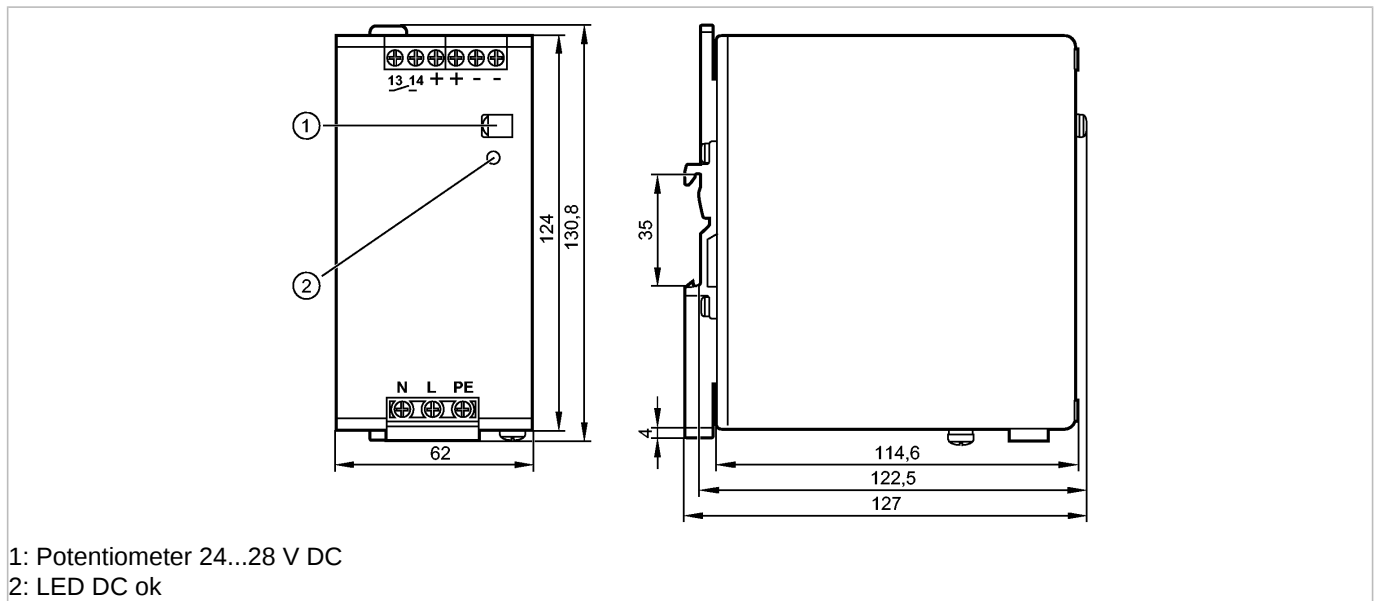


DN4013

PSU-1AC/24VDC-10A

Evaluation systems, power supplies



1: Potentiometer 24...28 V DC
2: LED DC ok



Product characteristics

Switched-mode power supply 24 V DC

240 W power output

Primary switched mode

Output current 10 A, regulated

Application

Application regulated power supply for sensors, actuators, evaluation electronics and plcs

Electrical data

Input voltage range	[V]	100...120 AC; ± 10 % / 200...240 AC; ± 10 %; automatic range selection
Nominal voltage	[V]	115 / 230 AC
Frequency range	[Hz]	47...64
Nominal frequency	[Hz]	50 / 60
Output voltage	[V]	24...28 DC; adjustable; output voltage to SELV, PELV
Output current	[A]	10 (24 V DC) / 8.6 (28 V DC)
Output current peak	[A]	12 (24 V DC) / 10.3 (28 V DC)
Output power	[W]	240
Output power peak	[W]	288; ≤ 45 °C permitted continuously; > 45 °C < 1 minute every 10 minutes
Power factor		0.59 (120 V AC; 60 Hz) / 0.51 (230 V AC; 50 Hz)
Power reserve	[%]	20
Residual ripple	[mVpp]	< 50
Switch-on peak current	[A]	3 (120 V AC; 60 Hz) / 3 (230 V AC; 50 Hz)
Inrush current limitation		yes
Efficiency	[%]	91 (120 V AC; 60 Hz) / 91.6 (230 V AC; 50 Hz)
Short-circuit proof		yes
Overload protection		yes
Overload performance		constant output current
Overvoltage protection	[V]	< 39 DC
Excess temperature protection		yes
External input protection		≤ B-10 A / ≤ C-6 A
Derating	[W/K]	6 (60...70 °C)



