Power supply unit - STEP-PS/ 1AC/12DC/3 - 2868570

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DIN rail power supply unit 12 V DC/3 A, primary switched-mode, 1-phase

Product Description

STEP POWER power supply units – for building automationThe new STEP POWER generation of compact power supply units is particularly suitable for installation distributors and flat control panels thanks to its design. The power supply units are available with 24 V DC output voltage in various performance classes and widths and with the special voltages 5, 12, 15 and 48 V DC. Their high degree of efficiency and the low standby losses make for high power efficiency.

Product Features

- Flexible mounting by simply snapping onto the DIN rail or screwing onto a level surface
- Reliable power supply thanks to high MTBF (mean time between failures) of more than 500,000 hours and U/I characteristic curve
- Energy savings thanks to maximum energy efficiency and incredibly low idling losses

Key commercial data

package_quantity	1
GTIN	4046356309578

Technical data

Dimensions

Width	54 mm
Height	90 mm
Depth	61 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 55° C derating)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, no condensation)
Noise immunity	EN 61000-6-2:2005

Input data

Nominal input voltage range	100 V AC ... 240 V AC
Input voltage range AC	85 V AC ... 264 V AC
Input voltage range DC	95 V DC ... 250 V DC

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Input data

AC frequency range	45 Hz ... 65 Hz
Frequency range DC	0 Hz
Current consumption	0.6 A (120 V AC)
Current consumption	0.3 A (230 V AC)
Inrush surge current	< 15 A (typical)
Power failure bypass	> 26 ms (120 V AC)
Power failure bypass	> 160 ms (230 V AC)
Input fuse	3.15 A (slow-blow, internal)
Type of protection	Transient surge protection
Protective circuit/component	Varistor

Output data

Nominal output voltage	12 V DC ±1%
Setting range of the output voltage	10 V DC ... 16.5 V DC (> 12 V constant capacity)
Output current	3 A (-25°C ... 55°C)
Output current	3.3 A (-25 °C ... 40 °C permanent)
Output current	4.9 A (maximum output current)
Derating	55 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	Yes
Control deviation	< 1 % (change in load, static 10% ... 90%)
Control deviation	< 2 % (change in load, dynamic 10% ... 90%)
Control deviation	< 0.1 % (change in input voltage ±10%)
Residual ripple	< 40 mV_{PP} (20 MHz)
Peak switching voltages nominal load	< 35 mV_{PP} (20 MHz)
Maximum power dissipation NO-Load	< 0.5 W
Power loss nominal load max.	6.4 W

General

Net weight	0.19 kg
Operating voltage display	Green LED
Efficiency	> 85 % (for 230 V AC and nominal values)
Insulation voltage input/output	4 kV AC (type test)
Insulation voltage input/output	3.75 kV AC (routine test)
Protection class	II (in an enclosed control cabinet)
MTBF (IEC 61709, SN 29500)	> 1689000 h (According to EN 29500)
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	Alignable: 0 mm horizontally, 30 mm vertically
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Standard – Electrical equipment of machines	EN 60204
Standard - Electrical safety	IEC 60950-1/VDE 0805 (SELV)

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General

Shipbuilding approval	Germanischer Lloyd (EMC 1), ABS, NK
Standard – Electronic equipment for use in electrical power installations and their assembly into electrical power installations	EN 50178/VDE 0160 (PELV)
Standard – Safety extra-low voltage	IEC 60950-1 (SELV) and EN 60204 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
Standard - Safe isolation	DIN VDE 0106-1010
Standard – Protection against electric shock	DIN 57100-410
Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment	DIN VDE 0106-101
Standard – Limitation of mains harmonic currents	EN 61000-3-2
Information technology equipment - safety (CB scheme)	CB Scheme
UL approvals	UL/C-UL listed UL 508
UL approvals	UL/C-UL Recognized UL 60950
UL approvals	NEC Class 2 as per UL 1310
UL approvals	UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location)
Surge voltage category	III

Connection data, input

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section stranded min.	0.2 mm²
Conductor cross section stranded max.	2.5 mm²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	12
Stripping length	6.5 mm
Screw thread	M3

Connection data, output

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section stranded min.	0.2 mm²
Conductor cross section stranded max.	2.5 mm²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	12
Stripping length	6.5 mm

Signaling

Output name	LED status indicator
Status display	"DC OK" LED green
Note on status display	U_{OUT} > 10.8 V: LED on

