Power supply unit - STEP-PS/48AC/24DC/0.5 - 2868716

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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.

Why buy this product

- 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
GTIN	4 046356 576789
Weight per Piece (excluding packing)	70.0 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
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)

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Ambient conditions

Noise immunity	EN 61000-6-2:2005

Input data

Nominal input voltage range	48 V AC
Input voltage range	43 V AC ... 52 V AC
	60 V DC ... 80 V DC
AC frequency range	45 Hz ... 65 Hz
Frequency range DC	0 Hz
Inrush surge current	< 10 A (typical)
Power failure bypass	> 15 ms (48 V AC)
	> 20 ms (52 V AC)
Input fuse	1.25 A (slow-blow, internal)
Choice of suitable fuses	6 A ... 16 A (Characteristics B, C, D, K)

Output data

Nominal output voltage	24 V DC ±1 %
Nominal output current	0.5 A (-25°C ... 55°C)
	0.55 A (-25 °C ... 40 °C permanent)
Output current I_{max}	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	< 30 mV_{PP} (20 MHz)
Output current	0.5 A (-25°C ... 55°C)
Output power	12 W
Typical response time	< 0.5 s
Peak switching voltages nominal load	< 20 mV_{PP} (20 MHz)
Maximum power dissipation NO-Load	< 0.3 W
Power loss nominal load max.	< 3.4 W

General

Net weight	0.07 kg
Efficiency	> 81 % (for 48 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)
	> 1860000 h (40°C)
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	Alignable: 0 mm horizontally, 30 mm vertically

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General

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 60204-1
Standard - Safety of transformers	EN 61558-2-16
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)
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
Rail applications	EN 50121-4
UL approvals	UL/C-UL listed UL 508
	UL/C-UL Recognized UL 60950
	NEC Class 2 as per UL 1310
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 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 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

Signaling

Output name	LED status indicator
Status display	"DC OK" LED green

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Signaling

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 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 / EAC / cULus Recognized / cULus Listed

Ex Approvals

Approvals submitted

Approval details

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Drawings

Block diagram