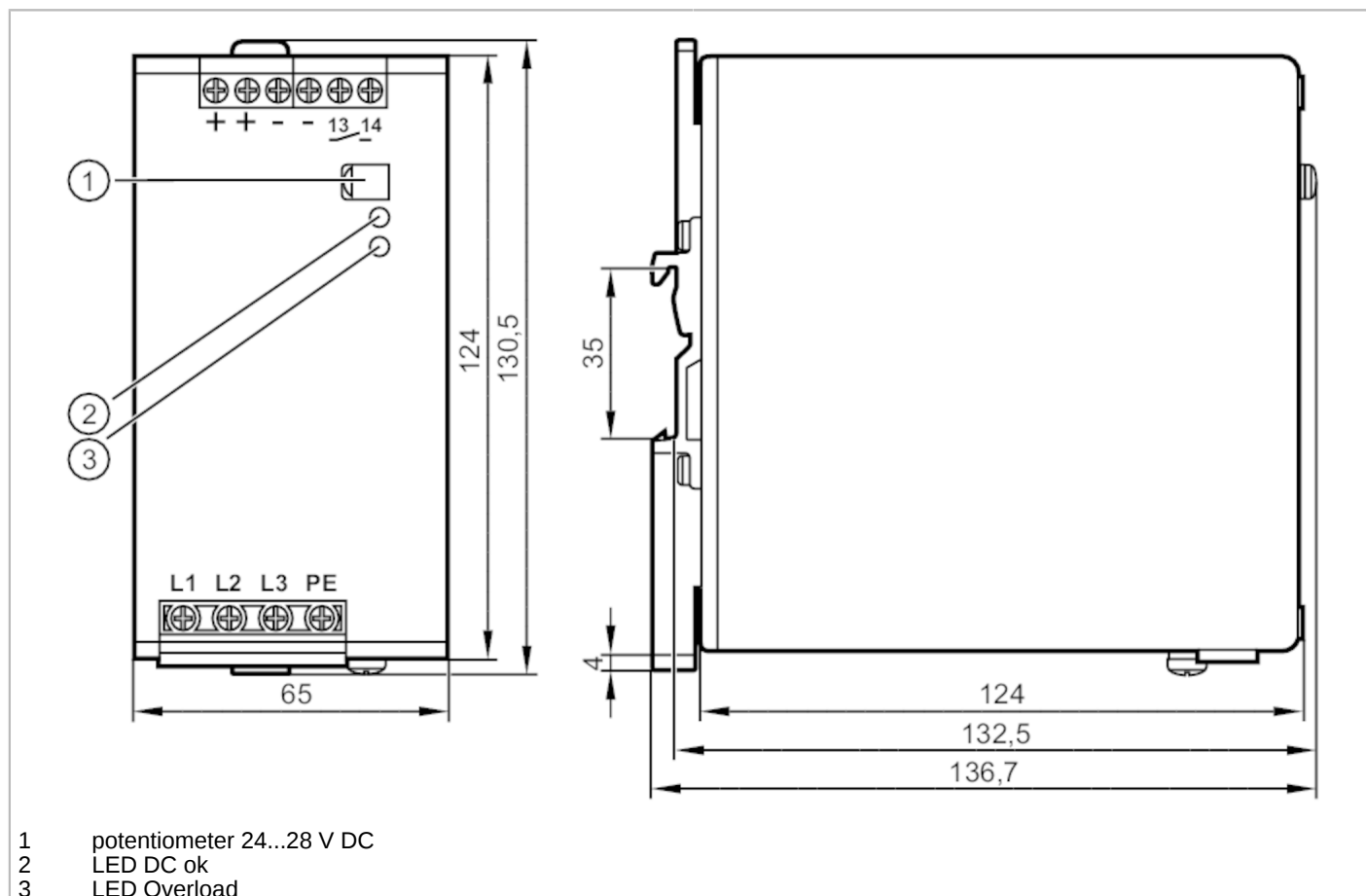


DN4034



Switched-mode power supply 24 V DC

PSU-3AC/24VDC-20A



Application

Design housing for DIN rail mounting

Electrical data

Frequency AC	[Hz]	47...64
Operating voltage tolerance	[%]	15
Nominal voltage AC	[V]	< 400
Input voltage range AC	[V]	380...480
Output voltage DC	[V]	24...28
Protection class		I; (IEC 61140)
Overvoltage protection		yes; (< 35 DC)
Output voltage	[V]	adjustable; output voltage to SELV, PELV
Max. output current at min. output voltage	[A]	20
Max. output current at max. output voltage	[A]	17.5
Max. output current peak at min. output voltage	[A]	30
Max. output current peak at max. output voltage	[A]	26
Output power (permanent)	[W]	480
Output power (peak)	[W]	720



