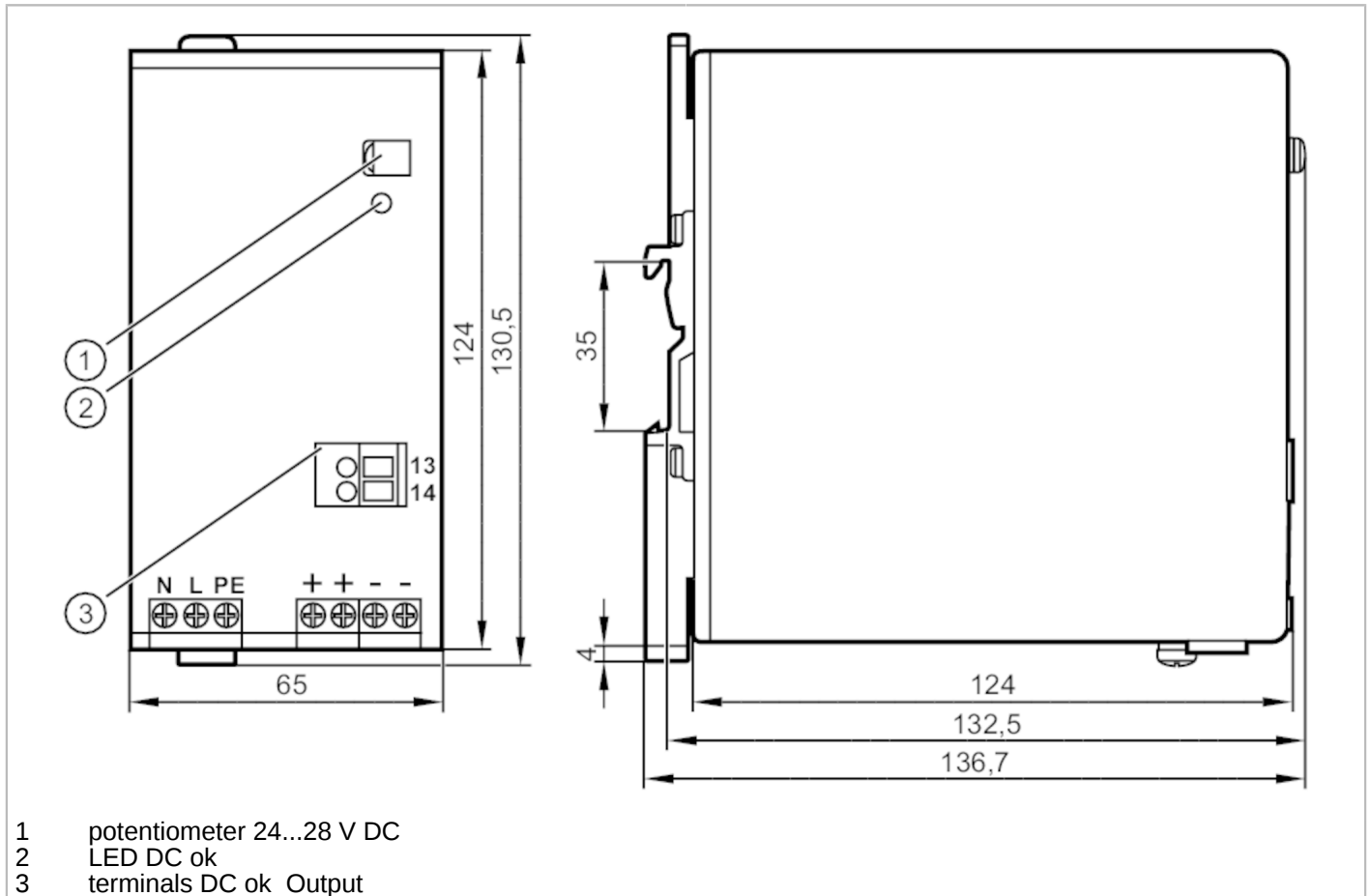


# DN4014



## Switched-mode power supply 24 V DC

PSU-1AC/24VDC-20A



Electrical data		
Frequency AC	[Hz]	47...64
Operating voltage tolerance	[%]	15...10
Nominal voltage AC	[V]	< 230
Input voltage range AC	[V]	100...240
Output voltage DC	[V]	24...28
Protection class		I; (IEC 61140)
Overvoltage protection		yes; (< 32 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]	17.1
Max. output current peak at min. output voltage	[A]	24
Max. output current peak at max. output voltage	[A]	20.6
Output power (permanent)	[W]	480
Output power (peak)	[W]	576
Note on output power (peak)		≤ 45 °C permitted continuously; > 45 °C < 1 minute every 10 minutes

