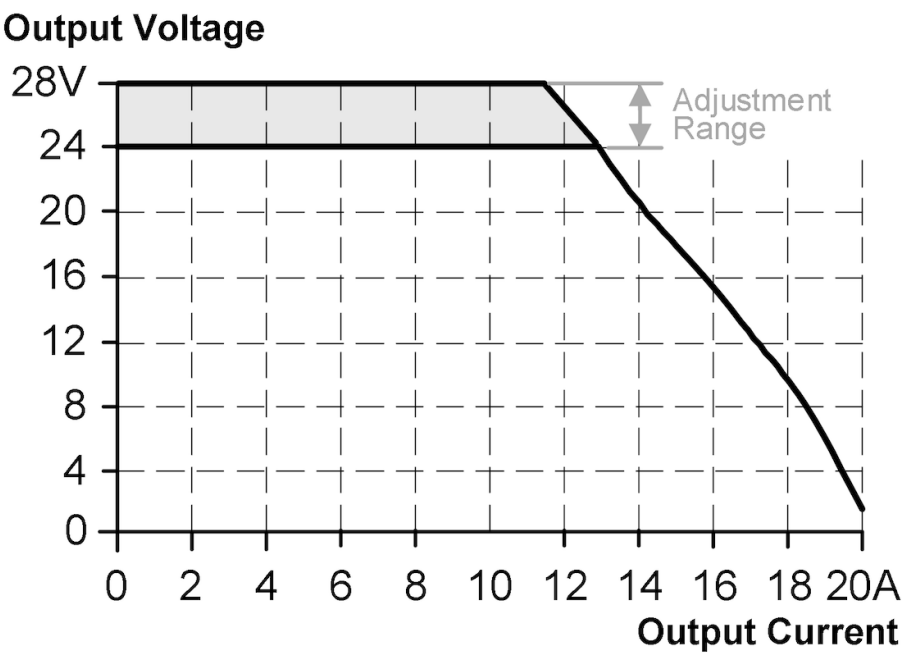
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Diagrams and graphs

Block diagram



Output curve



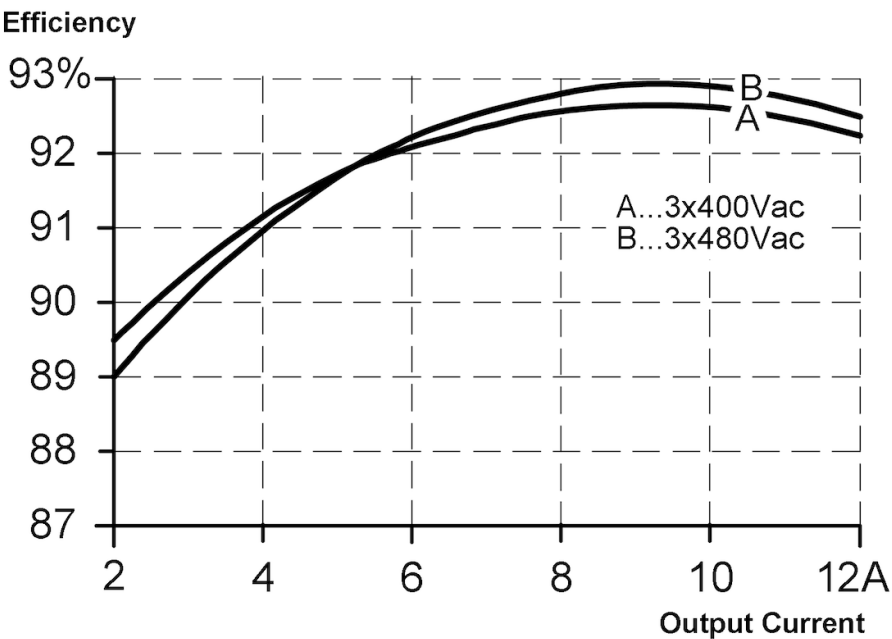
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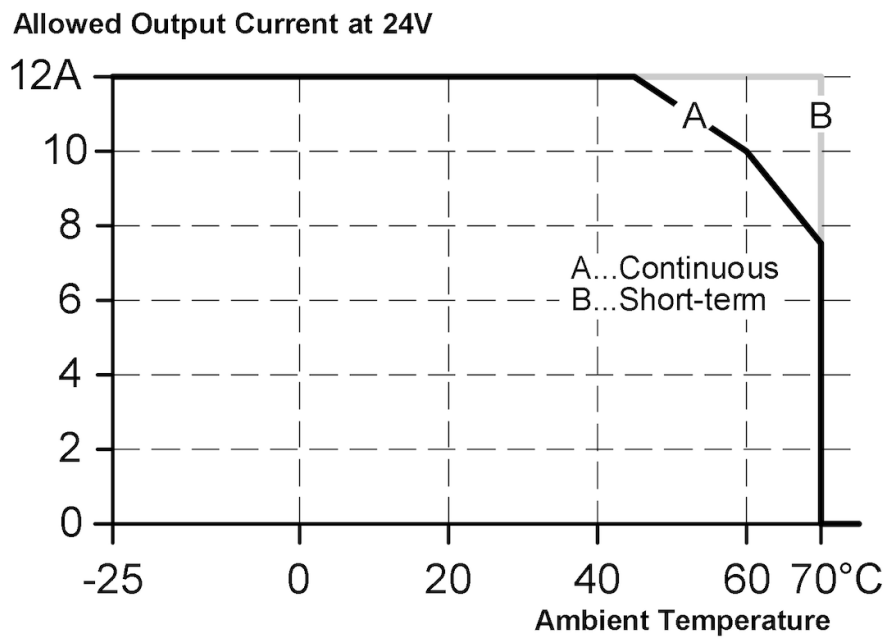
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Characteristic curve for degree of
efficiency / power loss



Characteristic curve for derating



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Switched-mode power supply 24 V DC

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Characteristic curve for mains buffering time

