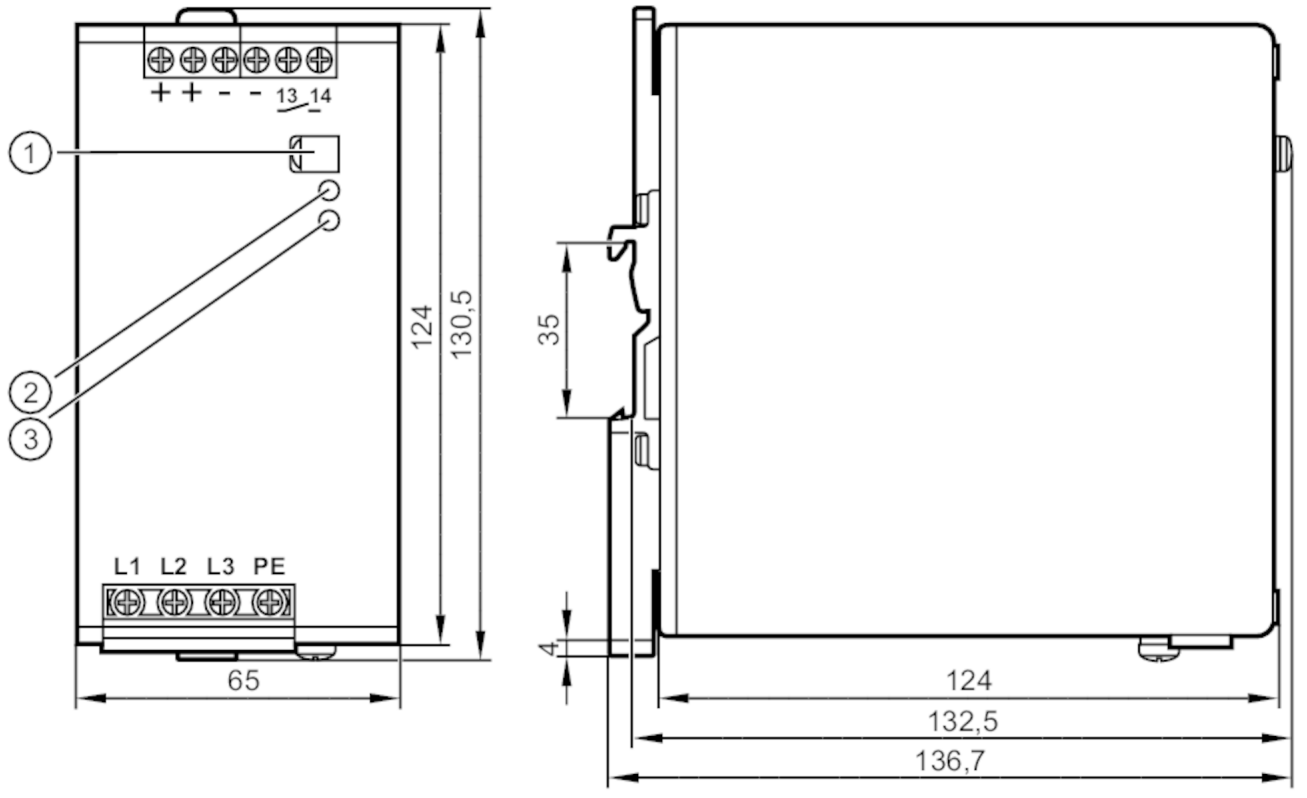
DN4034

Switched-mode power supply 24 V DC

PSU-3AC/24VDC-20A



1 potentiometer 24...28 V DC
2 LED DC ok
3 LED Overload

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
Note on output power (peak)	[W]	if consumption > 4 s the power is automatically reduced to the output power

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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		≤ B-6 A / ≤ 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
Max. relative air humidity	[%]	95; (IEC 60068-2-30)

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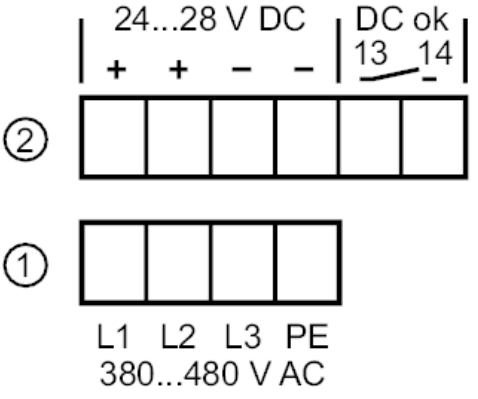
Protection		IP 20; (EN 60529)	
Pollution degree		2; (IEC 62103: conductive soiling not permitted)	
Tests / approvals			
EMC		EN 61000-6-1	
		EN 61000-6-2	
		EN 61000-6-3	
		EN 61000-6-4	
		EN 61000-3-2	Class A
Vibration resistance		IEC 60068-2-6	±1,6 mm 2...17,8 Hz / 2 g 17,8...500 Hz
Shock resistance		IEC 60068-2-27	30 g 6 ms / 20 g 11 ms
Power Factor Correction (PFC)		met	
Mechanical data			
Weight	[g]	1029	
Type of mounting		rail; (TH35 (EN 60715))	
Dimensions	[mm]	124 x 65 x 132.5	
Materials		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