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Power factor (nominal voltage 120 V AC / 60 Hz)		0.99
Power factor (nominal voltage 230 V AC / 50 Hz)		0.95
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]		9
Switch-on peak current (nominal voltage 230 V AC / 50 Hz) [A]		7
Inrush current limitation		yes
Efficiency (nominal voltage 120 V AC / 60 Hz) [%]		92.7
Efficiency (nominal voltage 230 V AC / 50 Hz) [%]		94
External input protection		$\leq$ B-10 A / $\leq$ C-10 A
Derating [W/K]		12 (60...70 °C)
Mains buffering time (nominal voltage 120 V AC / 60 Hz) [ms]		26
Mains buffering time (nominal voltage 230 V AC / 50 Hz) [ms]		26
Input current (nominal voltage 120 V AC / 60 Hz) [A]		4.36
Input current (nominal voltage 230 V AC / 50 Hz) [A]		2.33
Power loss (nominal voltage 120 V AC / 60 Hz) [W]		37.8
Power loss (nominal voltage 230 V AC / 50 Hz) [W]		30.6
Back feeding protection [V]		35

### Outputs

Short-circuit proof		yes
Overload protection		yes
Overload performance		Hiccup Mode; In the event of overload / short circuit, the output alternately supplies continuous power for 2 s and then switches off for 18 s.
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)

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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]	1121.5	
Type of mounting	rail; (TH35 (EN 60715))	
Dimensions [mm]	124 x 65 x 132.5	
Materials	steel sheet	

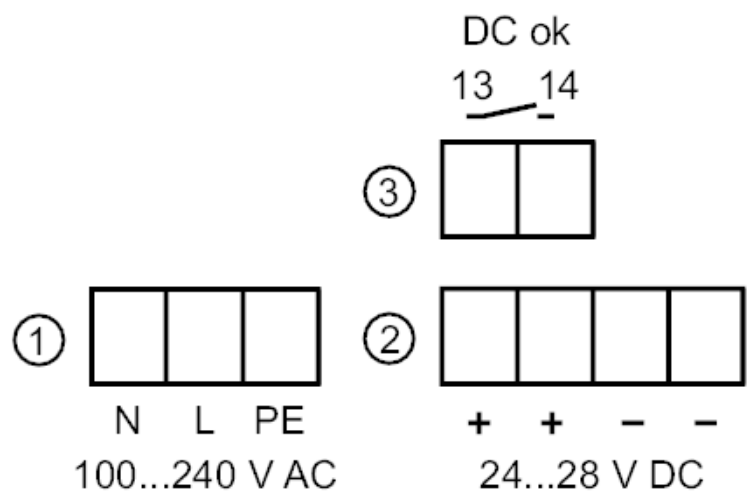
Displays / operating elements		
Display	DC ok	1 x LED

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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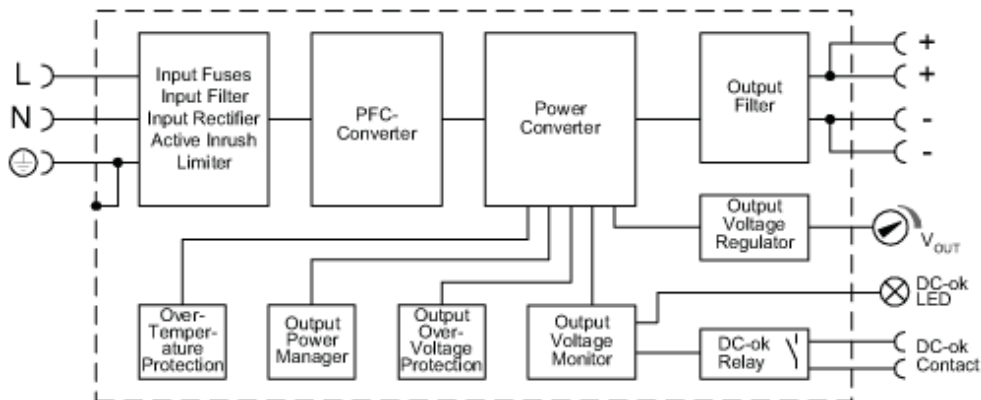