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classifications

eCl@ss

eCl@ss 4.0	27040702
eCl@ss 4.1	27040702
eCl@ss 5.0	27242213
eCl@ss 5.1	27242213
eCl@ss 6.0	27049002
eCl@ss 7.0	27049002
eCl@ss 8.0	27049002

ETIM

ETIM 2.0	EC001039
ETIM 3.0	EC001039
ETIM 4.0	EC002540
ETIM 5.0	EC002540

UNSPSC

UNSPSC 6.01	30211502
UNSPSC 7.0901	39121004
UNSPSC 11	39121004
UNSPSC 12.01	39121004
UNSPSC 13.2	39121004

approvals

UL Listed / cUL Listed / cULus Listed / UL Recognized / UL Listed / cUL Recognized / cUL Listed / GL / NK / IECEE CB Scheme / cULus Recognized / cULus Listed /

Approval details

UL Listed

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UL Recognized

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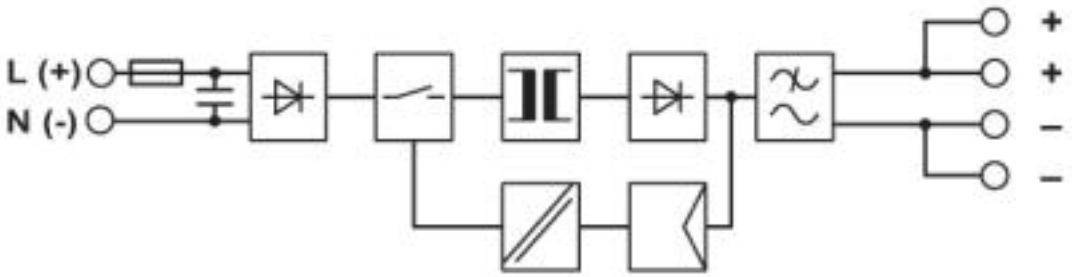
cULus Recognized

Drawings

Block diagram



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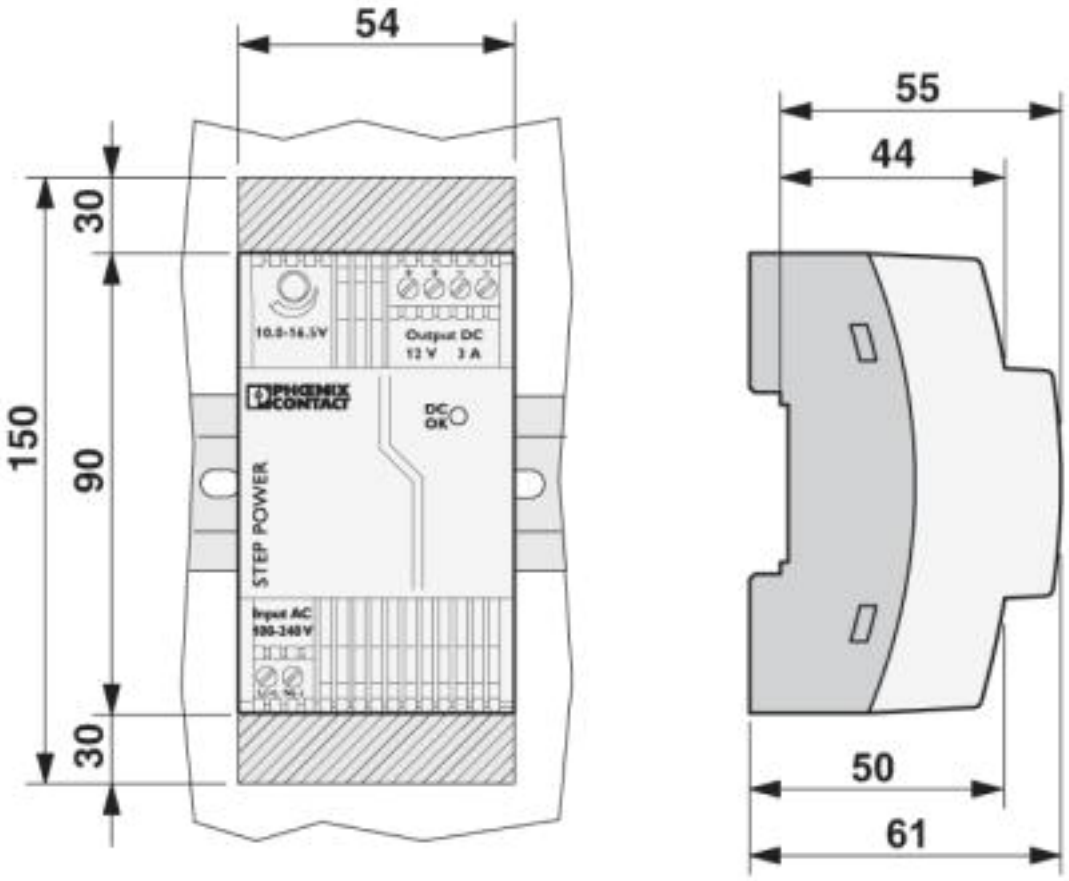
Dimensioned drawing



