

Power supply unit - STEP-PS/ 1AC/24DC/3.8/C2LPS - 2868677

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Primary-switched STEP POWER power supply for DIN rail mounting, input: 1-phase, output: 24 V DC/3.8 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) | 380.0 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 |
| Inrush surge current | < 15 A (typical) |
| Power failure bypass | > 25 ms (120 V AC) |
| | > 120 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 ... 25 V DC (> 24 V constant capacity) |
| Output current | 3.8 A (-25°C ... 55°C) |
| | 6.5 A (maximum output current) |
| Derating | 55 °C ... 70 °C (2.5%/K) |
| Connection in series | No |
| 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 | < 80 mV _{PP} (20 MHz) |
| Peak switching voltages nominal load | < 10 mV _{PP} (20 MHz) |
| Maximum power dissipation NO-Load | < 0.7 W |
| Power loss nominal load max. | 11.8 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) |
| Protection class | II (in closed control cabinet) |
| | > 897000 h (40°C) |
| Mounting position | horizontal DIN rail NS 35, EN 60715 |

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General

| | |
|--|--|
| 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) |
| 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 |
| | NEC Class 2 as per UL 1310 |
| | 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 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section stranded min. | 0.2 mm ² |
| Conductor cross section stranded max. | 2.5 mm ² |
| 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 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section stranded min. | 0.2 mm ² |
| Conductor cross section stranded max. | 2.5 mm ² |

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Technical data

Connection data, output

| | |
|--|--------|
| 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 / IECEx CB Scheme / GL / 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 

IECEx CB Scheme 


GL

EAC

EAC

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Approvals

cULus Recognized 

cULus Listed 

Drawings

Block diagram

