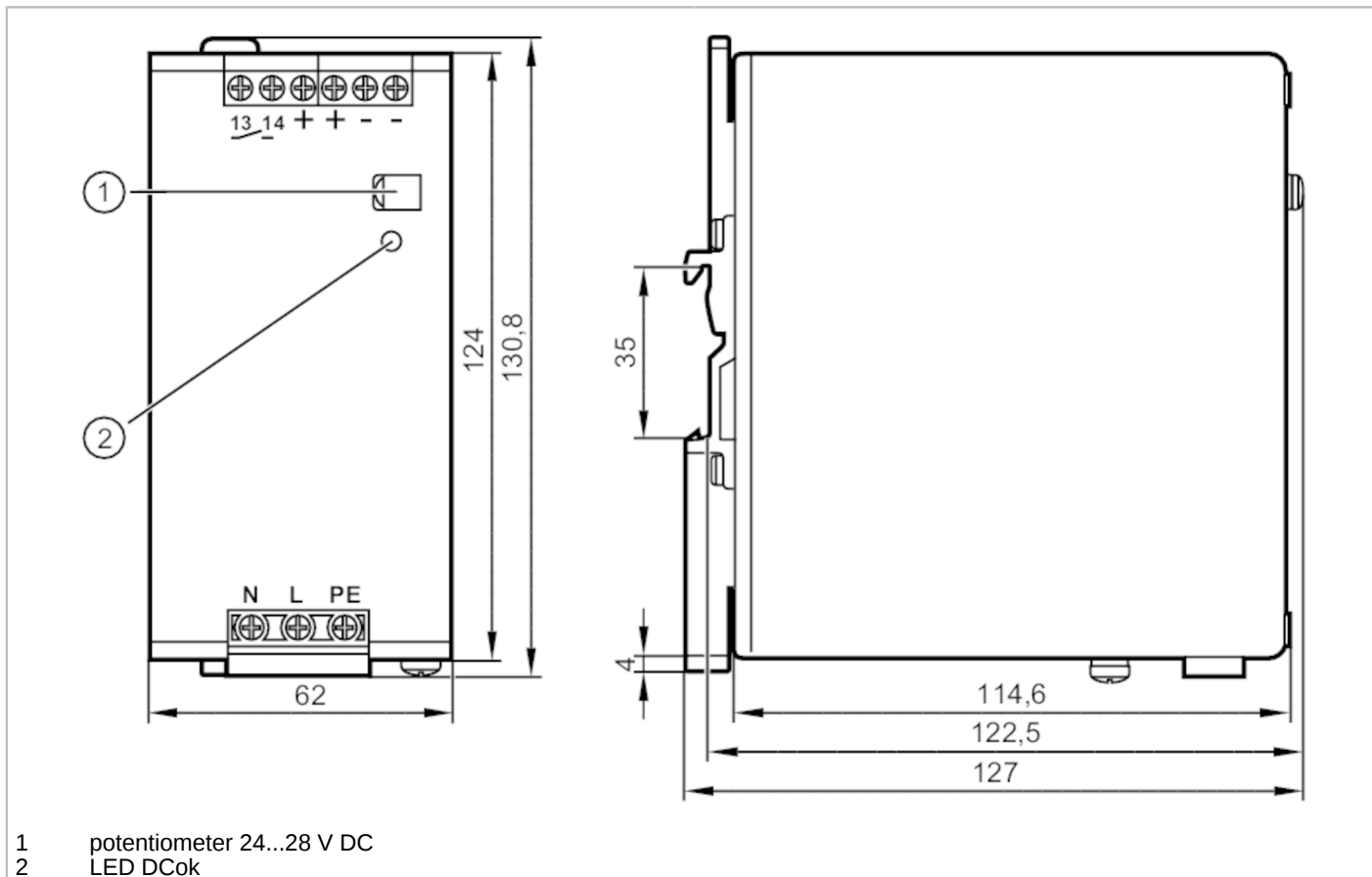


# DN4013



## Switched-mode power supply 24 V DC

PSU-1AC/24VDC-10A



Application	
Design	housing for DIN rail mounting
Electrical data	
Frequency AC	[Hz] 47...64
Operating voltage	[V] automatic range selection
Nominal voltage AC	[V] < 230
Nominal frequency AC	[Hz] 50...60
Input voltage range AC	[V] 100...120 / 200...240; (-10 % / +10 %)
Output voltage DC	[V] 24...28
Protection class	I; (IEC 61140)
Oversvoltage protection	yes; (< 39 DC)
Output voltage	[V] adjustable; output voltage to SELV, PELV
Max. output current at min. output voltage	[A] 10
Max. output current at max. output voltage	[A] 8.6
Max. output current peak at min. output voltage	[A] 12
Max. output current peak at max. output voltage	[A] 10.3
Output power (permanent)	[W] 240

