

## STEP-PS/1AC/24DC/0.5

Order No.: 2868596

<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2868596>

24 V DC/0.5 A DIN rail power supply unit, primary-switched, single-phase.

### Commercial data

GTIN (EAN)	4046356519953
sales group	H011
Pack	1 pcs.
Weight/Piece	0.0904 KG
Catalog page information	Page 285 (NTK-2010)

### Product notes

WEEE/RoHS-compliant since:  
10/02/2009



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### Product description

#### STEP POWER power supply units – for building automation

The 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.

## Technical data

### Input data

Nominal input voltage	100 V AC ... 240 V AC
AC input voltage range	85 V AC ... 264 V AC
DC input voltage range	95 V DC ... 250 V DC
AC frequency range	45 Hz ... 65 Hz
DC frequency range	0 Hz
Current consumption	Approx. 0.28 A (120 V AC) Approx. 0.13 A (230 V AC)
Inrush surge current	< 15 A (typical)
Power failure bypass	> 15 ms (120 V AC) > 90 ms (230 V AC)
Input fuse	1.25 A (slow-blow, internal)
Permissible backup fuse	B6 B10 B16

### Output data

Nominal output voltage	24 V DC $\pm$ 1%
Output current	0.5 A (-25°C to +55°C) 0.55 A (-25 °C ... 40 °C permanent) 1 A (maximum output current)
Derating	+55°C to 70°C: 2.5% per Kelvin 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 $\pm$ 10%)
Residual ripple	< 60 mV <sub>PP</sub> (20 MHz)
Peak switching voltages nominal load	< 10 mV <sub>PP</sub> (20 MHz)
Maximum power dissipation idling	< 0.3 W
Power loss nominal load max.	< 2.2 W

### General data

Width	18 mm
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Height	90 mm
Depth	61 mm
Weight	0.1 kg
Efficiency	> 84 % (for 230 V AC and nominal values)
Insulation voltage input/output	4 kV AC (type test) 2 kV AC (routine test)
Degree of protection	IP20
Class of protection	II
MTBF	> 500 000 h in acc. with IEC 61709 (SN 29500)
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)
Mounting position	Horizontal DIN rail NS 35, EN 60715
Assembly instructions	Can be aligned: Horizontal 0 cm, vertical 3 cm
Electromagnetic compatibility	Conformance with EMC directive 2004/108/EC
Immunity to interference	EN 61000-6-2:2005
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Standard – Electrical equipment of machines	EN 60204
Standard - Safety of transformers	IEC 61558-2-17
Standard - Electrical safety	IEC 60950/VDE 0805 (SELV)
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 (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
UL approvals	UL/C-UL listed UL 508 UL/C-UL Recognized UL 60950 NEC Class 2 as per UL 1310

**Connection data, input**

Type of connection	Screw connection
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Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
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**

Type of connection	Screw connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	12
Stripping length	6.5 mm

**Signaling**

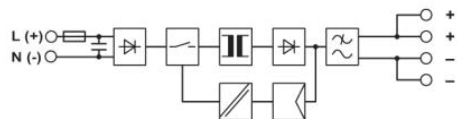
Output name	LED status indicator
Status display	"DC OK" LED green
Note on status display	U <sub>OUT</sub> > 21.5 V: LED lights up

**Certificates / Approvals**

Certifications applied for: UL Listed / CUL Listed / UL

**Diagrams/Drawings**

Block diagram



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