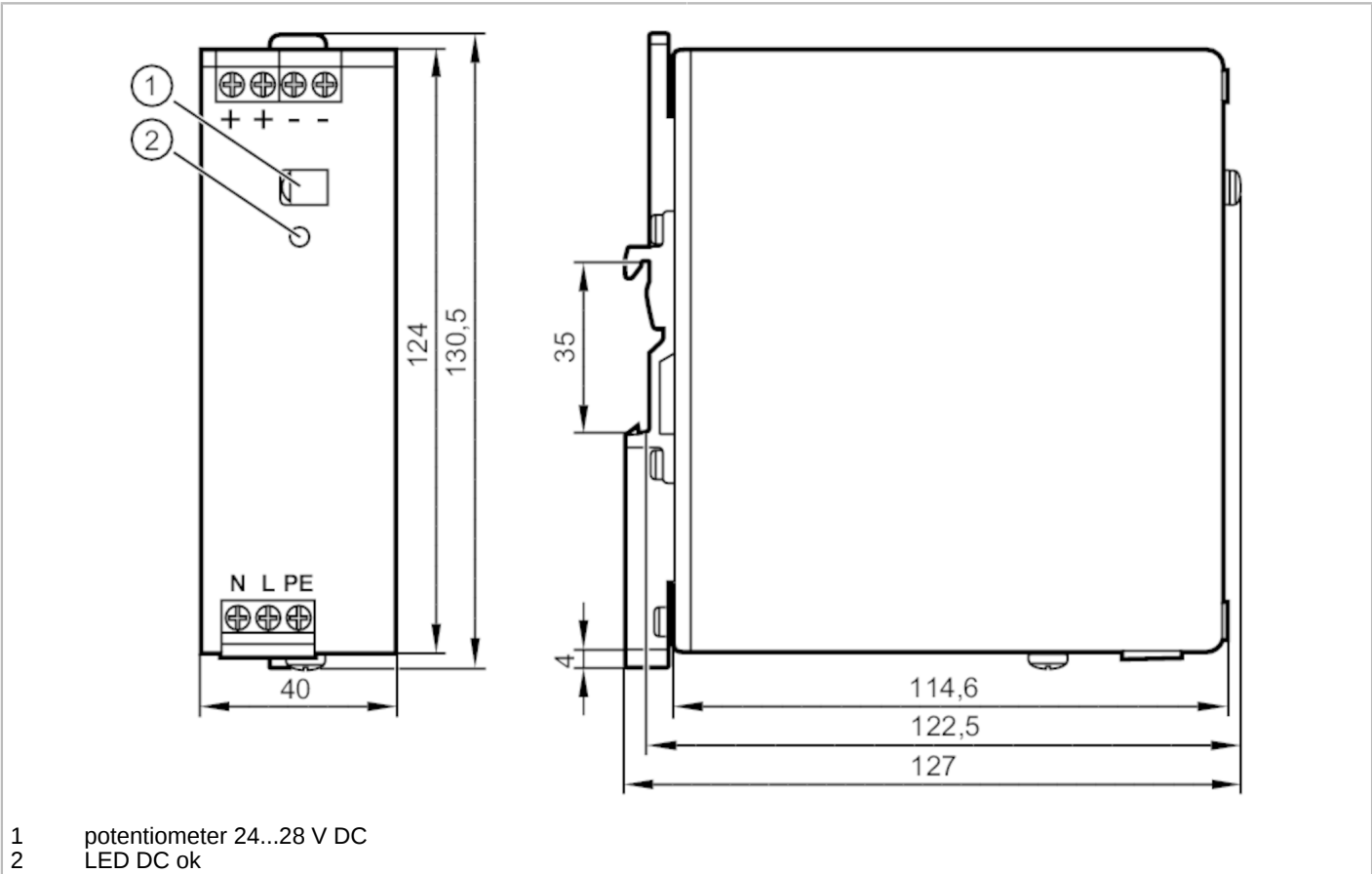


DN4012



Switched-mode power supply 24 V DC

PSU-1AC/24VDC-5A



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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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	$\leq B-10 A / \leq C-6 A$
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)



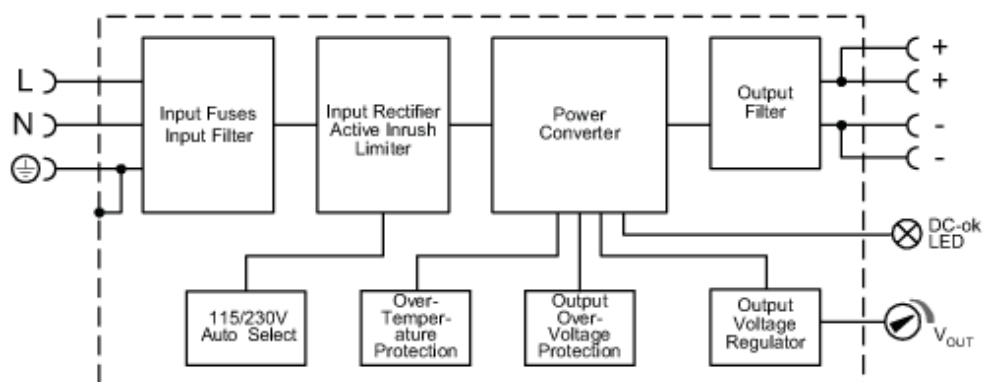
Switched-mode power supply 24 V DC

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		
24...28 V DC + + - - ② ① N L PE 100...240 V AC		
1:	primary	
2:	secondary	