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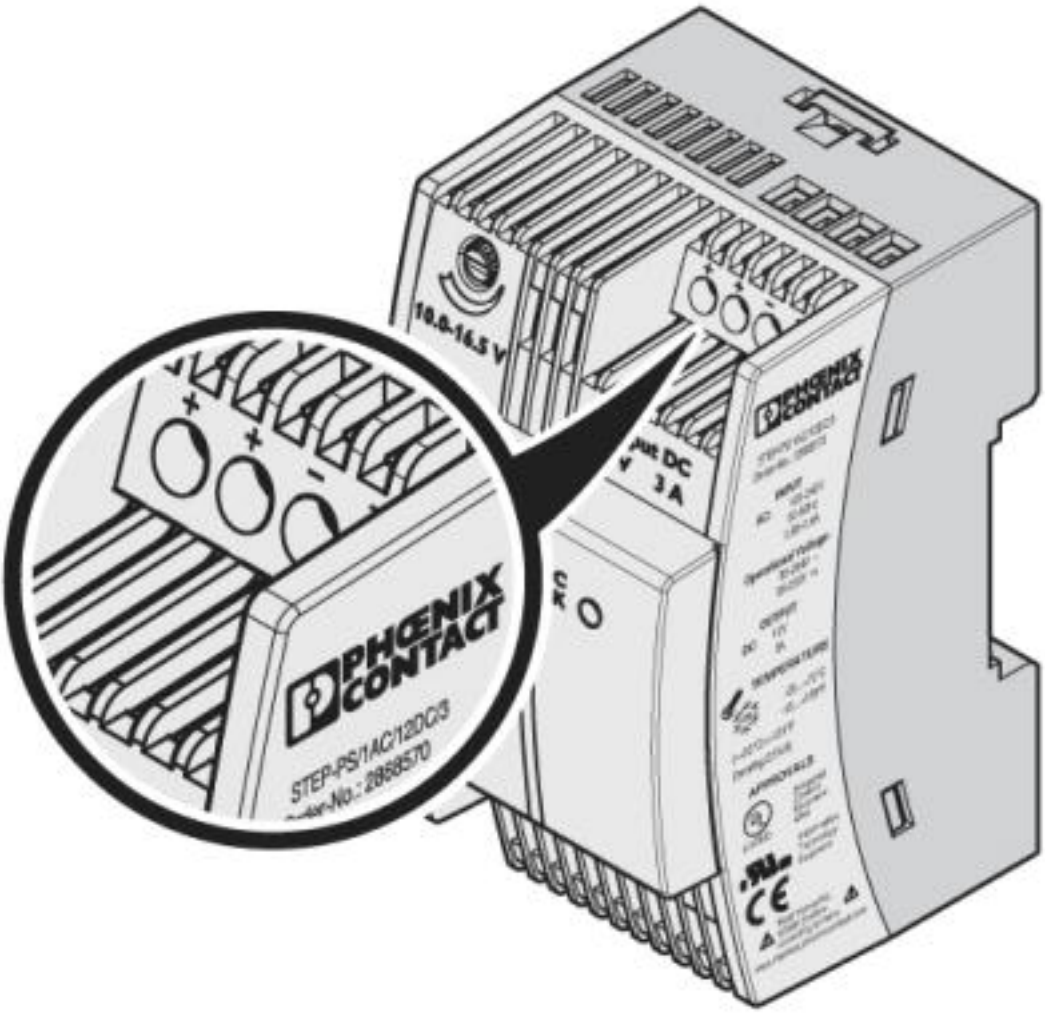
Schematic diagram



