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Primary-switched STEP POWER power supply for DIN rail mounting, input: 1-phase, output: 24 V DC/0.5 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**

- 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**

Packing unit	1 pc
Weight per Piece (excluding packing)	85.0 g
Custom tariff number	85044030
Country of origin	Germany

### Technical data

#### **Dimensions**

Width	18 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



## Technical data

#### 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	> 15 ms (120 V AC)
	> 90 ms (230 V AC)
Input fuse	1.25 A (slow-blow, internal)
Choice of suitable circuit breakers	6 A 16 A (Characteristics B, C, D, K)

## Output data

Nominal output voltage	24 V DC ±1 %
Nominal output current (I <sub>N</sub> )	0.5 A (-25°C 55°C)
	0.55 A
Output current I <sub>max</sub>	1 A
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	< 20 mV <sub>PP</sub> (20 MHz)
Output power	12 W
Typical response time	< 0.5 s
Peak switching voltages nominal load	< 30 mV <sub>PP</sub> (20 MHz)
Maximum power dissipation in no-load condition	< 0.3 W
Power loss nominal load max.	< 2.2 W

#### General

Net weight	0.07 kg
Efficiency	> 84 % (for 230 V AC and nominal values)
Insulation voltage input/output	4 kV AC (type test)
	3.75 kV AC (routine test)
Protection class	II (in closed control cabinet)



## Technical data

#### General

	> 1567000 h (40°C)
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	Alignable: 0 mm horizontally, 30 mm vertically

## 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 flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	6.5 mm
Screw thread	M3

## Connection data, output

Connection method	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 flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	6.5 mm
Screw thread	M3

## Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Shock	30g in each direction, according to IEC 60068-2-27
Noise immunity	EN 61000-6-2:2005
Connection in acc. with standard	CUL
Standards/regulations	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-6
Standard – Electrical equipment of machines	EN 60204-1
Standard - Electrical safety	IEC 60950-1/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 60950-1 (SELV) and EN 60204-1 (PELV)



## Technical data

## Standards and Regulations

Standard - Safe isolation	DIN VDE 0100-410
Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment	EN 50178
Standard – Limitation of mains harmonic currents	EN 61000-3-2
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)
	NEC Class 2 as per UL 1310
Vibration (operation)	< 15 Hz, amplitude ±2.5 mm (according to IEC 60068-2-6)
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Rail applications	EN 50121-4

## 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
eCl@ss 9.0	27040701

### **ETIM**

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

## **UNSPSC**

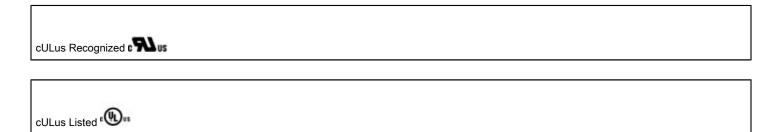
UNSPSC 6.01	30211502
UNSPSC 7.0901	39121004
UNSPSC 11	39121004
UNSPSC 12.01	39121004
UNSPSC 13.2	39121004



Approvals
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UL Recognized / UL Listed / cUL Recognized / cUL Listed / IECEE CB Scheme / EAC / cULus Recognized / cULus Listed
Ex Approvals
UL Listed / cUL Listed / cULus Listed
Approvals submitted
Approval details
UL Recognized <b>SN</b>
UL Listed (P)
cUL Recognized
cUL Listed **
IECEE CB Scheme CB
EAC

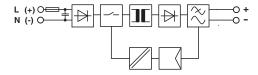


# Approvals



## **Drawings**

#### Block diagram



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