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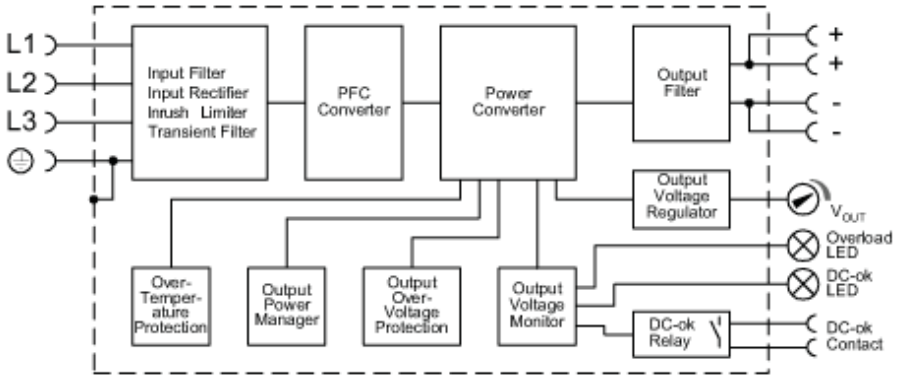
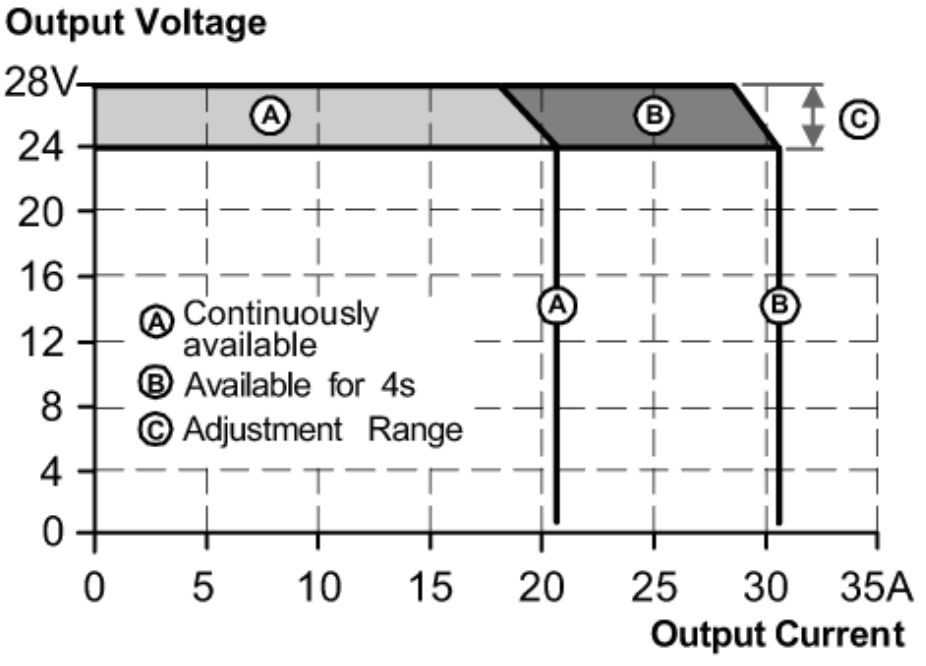
Diagrams and graphs

