Power supply unit - ESSENTIAL-PS/1AC/24DC/240W/EE - 2910587

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Primary-switched ESSENTIAL POWER power supply for DIN rail mounting, input: 1-phase, output: 24 V DC / 240 W

Your advantages

- Worldwide use thanks to the wide range input and international approval package
- Fast installation, thanks to easy DIN rail mounting
- Greater availability, thanks to fanless convention cooling

Key Commercial Data

Packing unit	1 pc
GTIN	4 055626 464404
GTIN	4055626464404
Weight per Piece (excluding packing)	966.600 g
Sales Key	CMPB13

Technical data

Dimensions

Width	60 mm
Height	123.6 mm
Depth	117.6 mm
Installation distances left/right	10 mm
Installation distances top/bottom	50 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)
Degree of pollution	2

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Ambient conditions

Installation height	≤ 5000 m (> 2000 m, Derating: 10 %/1000 m)

Input data

Nominal input voltage range	100 V AC ... 240 V AC
Input voltage range	85 V AC ... 264 V AC
AC frequency range	47 Hz ... 63 Hz
Discharge current to PE	< 1 mA (264 V AC)
Current consumption	2.8 A (115 V AC)
	1.4 A (230 V AC)
Inrush surge current	typ. 20 A (115 V AC)
	typ. 40 A (230 V AC)
Mains buffering	typ. 10 ms (115 V AC)
	typ. 16 ms (230 V AC)
Input fuse	6.3 A (slow-blow, internal)
Type of protection	Transient surge protection
Protective circuit/component	Varistor

Output data

Nominal output voltage	24 V DC ±2 %
Setting range of the output voltage (U_{Set})	22 V DC ... 28 V DC (max. power ≤ 240 W)
Nominal output current (I_N)	10 A
Derating	> 40 °C (1.67 % / °C, 115 V AC)
	> 50 °C (2.5 % / °C, 230 V AC)
Max. capacitive load	8000 µF
Active current limitation	105% - 150% of the max. output power (in the event of short circuit)
Residual ripple	< 120 mV_{PP} (-10 °C ... +70 °C)
	< 240 mV_{PP} (-20 °C ... -10 °C)
Output power	240 W
Typical response time	1000 ms
Maximum power dissipation in no-load condition	4.62 W (115 V AC)
	2.14 W (230 V AC)
Power loss nominal load max.	31.53 W (115 V AC)
	25.44 W (230 V AC)

General

Net weight	0.8 kg
Operating voltage display	Green LED
Efficiency	88 % (115 V AC)
	90 % (230 V AC)
Insulation voltage input/output	3 kV AC
Insulation voltage input / PE	2 kV AC
Insulation voltage output / PE	0.5 kV AC

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General

Protection class	I (with PE connection)
Degree of protection	IP20
MTBF (Telcordia SR-332)	> 700000 h
Assembly instructions	alignable: horizontally 10 mm, vertically 50 mm

Connection data, input

Connection method	Screw connection
Conductor cross section AWG min.	16
Conductor cross section AWG max.	12
Stripping length	7 mm

Connection data, output

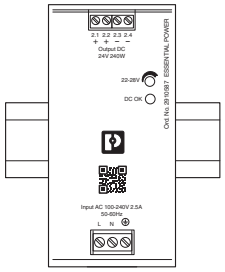
Connection method	Screw connection
Conductor cross section AWG min.	16
Conductor cross section AWG max.	12
Stripping length	7 mm

Standards and Regulations

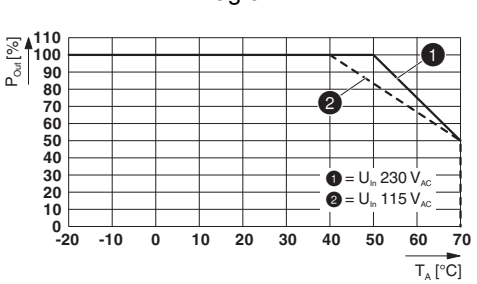
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise immunity	EN 61000-6-2
	EN 61000-6-1
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Standard - Electrical safety	EN 60950-1
Standard – Safety extra-low voltage	EN 60950-1 (SELV)
UL approvals	UL/C-UL listed UL 508
Shock	IEC 60068-2-27, 27, half sinusoidal wave: 50g for 11 ms; 3x per direction, 9x overall
Vibration (operation)	IEC 60068-2-6, sinusoidal waves: 10 Hz ... 500 Hz, 19,6 m/s² (2g peak), 10 min. per cycle, 60 min. in the X direction
Approval - requirement of the semiconductor industry with regard to mains voltage dips	SEMI F47 - 0706 (200 V AC)

Drawings

Schematic diagram



Diagram



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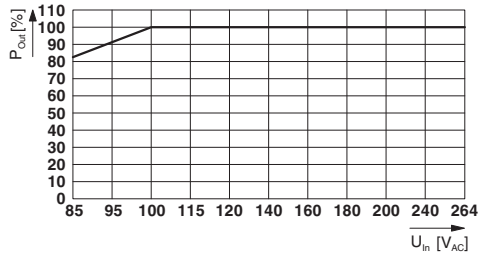
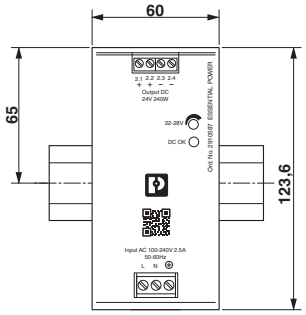
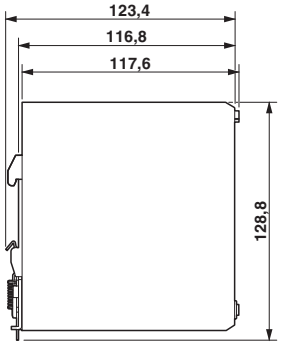


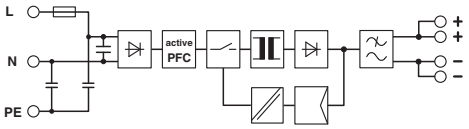
Dimensional drawing



Dimensional drawing



Block diagram



Classifications

eCl@ss

eCl@ss 5.1	27049002

Approvals

Approvals

Approvals

EAC

Ex Approvals

Approval details

EAC	EAC	EAC*DE*08*02578

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Accessories

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Device protection

Type 3 surge protection device - PLT-EE-T3-230-FM - 2910544

Pluggable device protection, according to type 3/Class III, for 1-phase power supply networks with separate N and PE (3-conductor system: L1, N, PE) with remote indication contact.

Type 3 surge protection device - PLT-EE-T3-24-FM - 2910540

Pluggable device protection, according to type 3/Class III, for 1-phase power supply networks with separate N and PE (3-conductor system: L1, N, PE) with remote indication contact.