## Switched-mode power supply 24 V DC

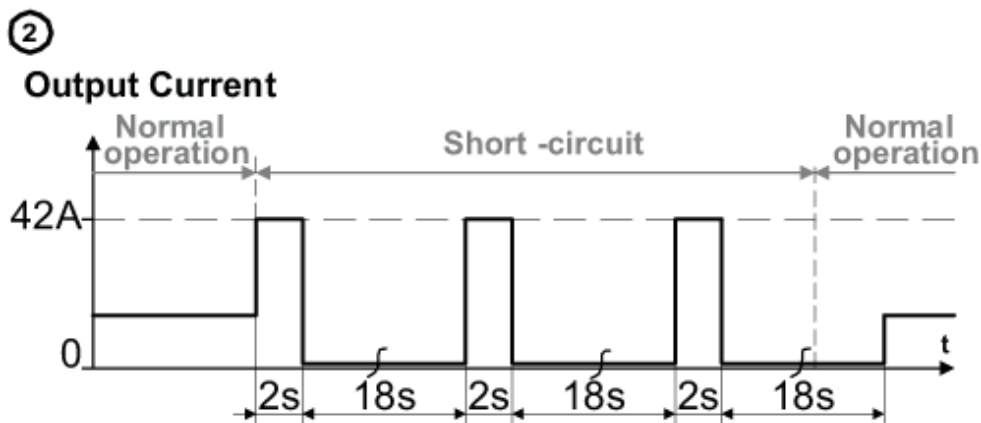
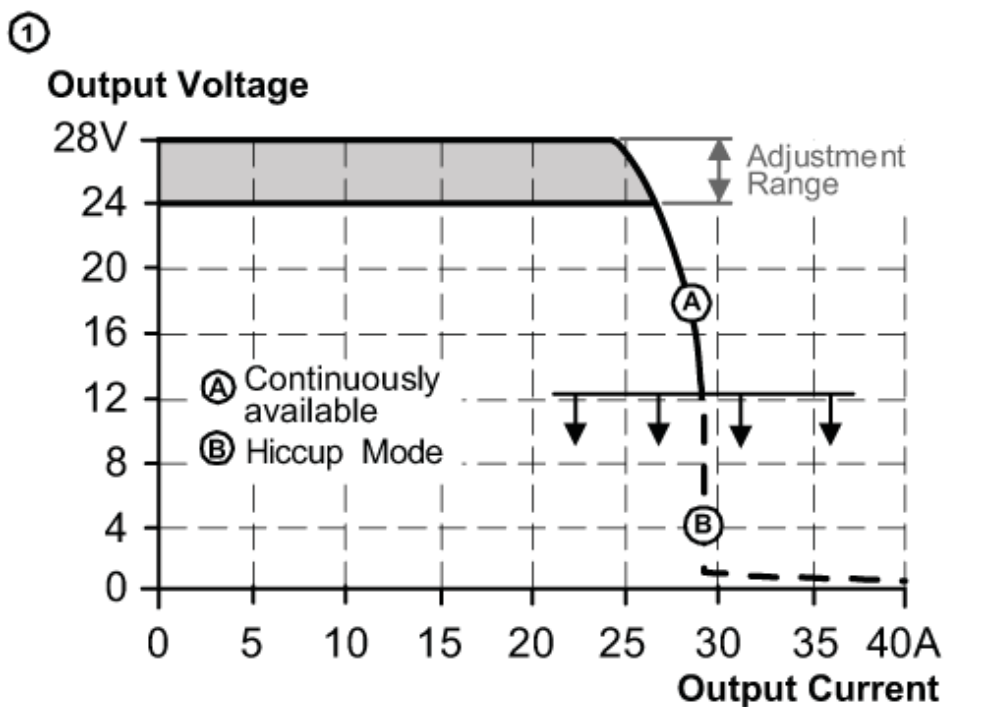
PSU-1AC/24VDC-20A