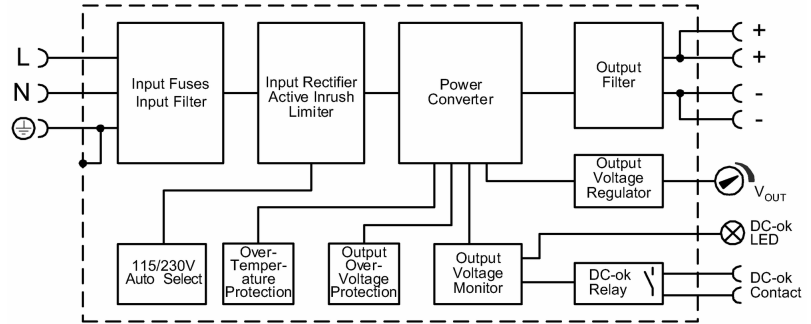
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PSU-1AC/24VDC-10A

Evaluation systems, power supplies

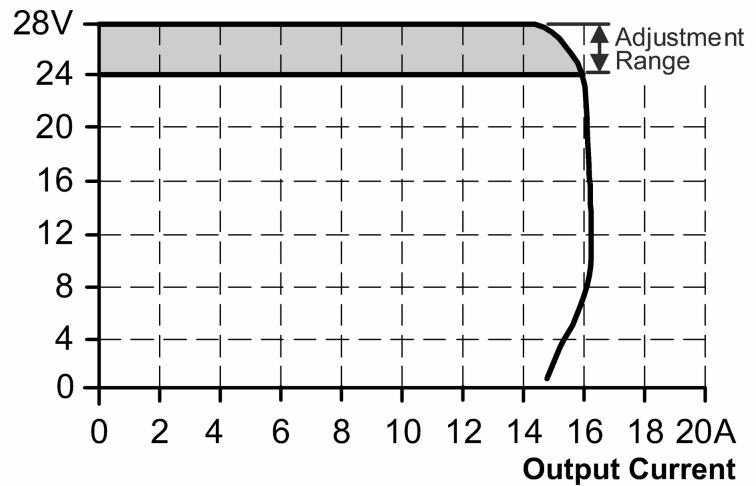
Mains buffering time [ms]	46 (120 V AC; 60 Hz) / 47 (230 V AC; 50 Hz)
Protection class	I (IEC 61140)
Input current [A]	3.73 (120 V AC; 60 Hz) / 2.23 (230 V AC; 50 Hz)
Power loss [W]	23.7 (120 V AC; 60 Hz) / 22 (230 V AC; 50 Hz)
Back feeding protection [V]	≤ 35 DC