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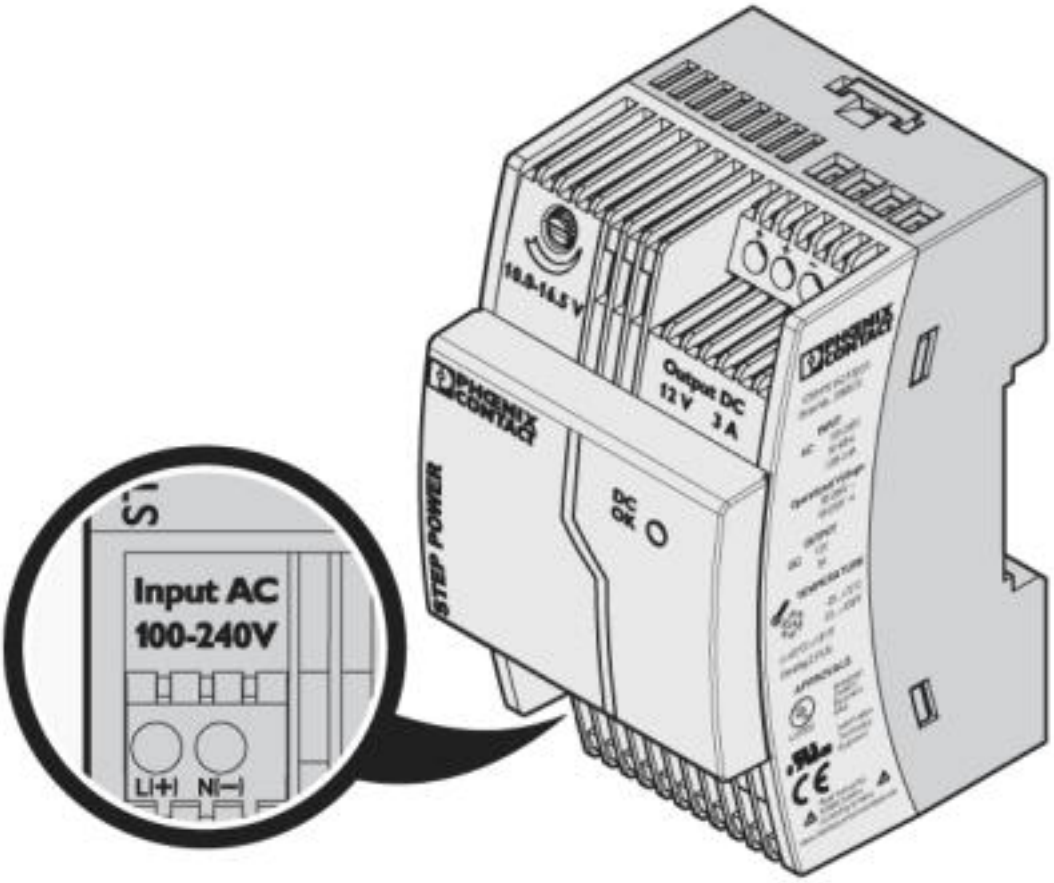

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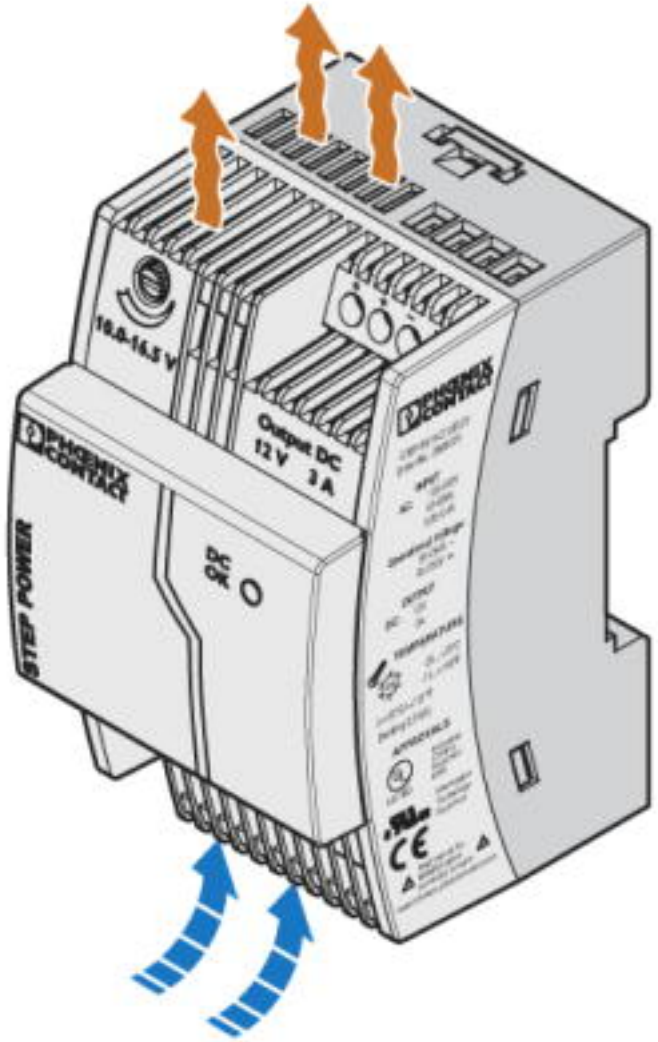