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Output power (peak)	[W]	288
Note on output power (peak)	[W]	≤ 45 °C permitted continuously; > 45 °C < 1 minute every 10 minutes
Power factor (nominal voltage 120 V AC / 60 Hz)		0.59
Power factor (nominal voltage 230 V AC / 50 Hz)		0.51
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)	[%]	91
Efficiency (nominal voltage 230 V AC / 50 Hz)	[%]	91.6
External input protection		≥ B-10 A / ≥ C-6 A
Derating	[W/K]	6 (60...70 °C)
Mains buffering time (nominal voltage 120 V AC / 60 Hz)	[ms]	46
Mains buffering time (nominal voltage 230 V AC / 50 Hz)	[ms]	47
Input current (nominal voltage 120 V AC / 60 Hz)	[A]	3.73
Input current (nominal voltage 230 V AC / 50 Hz)	[A]	2.23
Power loss (nominal voltage 120 V AC / 60 Hz)	[W]	23.7
Power loss (nominal voltage 230 V AC / 50 Hz)	[W]	22
Back feeding protection	[V]	35

Outputs		
Short-circuit proof		yes
Overload protection		yes
Overload performance		constant output current
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)
Protection		IP 20; (EN 60529)
Degree of soiling		2; (IEC 62103: conductive soiling not permitted)
Overheat protection		yes

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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
MTTF	[years]	70

Mechanical data		
Weight	[g]	875.5
Housing		rectangular
Type of mounting		Mounting on DIN rail; (TH35 (EN 60715))
Dimensions	[mm]	124 x 62 x 122.5
Material		housing: steel sheet

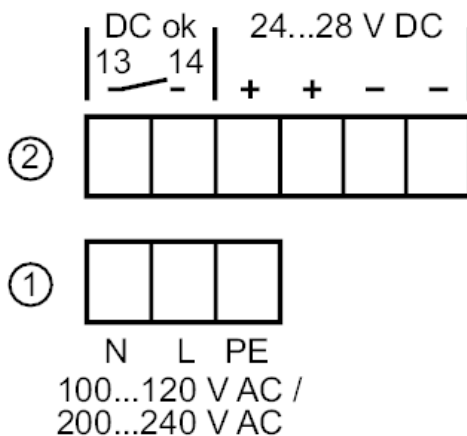
Displays / operating elements		
Display	DCok	1 x LED

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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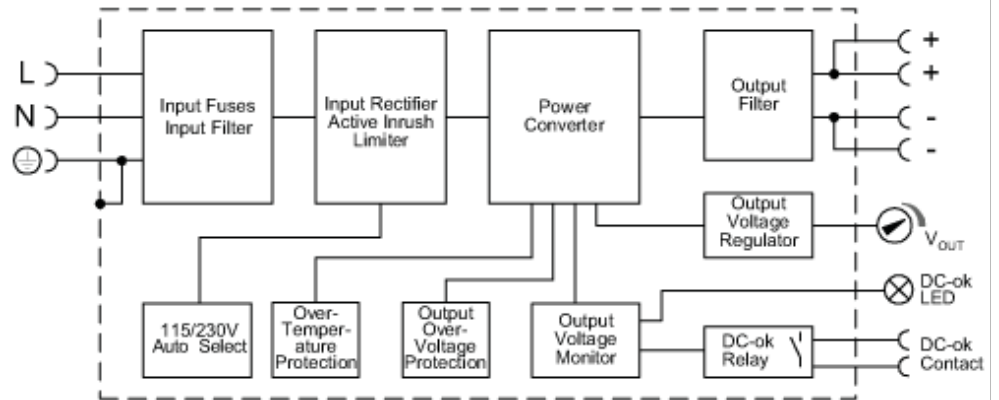


