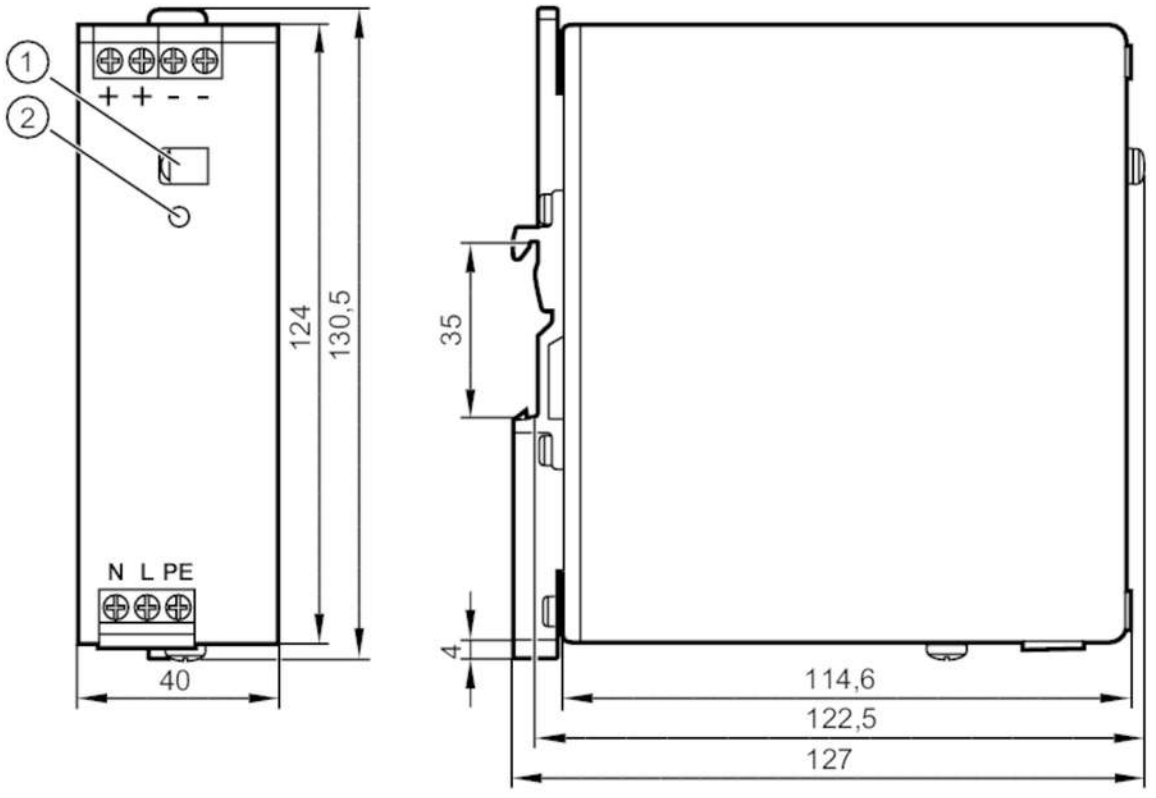
DN4012

Switched-mode power supply 24 V DC

PSU-1AC/24VDC-5A



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

Electrical data		
Frequency AC	[Hz]	47...64
Operating voltage tolerance	[%]	10
Operating voltage tolerance 2	[%]	10
Operating voltage	[V]	automatic range selection
Nominal voltage AC	[V]	< 230
Input voltage range AC	[V]	100...120 / 200...240; (automatic range selection)
Output voltage DC	[V]	24...28
Protection class		I; (IEC 61140)
Overvoltage protection		yes; (< 39 DC)
Output voltage	[V]	adjustable; output voltage to SELV, PELV
Max. output current at min. output voltage	[A]	5
Max. output current at max. output voltage	[A]	4.3
Max. output current peak at min. output voltage	[A]	6
Max. output current peak at max. output voltage	[A]	5.1
Output power (permanent)	[W]	120
Output power (peak)	[W]	144
Note on output power (peak)	[W]	≤ 45 °C permitted continuously; > 45 °C < 1 minute every 10 minutes

