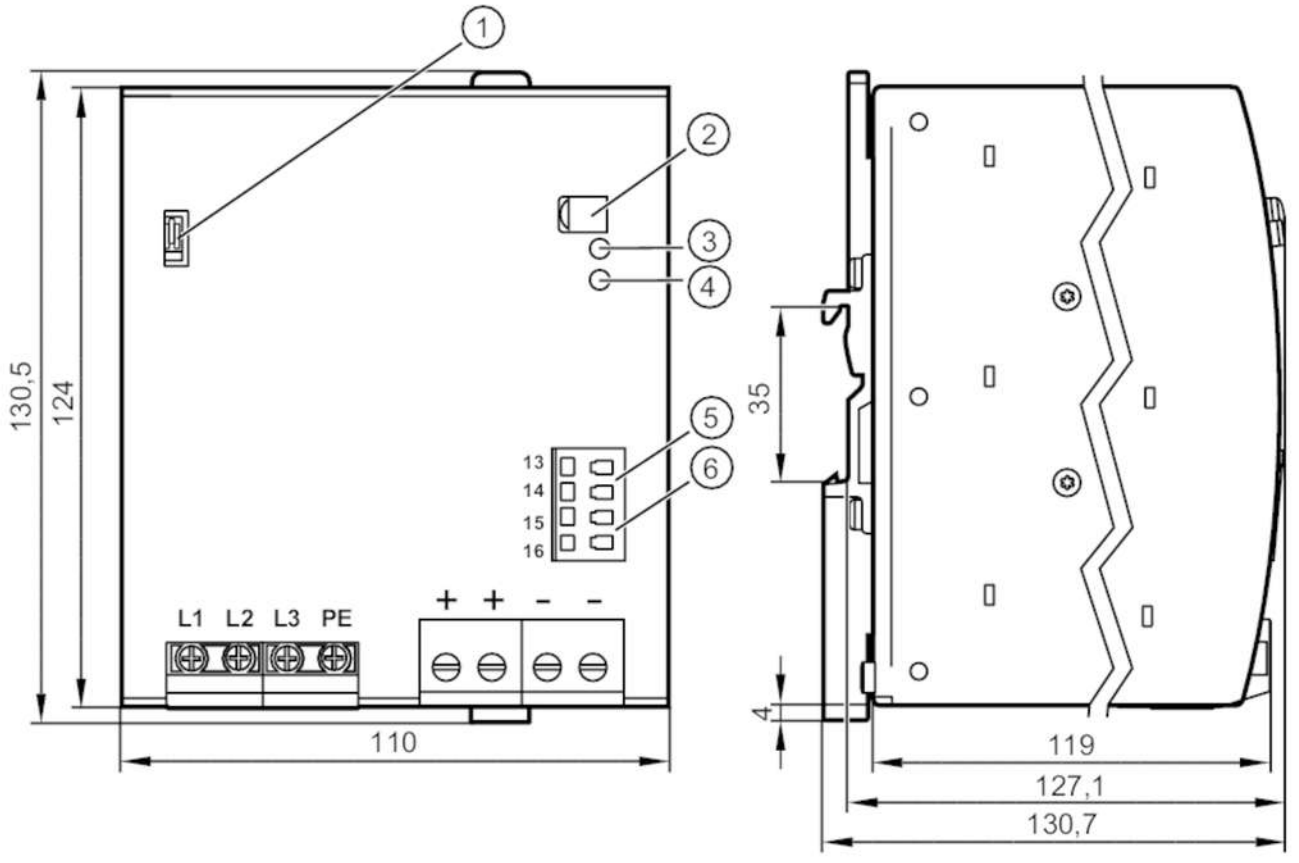
E84036

Switched-mode power supply 24 V DC

PSU-3AC/24VDC-40A



1 jumper single or parallel operation
2 potentiometer 24...28 V DC
3 LED DC ok
4 LED Overload
5 terminals DC ok Output
6 terminals Shut-Down input

Electrical data		
Frequency AC	[Hz]	47...64
Operating voltage tolerance	[%]	15...20
Nominal voltage AC	[V]	< 400
Input voltage range AC	[V]	380...480
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