### Diagrams and graphs

block diagram



output characteristics



1: output characteristics

2: Hiccup Mode

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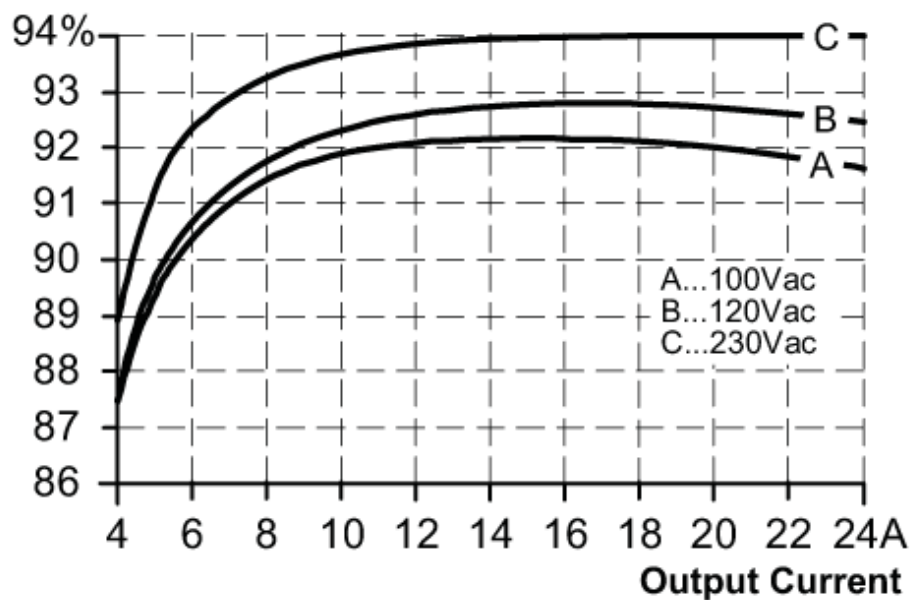


## Switched-mode power supply 24 V DC

PSU-1AC/24VDC-20A

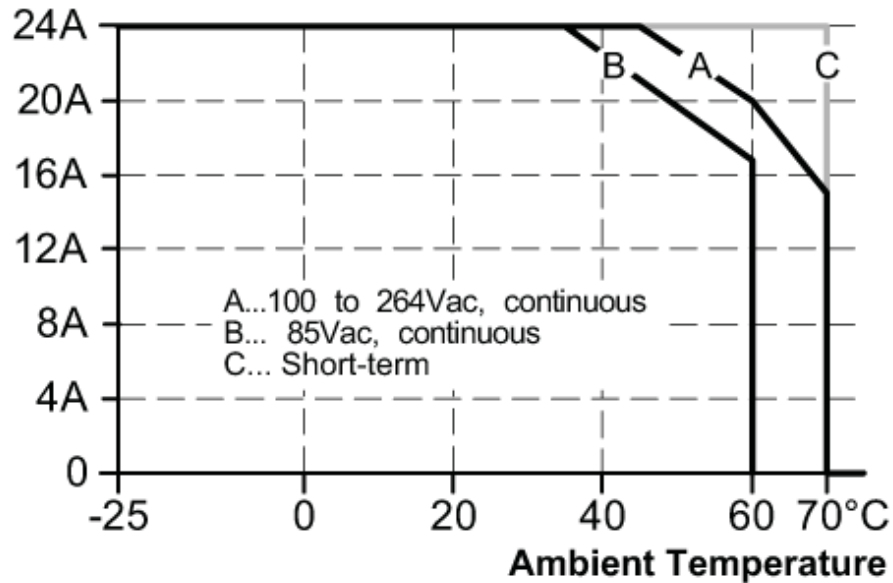
characteristic curve for degree of efficiency / power loss

### Efficiency



characteristic line for derating

### Allowed Output Current at 24V



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## Switched-mode power supply 24 V DC

PSU-1AC/24VDC-20A

characteristic line for mains buffering time

### Hold-up Time at 24V