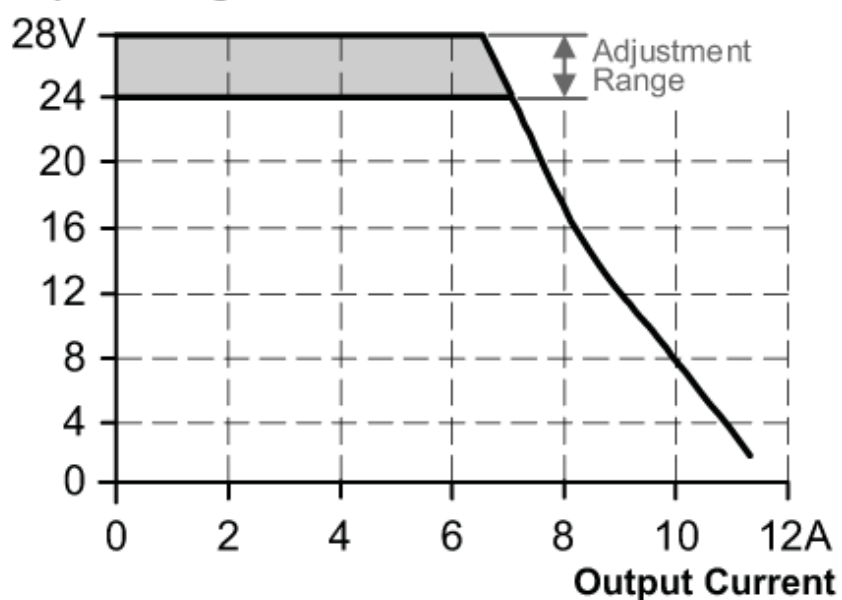
Diagrams and graphs

block diagram



output characteristics

Output Voltage

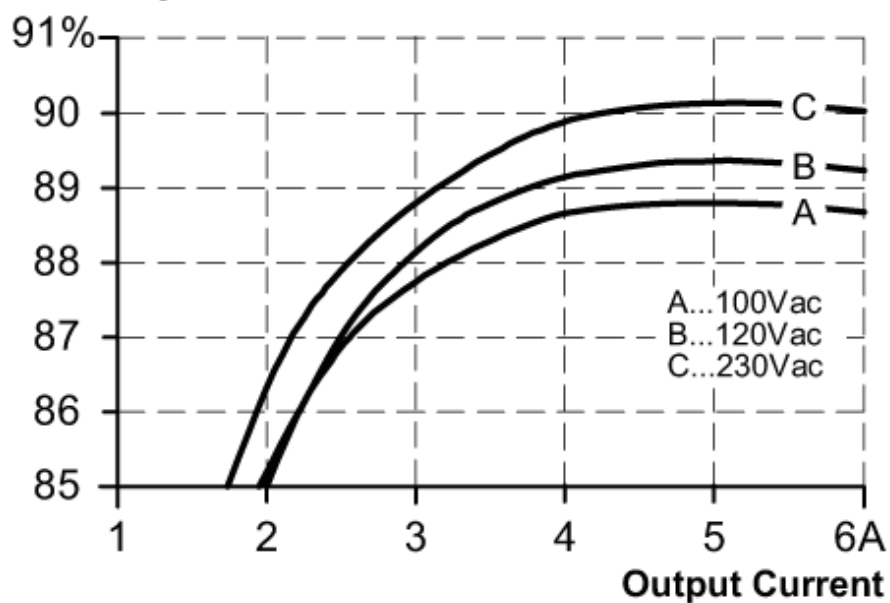


Switched-mode power supply 24 V DC

PSU-1AC/24VDC-5A

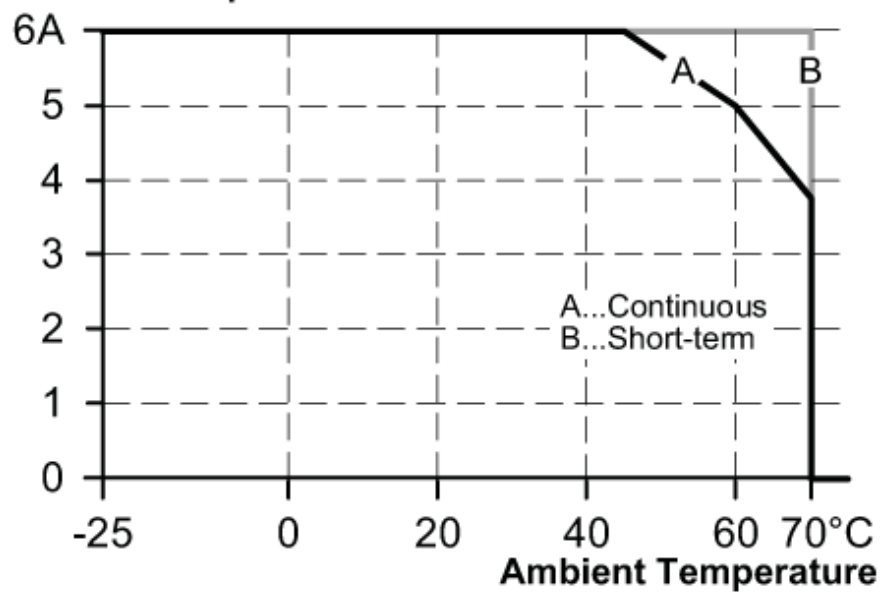
characteristic curve for degree of efficiency / power loss

Efficiency



characteristic line for derating

Allowed Output Current at 24V



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characteristic line for mains buffering
time

Hold-up Time at 24V