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Note on output power (peak) [W]	if consumption > 4 s the power is automatically reduced to the output power	
Power factor (nominal voltage 400 V AC / 50 Hz)	0.94	
Note on power factor (nominal voltage 400 V AC / 50 Hz)	with symmetrical phase voltage	
Power factor (nominal voltage 480 V AC / 50 Hz)	0.95	
Note on power factor (nominal voltage 480 V AC / 50 Hz)	with symmetrical phase voltage	
Power reserve [%]	50	
Number of output circuits	1	
Max. residual ripple [mV]	100	
Switch-on peak current (nominal voltage 400 V AC / 60 Hz) [A]	3	
Switch-on peak current (nominal voltage 480 V AC / 50 Hz) [A]	3	
Inrush current limitation	yes	
Efficiency (nominal voltage 400 V AC / 60 Hz) [%]	95	
Efficiency (nominal voltage 480 V AC / 50 Hz) [%]	94.8	
External input protection	$\leq B-6 A / \leq C-3 A$	
Derating [W/K]	12 (60...70 °C)	
Mains buffering time (nominal voltage 400 V AC / 60 Hz) [ms]	22	
Mains buffering time (nominal voltage 480 V AC / 50 Hz) [ms]	22	
Input current (nominal voltage 400 V AC / 60 Hz) [A]	0.78	
Input current (nominal voltage 480 V AC / 50 Hz) [A]	0.64	
Power loss (nominal voltage 400 V AC / 60 Hz) [W]	25.3	
Power loss (nominal voltage 480 V AC / 50 Hz) [W]	26.6	
Back feeding protection [V]	34	

Outputs		
Short-circuit proof	yes	
Overload protection	yes	
Overload performance	output current constant	
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	



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Max. relative air humidity [%]	95; (IEC 60068-2-30)
Protection	IP 20; (EN 60529)
Pollution degree	2; (IEC 62103: conductive soiling not permitted)

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]		132
Power Factor Correction (PFC)		met

Mechanical data

Weight [g]	1029
Housing	rectangular
Type of mounting	mounting on DIN rail; (TH35 (EN 60715))
Dimensions [mm]	124 x 65 x 132.5
Materials	housing: steel sheet

Displays / operating elements

Display	DC ok	1 x LED
	overload	1 x LED

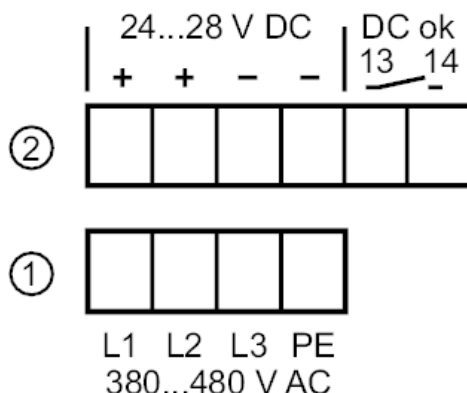
Remarks

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:

