Power supply unit - STEP-PS/ 1AC/24DC/4.2 - 2868664

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Primary-switched STEP POWER power supply for DIN rail mounting, input: 1-phase, output: 24 V DC/4.2 A

Product description

STEP POWER power supplies for installation distributors
The STEP POWER power supply range was developed especially for building automation. The low idling losses and high degree of efficiency ensure maximum energy efficiency. They allow flexible use and can be snapped onto the DIN rail or screwed onto an even surface.

Product Features

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

Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	381.6 GRM
Custom tariff number	85044030
Country of origin	Germany

Technical data

Dimensions

Width	90 mm
Height	90 mm
Depth	61 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 55° C derating : 2.5%/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C

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Ambient conditions

Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)
Noise immunity	EN 61000-6-2:2005

Input data

Nominal input voltage range	100 V AC ... 240 V AC
Input voltage range	85 V AC ... 264 V AC
	95 V DC ... 250 V DC
AC frequency range	45 Hz ... 65 Hz
Frequency range DC	0 Hz
Inrush surge current	< 15 A (typical)
Power failure bypass	> 20 ms (120 V AC)
	> 100 ms (230 V AC)
Input fuse	4 A (slow-blow, internal)
Choice of suitable fuses	6 A ... 16 A (Characteristics B, C, D, K)
Type of protection	Transient surge protection
Protective circuit/component	Varistor

Output data

Nominal output voltage	24 V DC ±1 %
Setting range of the output voltage	22.5 V DC ... 29.5 V DC (> 24 V constant capacity)
Output current	4.2 A (-25°C ... 55°C)
	4.4 A (-25 °C ... 40 °C permanent)
	6.5 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 %)
	< 2 % (change in load, dynamic 10 % ... 90 %)
	< 0.1 % (change in input voltage ±10 %)
Residual ripple	< 40 mV_{PP} (20 MHz)
Peak switching voltages nominal load	< 30 mV_{PP} (20 MHz)
Maximum power dissipation NO-Load	< 0.7 W
Power loss nominal load max.	13.2 W

General

Net weight	0.33 kg
Efficiency	> 88 % (for 230 V AC and nominal values)
Insulation voltage input/output	4 kV AC (type test)
	3.75 kV AC (routine test)

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General

Protection class	II (in closed control cabinet)
	> 897000 h (40°C)
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)
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
	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/C-UL Recognized UL 60950
	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

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Connection data, output

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} > 21.5 V: LED lights up

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

Approvals

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Approvals

Approvals

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

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

UL Recognized

UL Listed

cUL Recognized

cUL Listed

GL

NK

BSH

IECEE CB Scheme

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Approvals

EAC

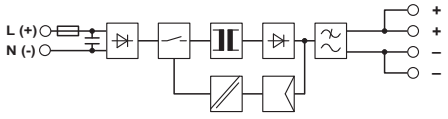
EAC

cULus Recognized

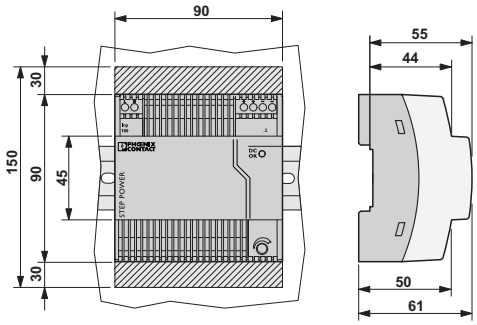
cULus Listed

Drawings

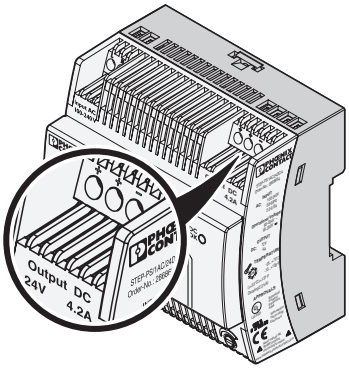
Block diagram



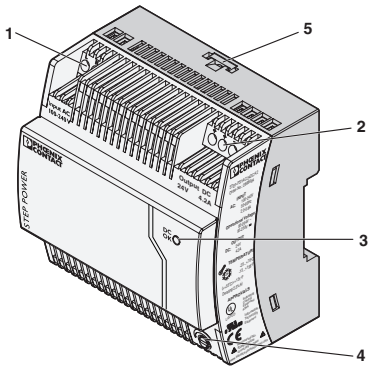
Dimensioned drawing



Schematic diagram



Schematic diagram



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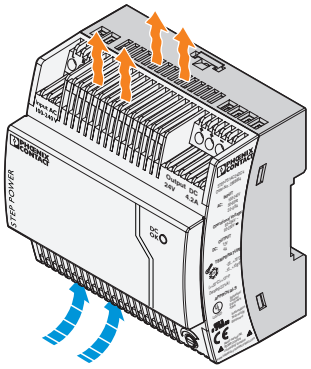

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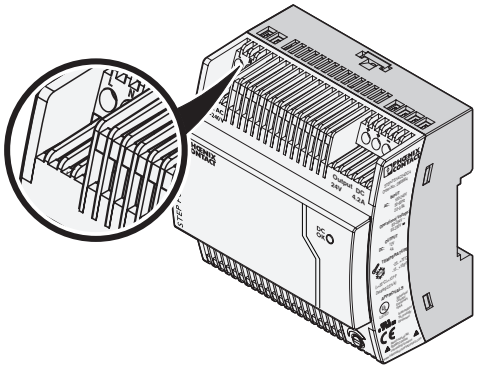

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