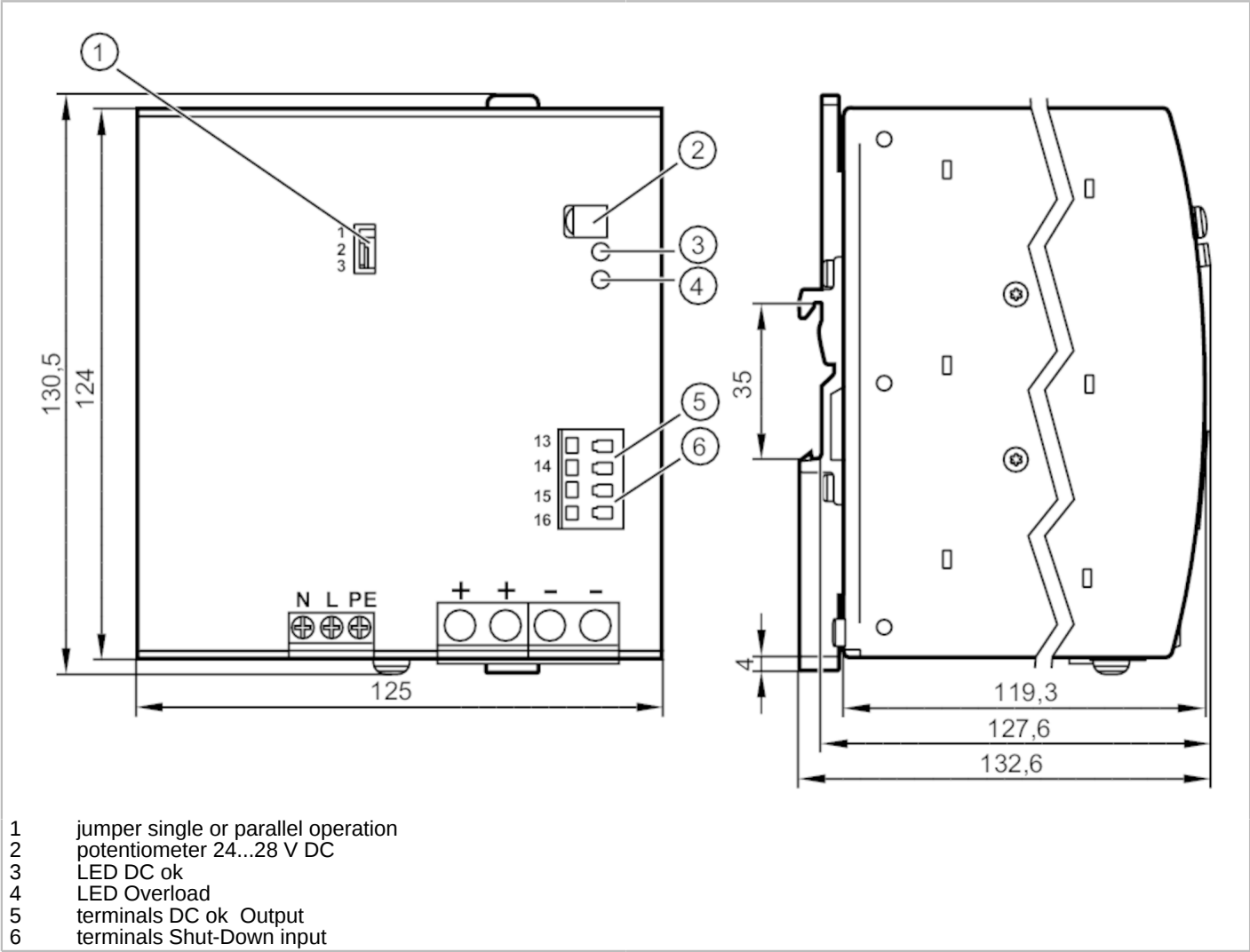


E84016



Switched-mode power supply 24 V DC

PSU-1AC/24VDC-40A



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]	40
Max. output current at max. output voltage	[A]	34.3
Max. output current peak at min. output voltage	[A]	60
Max. output current peak at max. output voltage	[A]	51.5



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Output power (permanent)	[W]	960
Output power (peak)	[W]	1440
Note on output power (peak)	[W]	if consumption > 4 s the power is automatically reduced to the output power
Power factor (nominal voltage 120 V AC / 60 Hz)		0.99
Power factor (nominal voltage 230 V AC / 50 Hz)		0.99
Power reserve	[%]	50
Number of output circuits		1
Max. residual ripple	[mV]	100
Switch-on peak current (nominal voltage 120 V AC / 60 Hz)	[A]	17
Switch-on peak current (nominal voltage 230 V AC / 50 Hz)	[A]	11
Inrush current limitation		yes
Efficiency (nominal voltage 120 V AC / 60 Hz)	[%]	93.6
Efficiency (nominal voltage 230 V AC / 50 Hz)	[%]	94.6
External input protection		≥ B-16 A / ≥ C-16 A
Derating	[W/K]	24 (60...70 °C)
Mains buffering time (nominal voltage 120 V AC / 60 Hz)	[ms]	27
Mains buffering time (nominal voltage 230 V AC / 50 Hz)	[ms]	27
Input current (nominal voltage 120 V AC / 60 Hz)	[A]	8.6
Input current (nominal voltage 230 V AC / 50 Hz)	[A]	4.5
Power loss (nominal voltage 120 V AC / 60 Hz)	[W]	65.6
Power loss (nominal voltage 230 V AC / 50 Hz)	[W]	54.8
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 17 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)