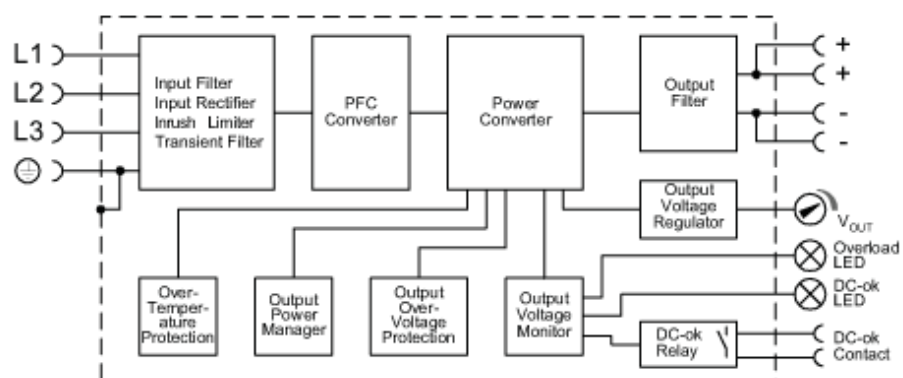
Connection



- 1: primary
2: secondary

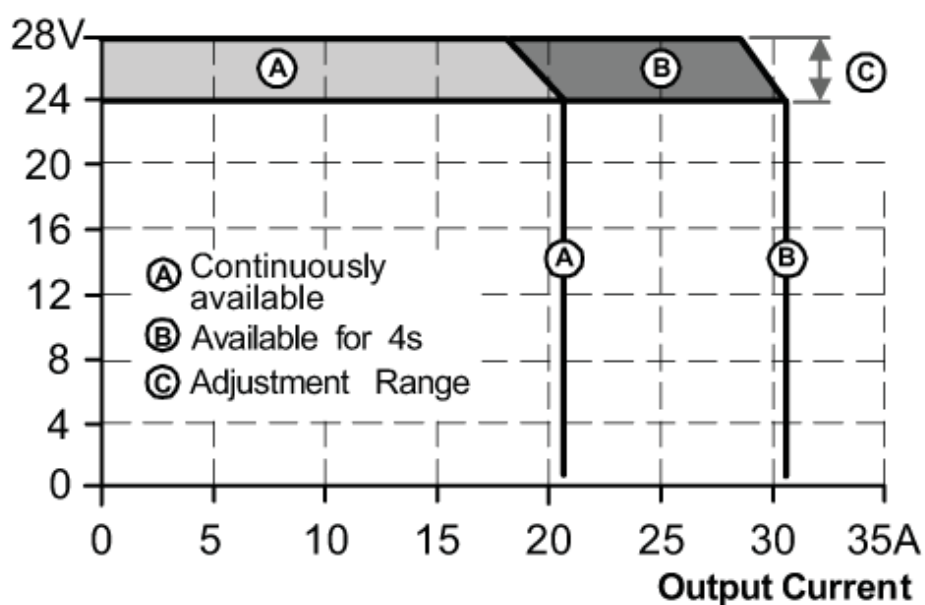
Diagrams and graphs

block diagram



output characteristics

Output Voltage



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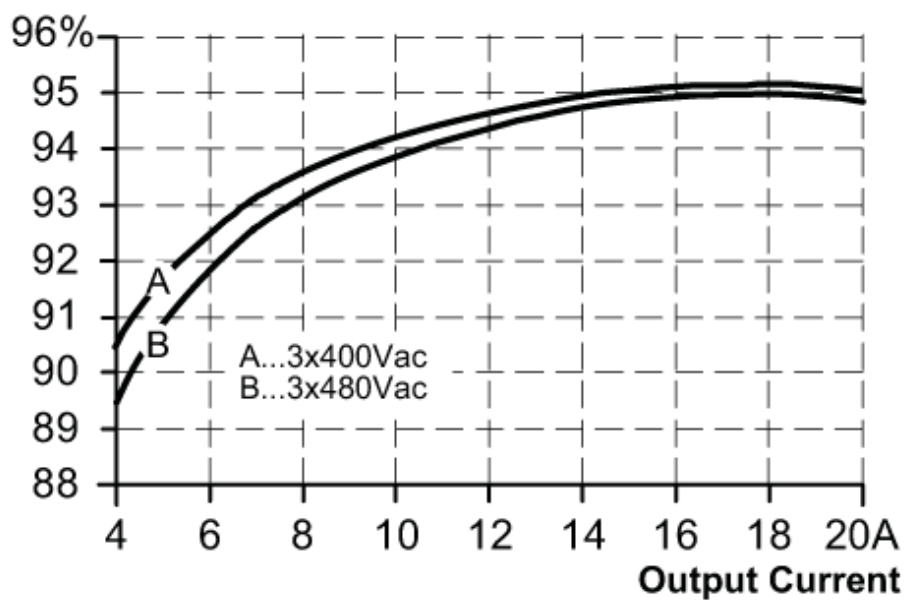


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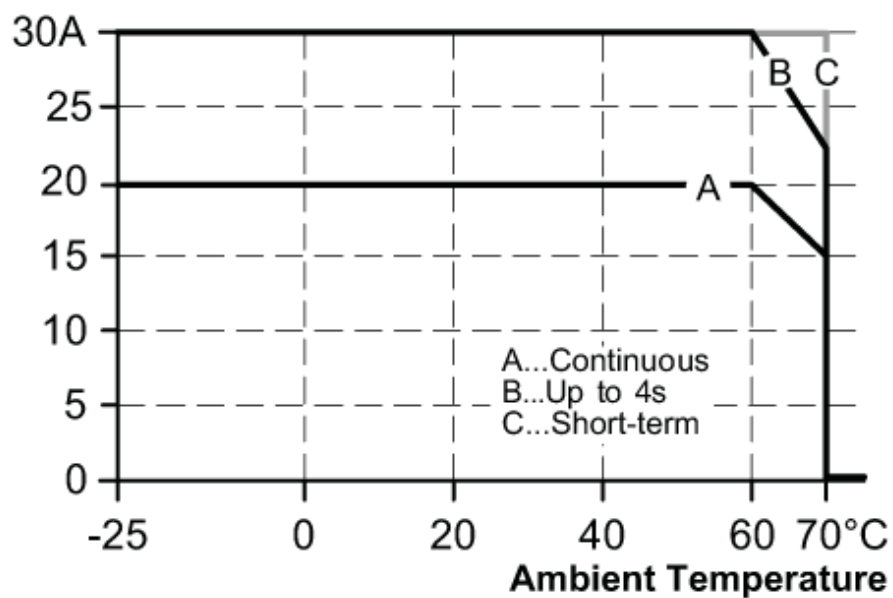
characteristic curve for degree of
efficiency / power loss

Efficiency



characteristic line for derating

Allowed Output Current at 24V



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characteristic line for mains buffering
time