## Switched-mode power supply 24 V DC

PSU-1AC/24VDC-10A

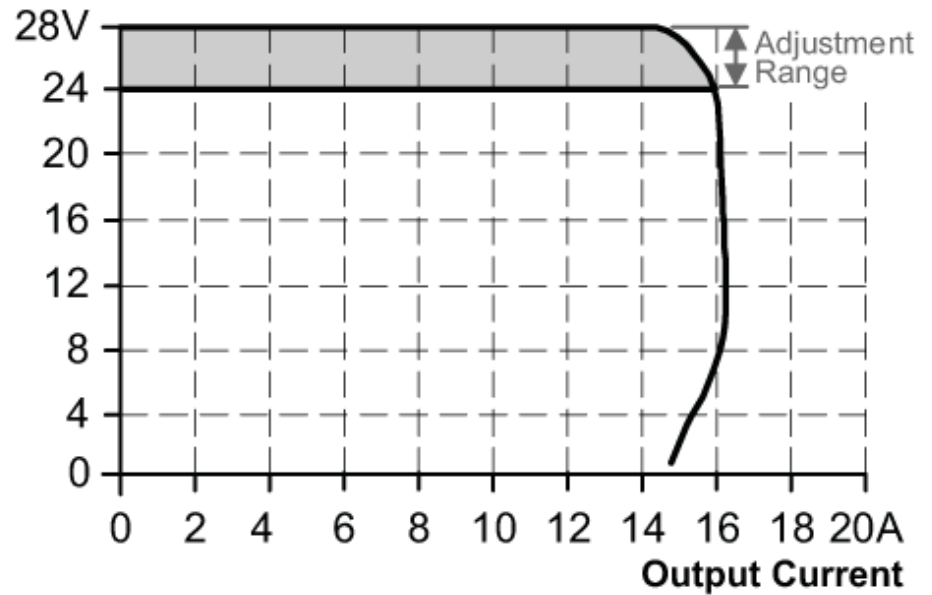
### Diagrams and graphs

Block diagram



Output curve

### Output Voltage



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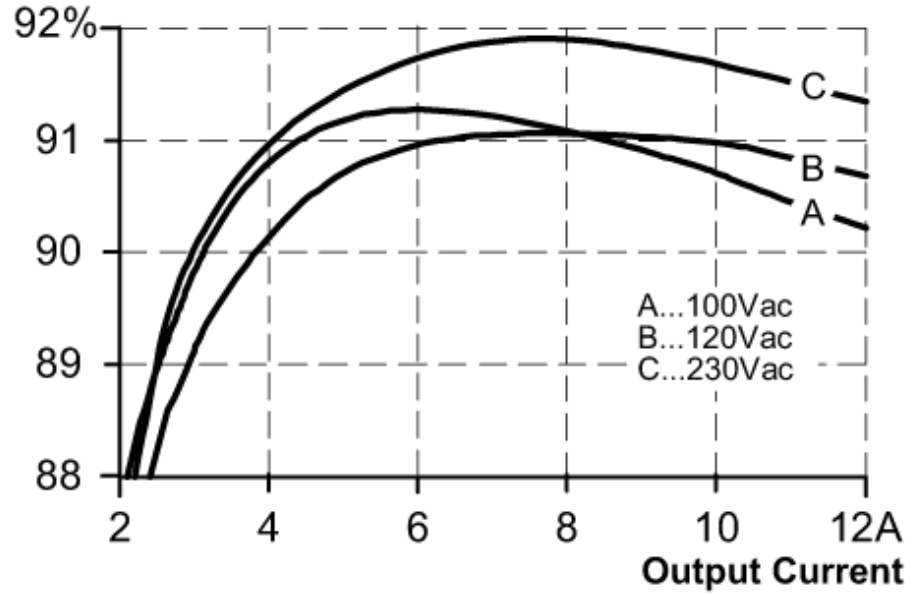


## Switched-mode power supply 24 V DC

PSU-1AC/24VDC-10A

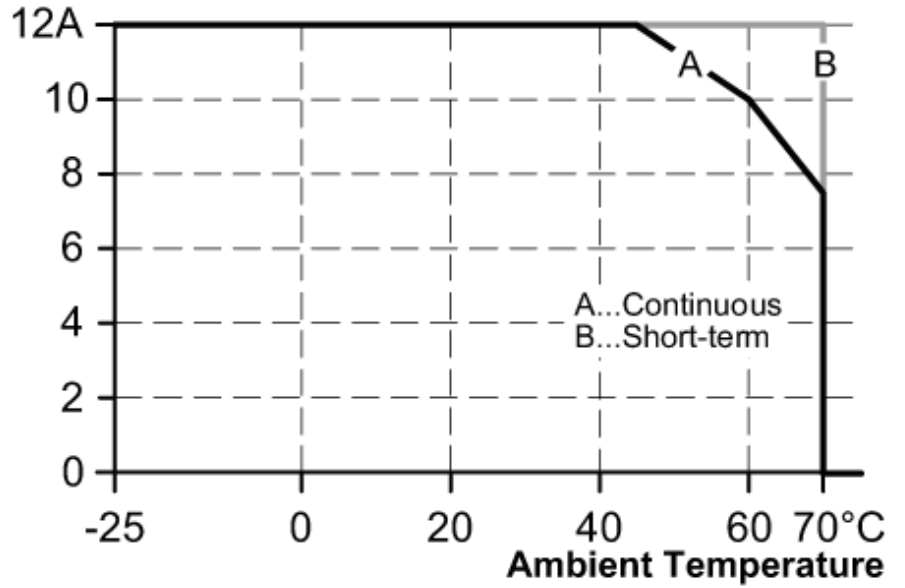
Characteristic curve for degree of efficiency / power loss

### Efficiency



Characteristic curve for derating

### Allowed Output Current at 24V



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## Switched-mode power supply 24 V DC

PSU-1AC/24VDC-10A

Characteristic curve for mains buffering time

### Hold-up Time at 24V