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PSU-1AC/24VDC-5A

Power factor (nominal voltage 120 V AC / 60 Hz)		0.56
Power factor (nominal voltage 230 V AC / 50 Hz)		0.47
Power reserve	[%]	20
Number of output circuits		1
Max. residual ripple	[mV]	50
Switch-on peak current (nominal voltage 120 V AC / 60 Hz)	[A]	3
Switch-on peak current (nominal voltage 230 V AC / 50 Hz)	[A]	3
Inrush current limitation		yes
Efficiency (nominal voltage 120 V AC / 60 Hz)	[%]	89.4
Efficiency (nominal voltage 230 V AC / 50 Hz)	[%]	90.2
External input protection		≤ B-10 A / ≤ C-6 A
Derating	[W/K]	3 (60...70 °C)
Mains buffering time (nominal voltage 120 V AC / 60 Hz)	[ms]	80
Mains buffering time (nominal voltage 230 V AC / 50 Hz)	[ms]	78
Input current (nominal voltage 120 V AC / 60 Hz)	[A]	2.05
Input current (nominal voltage 230 V AC / 50 Hz)	[A]	1.23
Power loss (nominal voltage 120 V AC / 60 Hz)	[W]	14.5
Power loss (nominal voltage 230 V AC / 50 Hz)	[W]	13.2
Back feeding protection	[V]	35
Outputs		
Short-circuit proof		yes
Overload protection		yes
Overload performance		output current constant
Parallel connection of outputs possible		no
Series connection of outputs possible		yes
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)
Pollution degree		2; (IEC 62103: conductive soiling not permitted)

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Switched-mode power supply 24 V DC

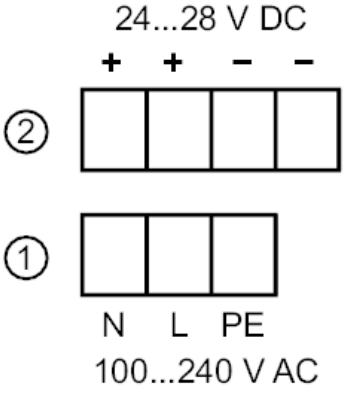
PSU-1AC/24VDC-5A

Tests / approvals			
EMC		EN 61000-6-1	
		EN 61000-6-2	
		EN 61000-6-4	
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
Mechanical data			
Weight	[g]	594.5	
Type of mounting		rail; (TH35 (EN 60715))	
Dimensions	[mm]	124 x 40 x 122.5	
Materials		steel sheet	
Displays / operating elements			
Display		DC ok	1 x LED
Remarks			
Remarks		Series connection of outputs only applies to identical units up to max. 150 V DC overall voltage	
		100 V AC mains power and permanent P > 120 W may result in thermal shutdown.	
Pack quantity		1 pcs.	

Electrical connection

screw terminals:

Connection



1: primary
2: secondary

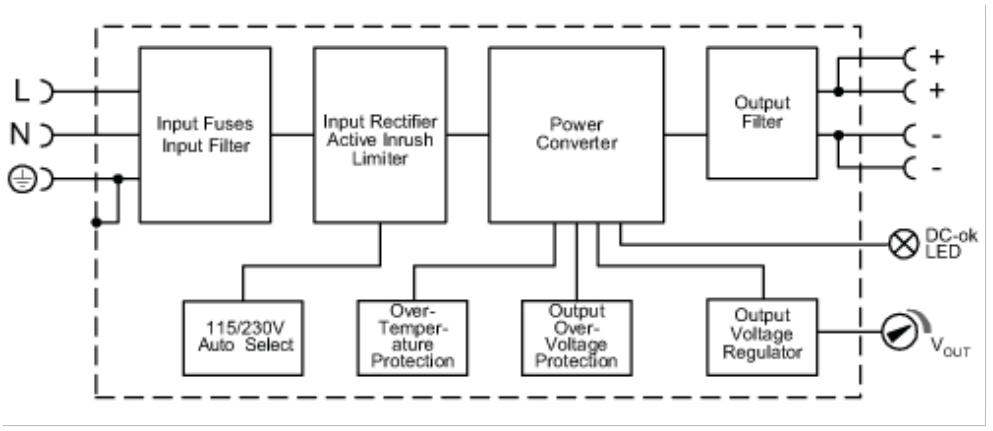
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Switched-mode power supply 24 V DC