Block diagram



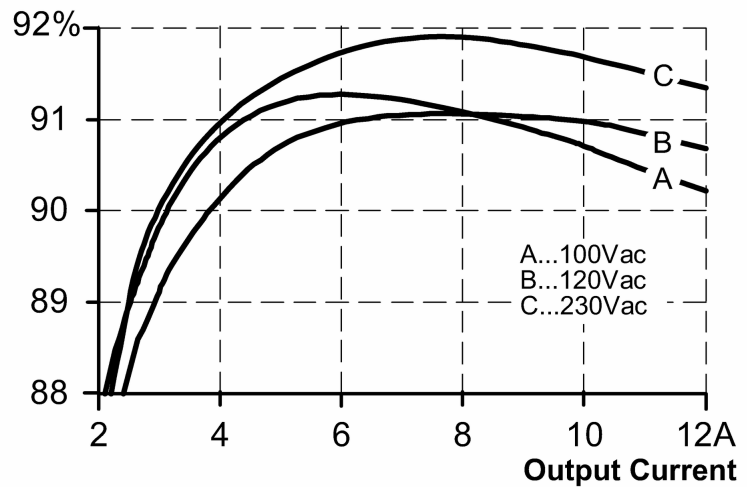
Output curve

Output Voltage



Characteristic curve for degree of efficiency / power loss

Efficiency



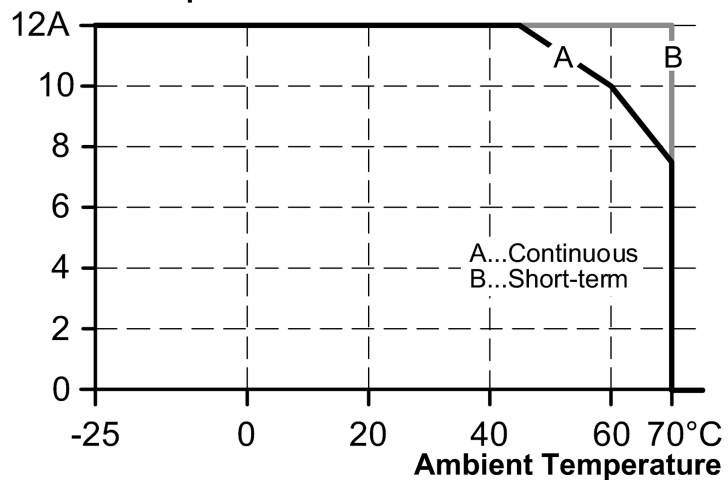
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PSU-1AC/24VDC-10A

Evaluation systems, power supplies

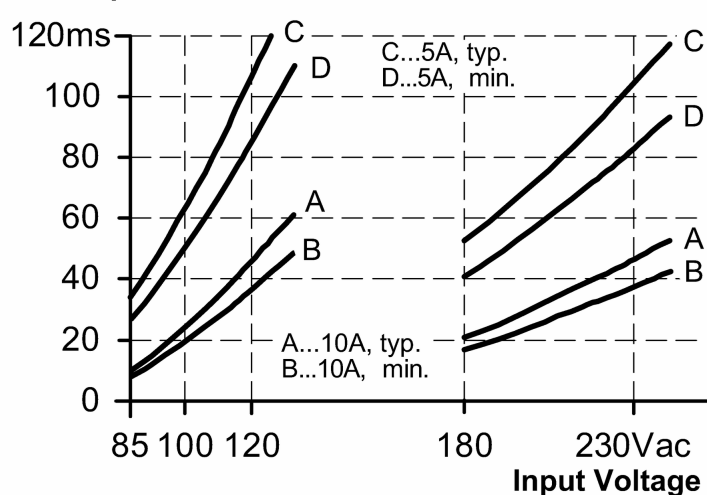
Characteristic curve for derating

Allowed Output Current at 24V



Characteristic curve for mains buffering time

Hold-up Time at 24V



Outputs	
DC OK signal	Relay output (60 V DC; 0.3 A / 30 V DC; 1 A / 30 V AC; 0.5 A)
Parallel connection of outputs	no
Series connection of outputs	yes
Environment	
Ambient temperature [°C]	-25...70, 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; to EN 60529
Degree of soiling	2; (IEC 62103) conductive soiling not permitted
Tests / approvals	
EMC	EN 61000-6-1 EN 61000-6-2 EN 61000-6-4
UL	UL 508 (Industrial Control Equipment)
Shock resistance	IEC 60068-2-27 30 g (6 ms) / 20 g (11 ms)
Vibration resistance	IEC 60068-2-6 ±1.6 mm (2...25 Hz) / 2 g (17.8...500 Hz)
MTBF [h]	821000



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PSU-1AC/24VDC-10A

Evaluation systems, power supplies

Mechanical data

Housing materials	steel sheet
Installation	rail TH35 (to EN 60715)
Weight [kg]	0.896

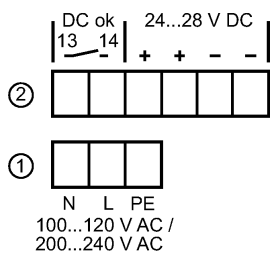
Displays / operating elements

Display	DCok 1 LED
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Electrical connection

Connection	screw terminals
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Wiring



- 1: primary
- 2: secondary

Remarks

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