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Pollution degree	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 / 1 g 17,8...500 Hz
Shock resistance	IEC 60068-2-27	15 g 6 ms / 10 g 11 ms
MTTF [years]		55
Power Factor Correction (PFC)		met

Mechanical data

Weight [g]	2044.5
Housing	rectangular
Type of mounting	mounting on DIN rail; (TH35 (EN 60715))
Dimensions [mm]	124 x 125 x 132.6
Materials	housing: steel sheet

Displays / operating elements

Display	DC ok	1 x LED
	overload	1 x LED

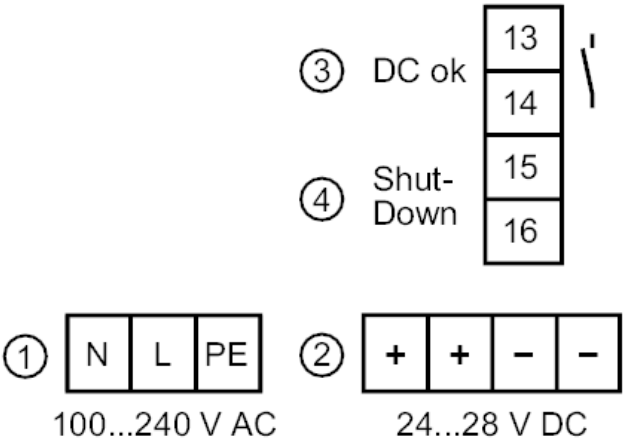
Remarks

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



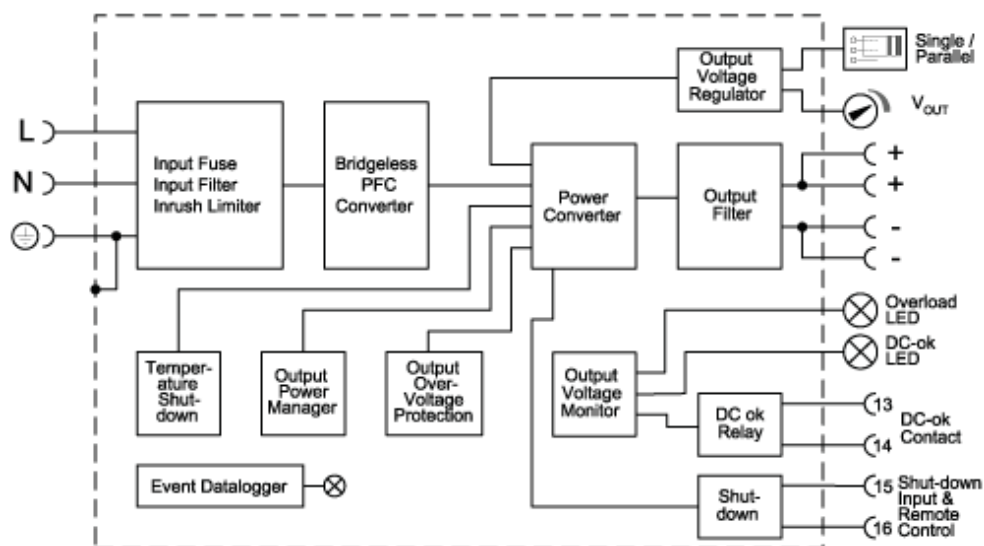
- 1: primary
- 2: secondary
- 3: DC ok relay output
- 4: Shut-Down input < 2 V / < 0.5 W