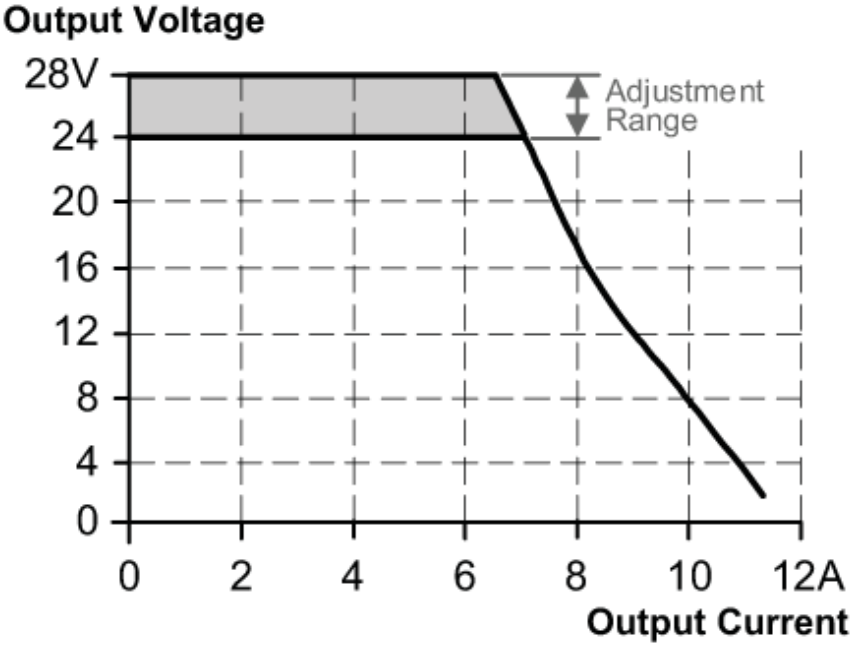
PSU-1AC/24VDC-5A

Diagrams and graphs

block diagram



output characteristics

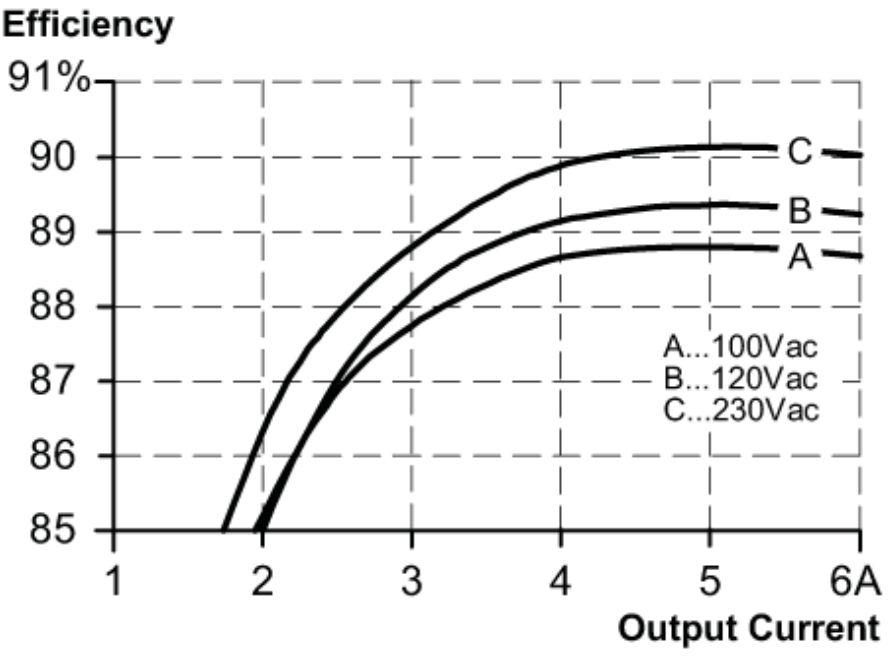


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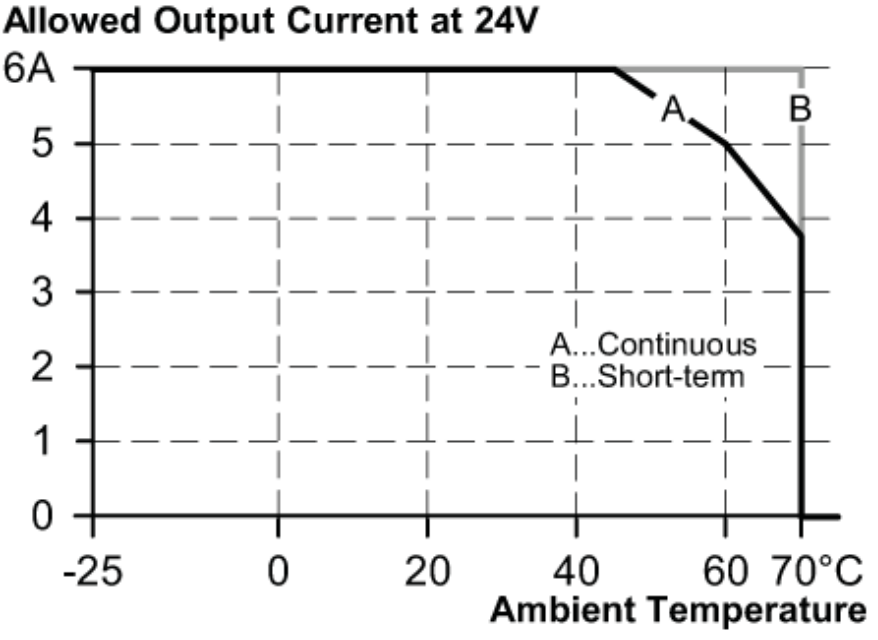
Switched-mode power supply 24 V DC

PSU-1AC/24VDC-5A

characteristic curve for degree of efficiency / power loss



characteristic line for derating



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Switched-mode power supply 24 V DC

PSU-1AC/24VDC-5A

characteristic line for mains buffering time

