

Power supply unit - STEP-PS/ 1AC/ 5DC/2 - 2320513

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Primary-switched STEP POWER power supply for DIN rail mounting, input: 1-phase, output: 5 V DC/2 A

Product Description

STEP POWER power supplies for distribution boards


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.

Your advantages

- 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
GTIN	 4 046356 674744
GTIN	4046356674744
Weight per Piece (excluding packing)	86.000 g
Custom tariff number	85044030
Country of origin	Vietnam
Sales Key	CMPS11

Technical data

Dimensions

Width	18 mm
Height	90 mm
Depth	61 mm
	55 mm (Device depth (DIN rail mounting))
Installation distance right/left	0 mm / 0 mm

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Technical data

Dimensions

Installation distance top/bottom	30 mm / 30 mm
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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)
Climatic class	3K3 (in acc. with EN 60721)
Degree of pollution	2

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
Current consumption	0.2 A (120 V AC)
	0.13 A (230 V AC)
Nominal power consumption	28.9 VA
Inrush current	< 15 A
Mains buffering time	typ. 25 ms (120 V AC)
	typ. 110 ms (230 V AC)
Input fuse	1.25 A (slow-blow, internal)
Recommended breaker for input protection	6 A ... 16 A (AC: Characteristics B, C, D, K)
Power factor (cos phi)	0.44

Output data

Nominal output voltage	5 V DC ±1 %
Nominal output current (I _N)	2 A (-25°C ... 40°C permanent)
	2.2 A (-25 °C ... 55 °C)
Output current I _{max}	3.7 A
Derating	55 °C ... 70 °C (2.5%/K)
Connection in parallel	yes, for redundancy and increased capacity
Connection in series	yes
Protection against overvoltage at the output (OVP)	< 10 V DC
Residual ripple	< 50 mV _{PP}
Output power	10 W
Typical response time	< 0.5 s
Maximum power dissipation in no-load condition	< 0.4 W
Power loss nominal load max.	< 2.6 W

General

Net weight	0.1 kg
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General

Operating voltage display	Green LED
Efficiency	> 81 % (for 230 V AC and nominal values)
	> 1812000 h (40 °C)
Insulation voltage input/output	4 kV AC (type test)
	3.75 kV AC (routine test)
Insulation voltage input / PE	3.5 kV AC (type test)
	2 kV AC (routine test)
Insulation voltage output / PE	500 V DC (routine test)
Degree of protection	IP20
Protection class	II (in closed control cabinet)
Housing material	Polycarbonate
Foot latch material	POM (Polyoxymethylene)
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 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
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 ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	6.5 mm
Screw thread	M3

Standards

EMC requirements for noise immunity	EN 61000-6-1
	EN 61000-6-2
EMC requirements for noise emission	EN 61000-6-3
	EN 61000-6-4

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Standards

Standard - Safety of transformers	EN 61558-2-16
Standard - Electrical safety	IEC 62368-1 (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 62368-1 (SELV) und 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

Conformance/approvals

UL approvals	UL/C-UL listed UL 508
	UL/C-UL Recognized UL 60950-1
	NEC Class 2 as per UL 1310

EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Electrostatic discharge	EN 61000-4-2
Contact discharge	6 kV (Test Level 3)
Discharge in air	8 kV (Test Level 3)
Electromagnetic HF field	EN 61000-4-3
Frequency range	80 MHz ... 1 GHz
Test field strength	10 V/m
Frequency range	1 GHz ... 2 GHz
Test field strength	10 V/m
Frequency range	2 GHz ... 3 GHz
Test field strength	10 V/m
Comments	Criterion A
Fast transients (burst)	EN 61000-4-4
Input	4 kV (Test Level 4 - asymmetrical)
Output	2 kV (Test Level 3 - asymmetrical)
Comments	Criterion A
Surge voltage load (surge)	EN 61000-4-5
Input	2 kV (Test Level 3 - symmetrical)
	4 kV (Test Level 4 - asymmetrical)
Output	1 kV (Test Level 2 - symmetrical)
	0.5 kV (Test Level 1 - asymmetrical)
Comments	Criterion A
Conducted interference	EN 61000-4-6
Frequency range	10 kHz ... 15 kHz

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EMC data

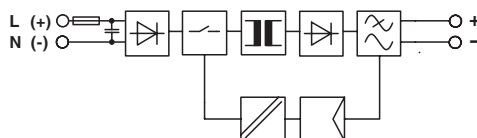
Voltage	3 V (Test Level 2)
Comments	Criterion A
Voltage dips	EN 61000-4-11

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 25;
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Block diagram



Classifications

eCl@ss

eCl@ss 10.0.1	27040701
eCl@ss 11.0	27040701
eCl@ss 4.0	27040700
eCl@ss 4.1	27040700
eCl@ss 5.0	27049000
eCl@ss 5.1	27049000
eCl@ss 6.0	27049000
eCl@ss 7.0	27049002
eCl@ss 9.0	27040701

ETIM

ETIM 3.0	EC001039
ETIM 4.0	EC002540
ETIM 6.0	EC002540
ETIM 7.0	EC002540

UNSPSC

UNSPSC 6.01	30211502
UNSPSC 7.0901	39121004

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Classifications

UNSPSC

UNSPSC 11	39121004
UNSPSC 12.01	39121004
UNSPSC 13.2	39121004
UNSPSC 18.0	39121004
UNSPSC 19.0	39121004
UNSPSC 20.0	39121004
UNSPSC 21.0	39121004

Approvals






Approvals

Approvals

EAC / EAC / UL Recognized / cUL Recognized / IECEE CB Scheme / UL Listed / cUL Listed / EAC / cULus Recognized / cULus Listed

Ex Approvals

Approval details

EAC		EAC-Zulassung
EAC		RU*DE*08.B.01873/19
UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm FILE E 214596
cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm FILE E 214596
IECEE CB Scheme		http://www.iecee.org/ DK-28573-UL

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Approvals

UL Listed


<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 123528

cUL Listed


<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 123528

EAC

RU S-
DE.BL08.W.00764

cULus Recognized



cULus Listed





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