E84036

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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 400 V AC / 50 Hz)		0.88
Note on power factor (nominal voltage 400 V AC / 50 Hz)		with symmetrical phase voltage
Power factor (nominal voltage 480 V AC / 50 Hz)		0.9
Note on power factor (nominal voltage 480 V AC / 50 Hz)		with symmetrical phase voltage
Power reserve	[%]	50
Number of output circuits		1
Max. residual ripple	[mV]	100
Switch-on peak current (nominal voltage 400 V AC / 60 Hz)	[A]	4.5
Switch-on peak current (nominal voltage 480 V AC / 50 Hz)	[A]	4.5
Inrush current limitation		yes
Efficiency (nominal voltage 400 V AC / 60 Hz)	[%]	95.3
Efficiency (nominal voltage 480 V AC / 50 Hz)	[%]	95.2
External input protection		≥ B-6 A / ≥ C-6 A
Derating	[W/K]	24 (60...70 °C)
Mains buffering time (nominal voltage 400 V AC / 60 Hz)	[ms]	25
Mains buffering time (nominal voltage 480 V AC / 50 Hz)	[ms]	25
Input current (nominal voltage 400 V AC / 60 Hz)	[A]	1.65
Input current (nominal voltage 480 V AC / 50 Hz)	[A]	1.35
Power loss (nominal voltage 400 V AC / 60 Hz)	[W]	47.3
Power loss (nominal voltage 480 V AC / 50 Hz)	[W]	48.4
Back feeding protection	[V]	35
Outputs		
Short-circuit proof		yes
Overload protection		yes
Overload performance		output current constant
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

E84036

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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)

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
Power Factor Correction (PFC)		met

Mechanical data

Weight	[g]	1754.5
Type of mounting		mounting on DIN rail; (TH35 (EN 60715))
Dimensions	[mm]	124 x 110 x 130.7
Materials		steel sheet

