

## Uninterruptible power supply - STEP-UPS/12DC/12DC/4/46WH - 1082548

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Uninterruptible power supply with integrated battery module. The STEP-BAT/LI-ION/18.5DC/46WH battery module can be re-ordered separately.

### Product Description

UPS modules with integrated energy storage are particularly space saving: UPS module and energy storage are combined in one housing. It's just a case of connecting a power supply upstream.

### Your advantages

- ✓ Stable supply of sensitive loads, thanks to the regulated output voltage
- ✓ Safety ensured, thanks to the integrated protective circuit and energy storage temperature monitoring
- ✓ Quick and easy installation, thanks to integrated energy storage
- ✓ Battery operation can be stopped via remote contact
- ✓ Flexible assembly – can be snapped onto the DIN rail or screwed onto a level surface



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 815169
GTIN	4055626815169
Weight per Piece (excluding packing)	660.000 g
Custom tariff number	85371091
Country of origin	Germany

### Technical data

#### Dimensions

Width	108 mm
Height	90 mm

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## Technical data

### Dimensions

Depth	71 mm
Installation distance right/left	0 mm / 0 mm
Installation distance top/bottom	30 mm / 30 mm

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	0 °C ... 40 °C
Ambient temperature (storage/transport)	-20 °C ... 45 °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

Input voltage	12 V DC
Input voltage range	10 V DC ... 16.5 V DC
Current consumption (charging process)	< 0.8 A (Charging (I <sub>Charge</sub> = max, I <sub>Out</sub> = 0))
Current consumption (maximum)	6 A
Current consumption (idle)	< 30 mA
Fixed backup threshold	< 10 V
Variable connect threshold	1 V / 1 s
Input fuse, integrated	7 A (slow-blow, internal)

### Output data (12 V DC mains operation)

Nominal output voltage	12 V DC
Nominal output current (I <sub>N</sub> )	4 A (0 °C ... 40 °C)

### Output data (12 V DC battery operation)

Nominal output voltage	12 V DC
Output voltage range (depends on the input voltage)	10 V DC ... 15 V DC (U <sub>Out</sub> = U <sub>In(t-1)</sub> )
Nominal output current (I <sub>N</sub> )	4 A (0 °C ... 40 °C)

### General output data

Efficiency	> 97.4 % (Mains operation, with charged energy storage)
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### General

IQ technology	no
Net weight	0.52 kg
Memory medium	Lithium-ion
Protection class	III
MTBF (IEC 61709, SN 29500)	> 1997000 h (40 °C)

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## Technical data

### General

Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	alignable: horizontally 0 mm, vertically 50 mm

### Connection data, input

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

### 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

### Connection data for signaling

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

### Charging process

Quality check of battery	Yes, every time it is charged and cyclically once a month
Deep discharge protection	< 15 V DC

### Standards

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## Technical data

### Standards

EMC requirements for noise immunity	EN 61000-6-2
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)

### Conformance/approvals

UL approvals	UL Listed UL 508
	UL/C-UL Recognized UL 60950-1

### EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
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 (Test Level 3)
Frequency range	1 GHz ... 2 GHz
Test field strength	10 V/m (Test Level 3)
Frequency range	2 GHz ... 3 GHz
Test field strength	10 V/m (Test Level 3)
Comments	Criterion A
Fast transients (burst)	EN 61000-4-4
Input	2 kV (Test Level 3 - asymmetrical)
Output	2 kV (Test Level 3 - asymmetrical)
Signal	2 kV (Test Level 4 - asymmetrical)
Comments	Criterion A
Surge voltage load (surge)	EN 61000-4-5
Input	1 kV (Test Level 2 - symmetrical)
	2 kV (Test Level 3 - asymmetrical)
Output	1 kV (Test Level 2 - symmetrical)
	2 kV (Test Level 3 - asymmetrical)
Signal	1 kV (Test Level 2 - asymmetrical)
Comments	Criterion A
Conducted interference	EN 61000-4-6
I/O/S	asymmetrical
Frequency range	0.15 MHz ... 80 MHz
Voltage	10 V (Test Level 3)
Comments	Criterion A

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## Technical data

### EMC data

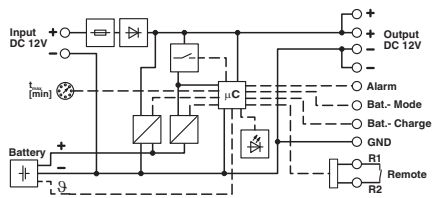
Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

### Environmental Product Compliance

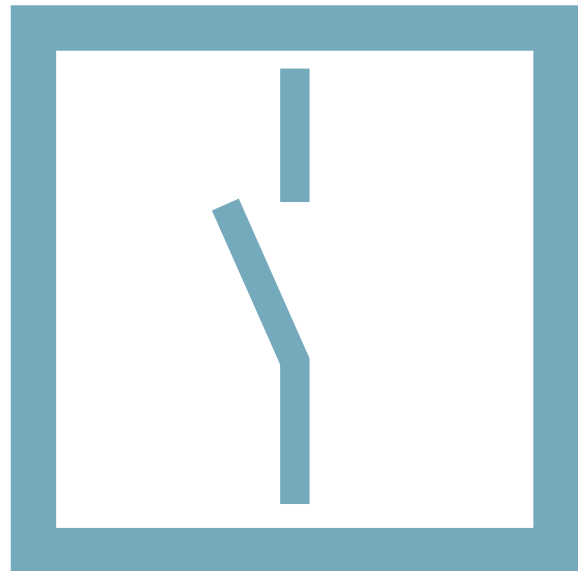
REACH SVHC	Lead 7439-92-1
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## Drawings

Block diagram



Pictogram



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Pictogram



## Classifications

### eCl@ss

eCl@ss 10.0.1	27040705
eCl@ss 11.0	27040705
eCl@ss 9.0	27040705

### ETIM

ETIM 6.0	EC000382
ETIM 7.0	EC000382

### UNSPSC

UNSPSC 18.0	39121011
UNSPSC 19.0	39121011
UNSPSC 20.0	39121011
UNSPSC 21.0	39121011

## Approvals

### Approvals

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## Approvals

Approvals

cULus Listed / cULus Listed

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Ex Approvals

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## Approval details

cULus Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 214596
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cULus Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 123528
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## Accessories

Accessories

Battery unit

Battery - STEP-BAT/LI-ION/18.5DC/46WH - 1081355



Replacement battery module, lithium-ion, 18.5 V DC, 46 Wh

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Power supply

Power supply unit - STEP-PS/ 1AC/12DC/5 - 2868583



Primary-switched STEP POWER power supply for DIN rail mounting, input: 1-phase, output: 12 V DC/5 A

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