block diagram



output characteristics



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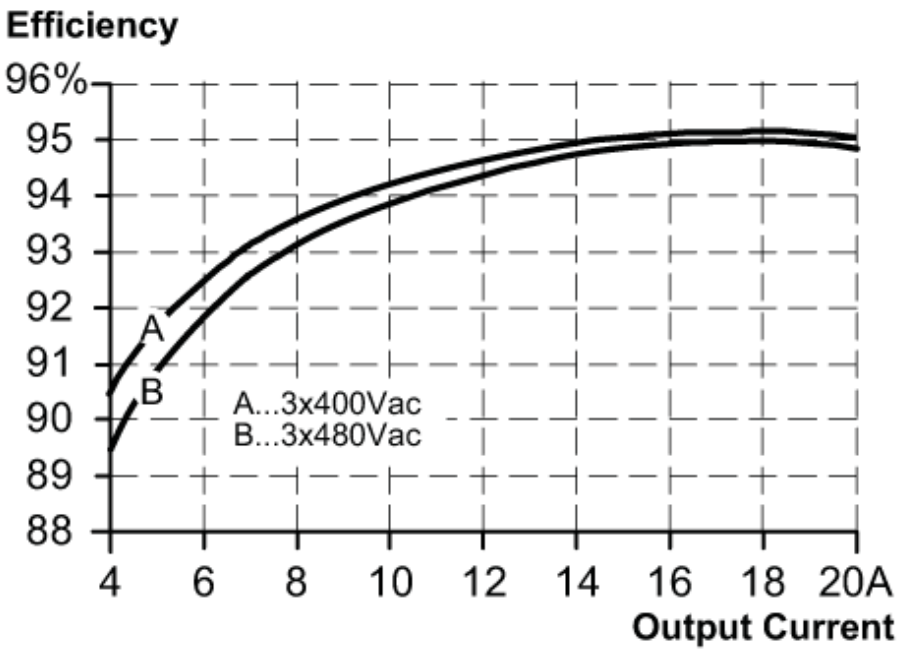
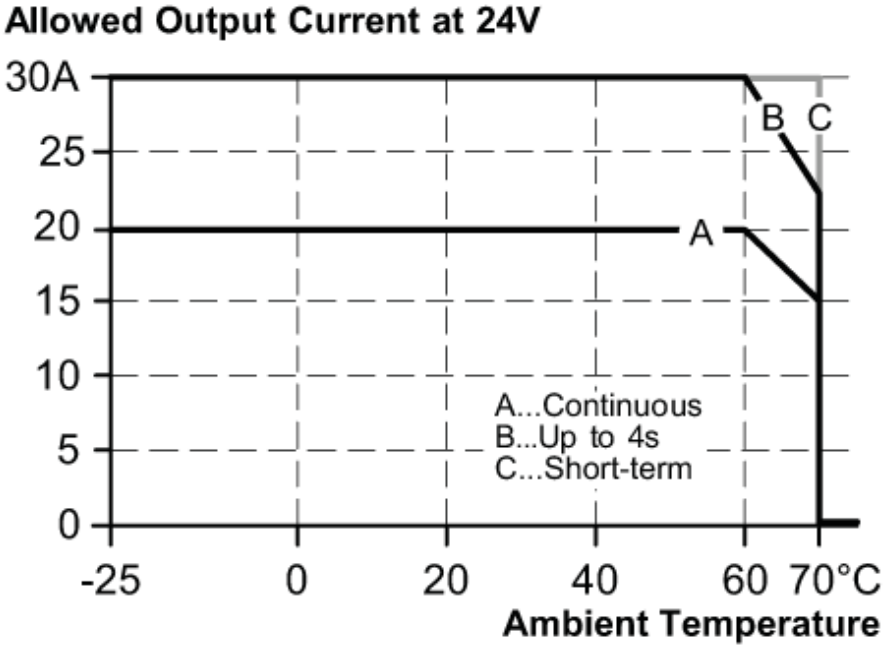
characteristic curve for degree of efficiency / power loss



characteristic line for derating



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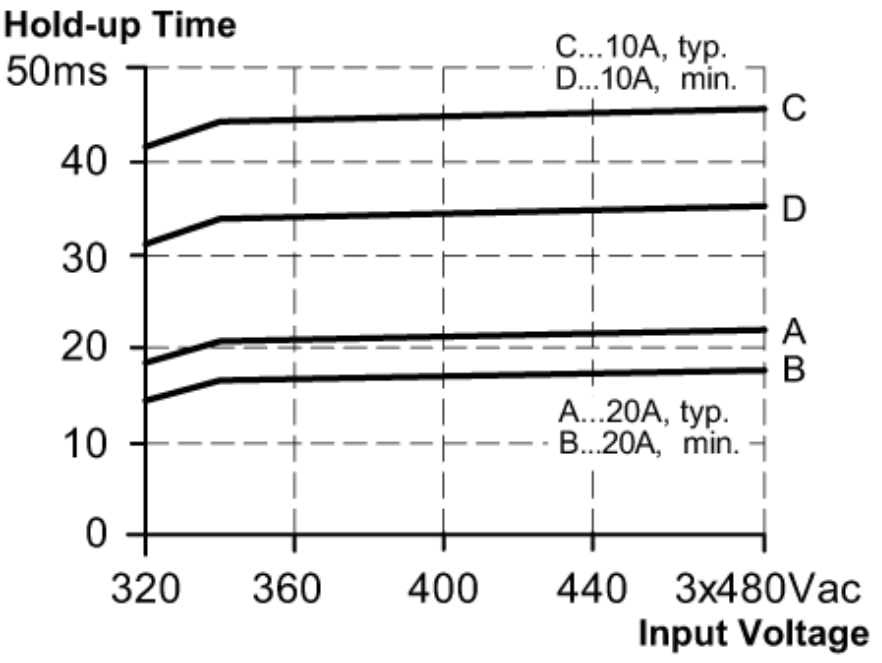
characteristic line for mains buffering time