Displays / operating elements

Display	DC ok	1 x LED
	overload	1 x LED

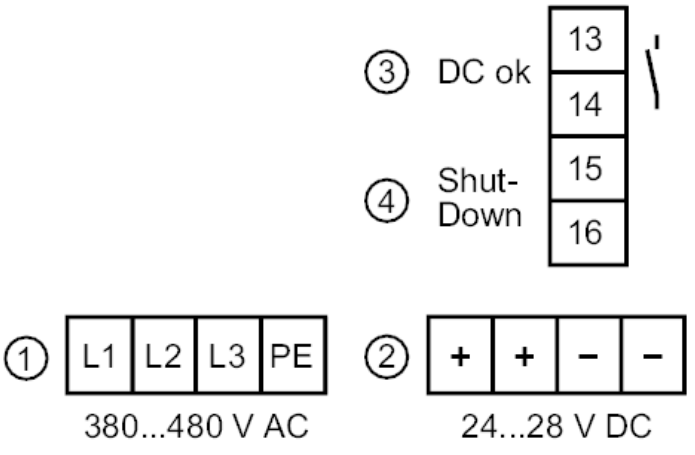
Remarks

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

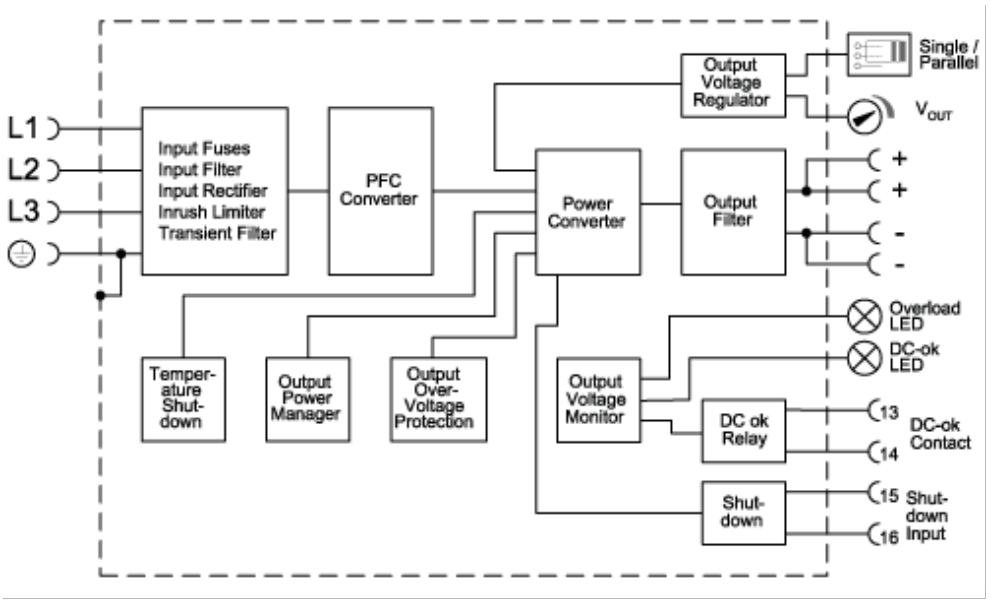
E84036

Switched-mode power supply 24 V DC

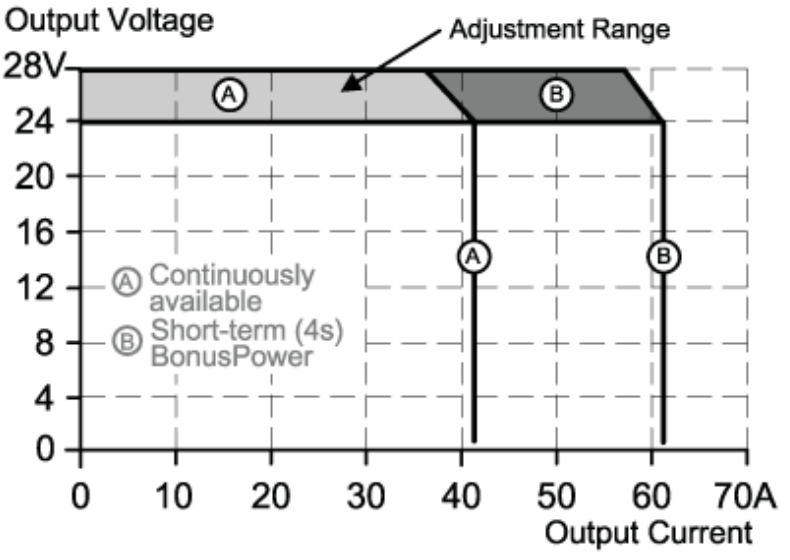
PSU-3AC/24VDC-40A

Diagrams and graphs

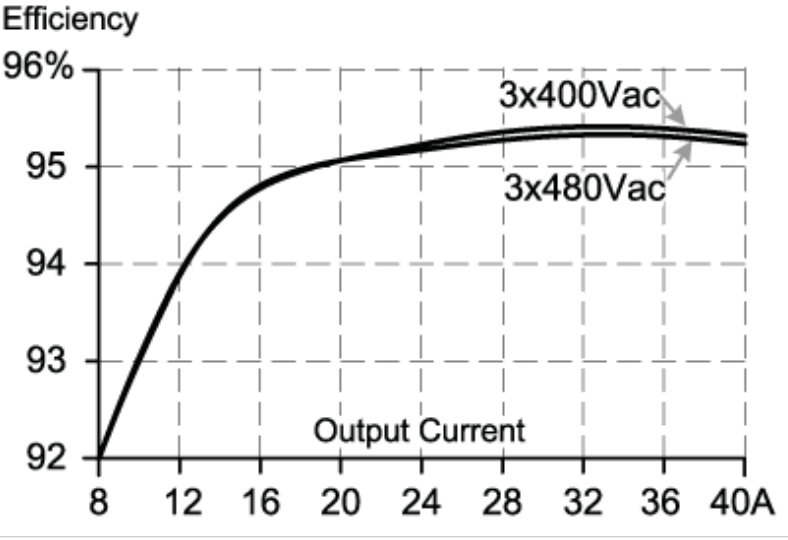
block diagram



output characteristics



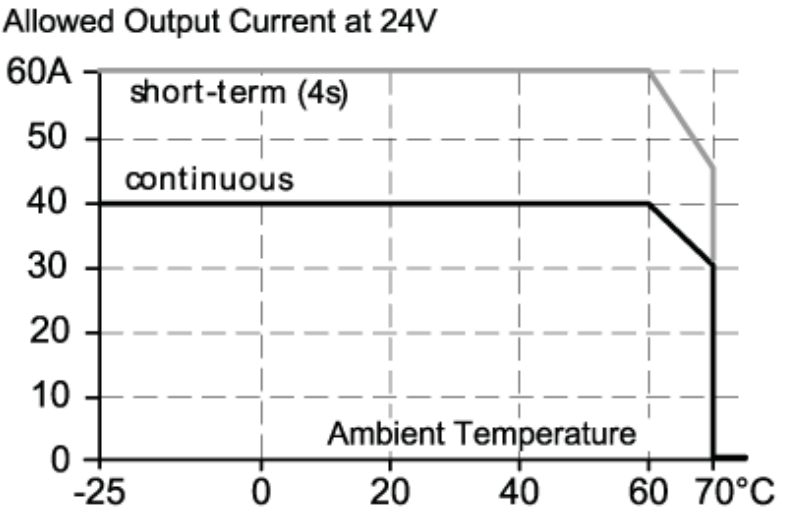
characteristic curve for degree of efficiency / power loss



E84036

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PSU-3AC/24VDC-40A

characteristic line for derating	
characteristic line for mains buffering time	