Switched-mode power supply 24 V DC

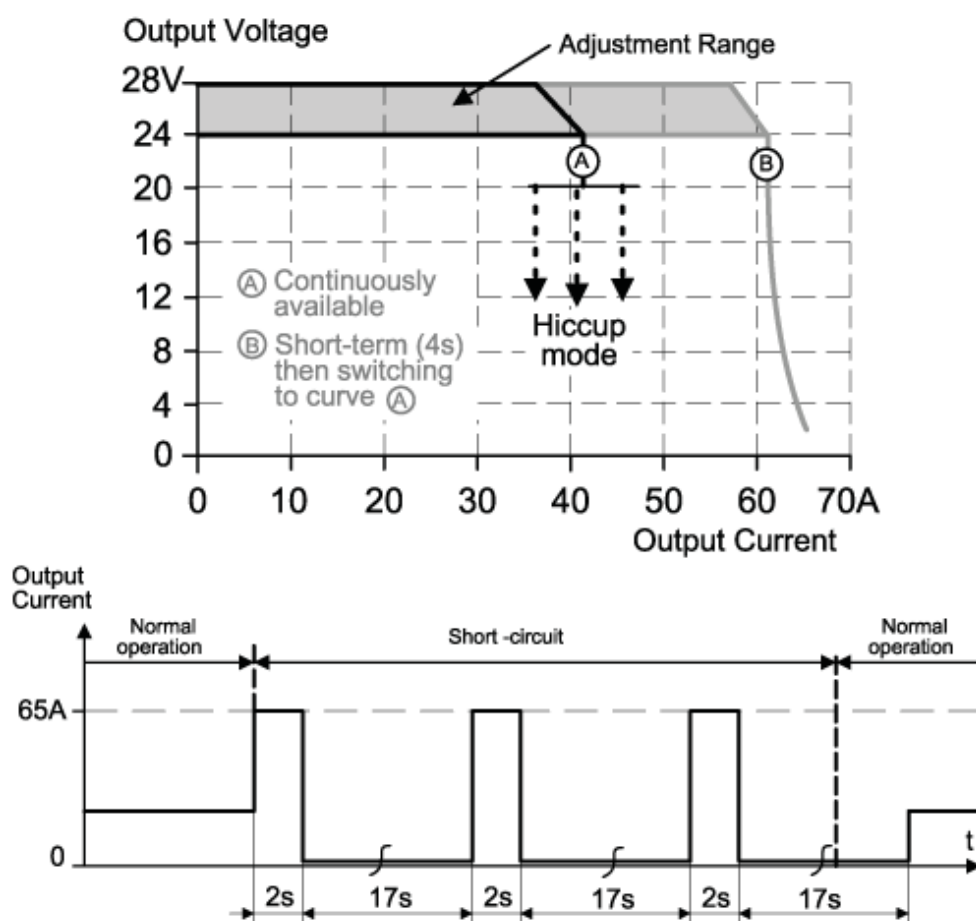
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Diagrams and graphs

block diagram



output characteristics



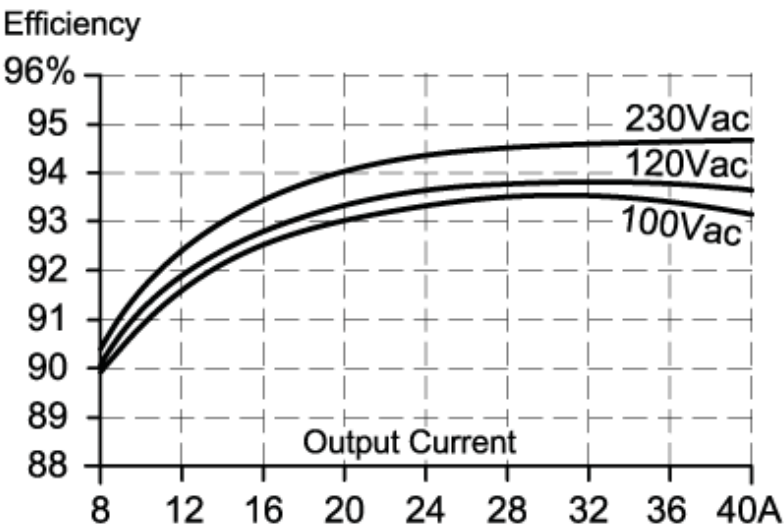
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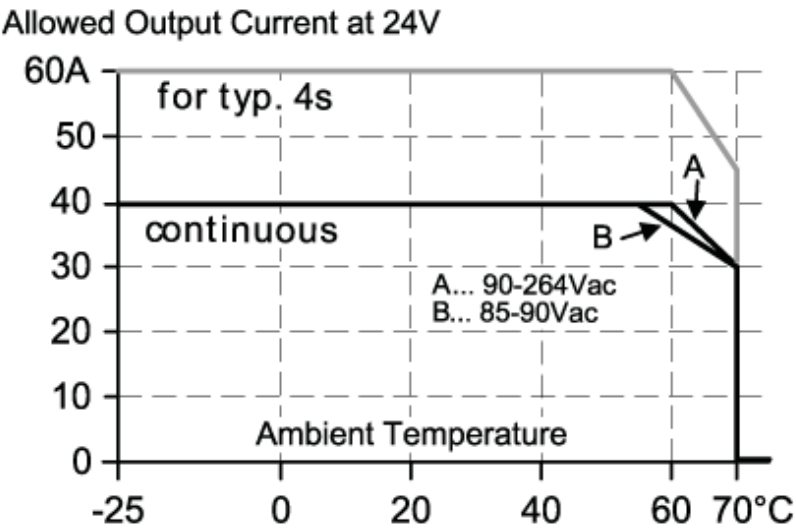
Switched-mode power supply 24 V DC

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characteristic curve for degree of efficiency / power loss



characteristic line for derating



characteristic line for mains buffering time