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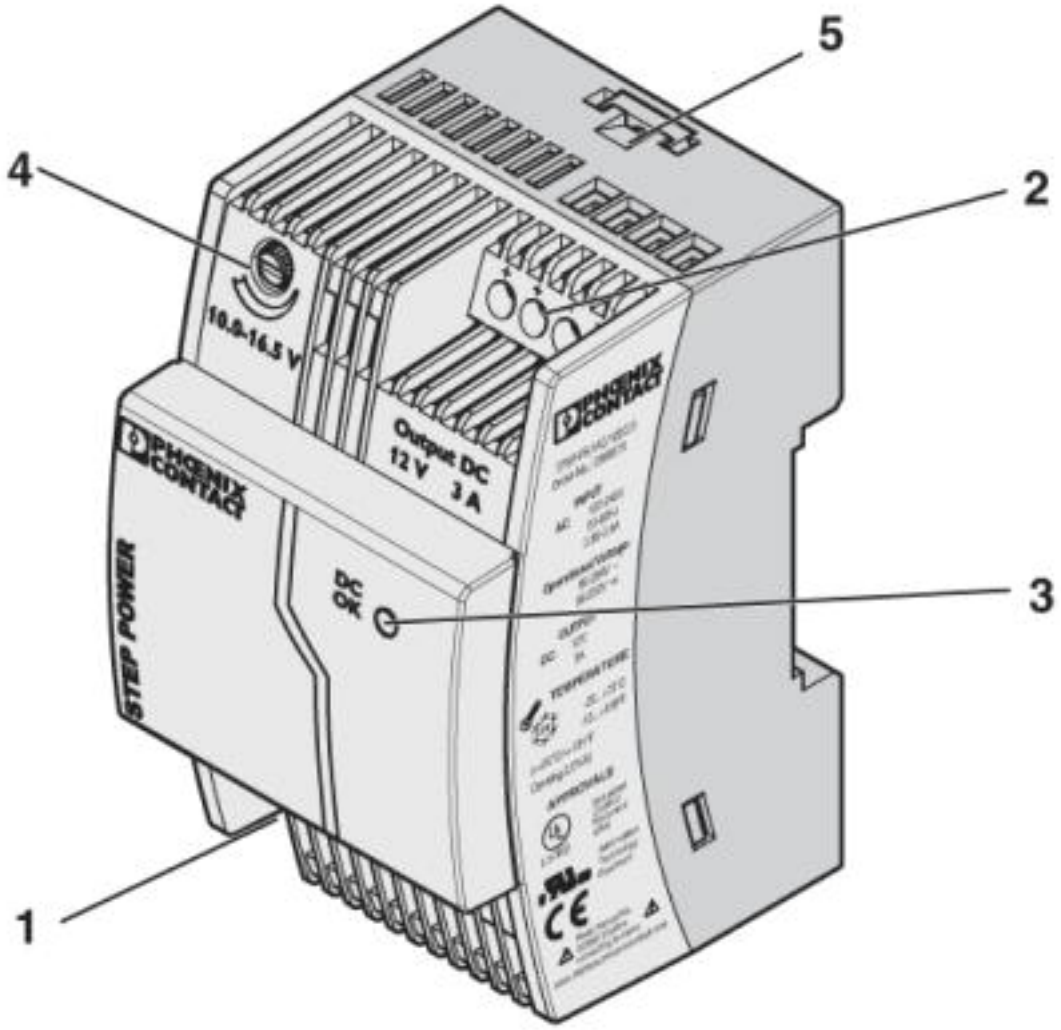

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