

# Uninterruptible power supply - STEP-UPS/12DC/12DC/4 - 2868693

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Uninterruptible power supply with integrated battery module. The STEP-BAT/LIPO/18.5 DC/1.4 AH 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

- UPS with integrated LiPo-based energy storage



## Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4046356519922

## Technical data

### Dimensions

Width	108 mm
Height	90 mm
Depth	61 mm
Installation distance right/left	0 mm / 0 mm
Installation distance top/bottom	0 mm / 0 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

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## Technical data

### Input data

Input voltage	12 V DC
Nominal 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	0.46 kg
Memory medium	Lithium polymer
Protection class	III
MTBF (IEC 61709, SN 29500)	> 1997000 h (40 °C)
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
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## Technical data

### Connection data, output

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>
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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

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
Standard - Electrical safety	EN 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)

### 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)

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## Technical data

### EMC data

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

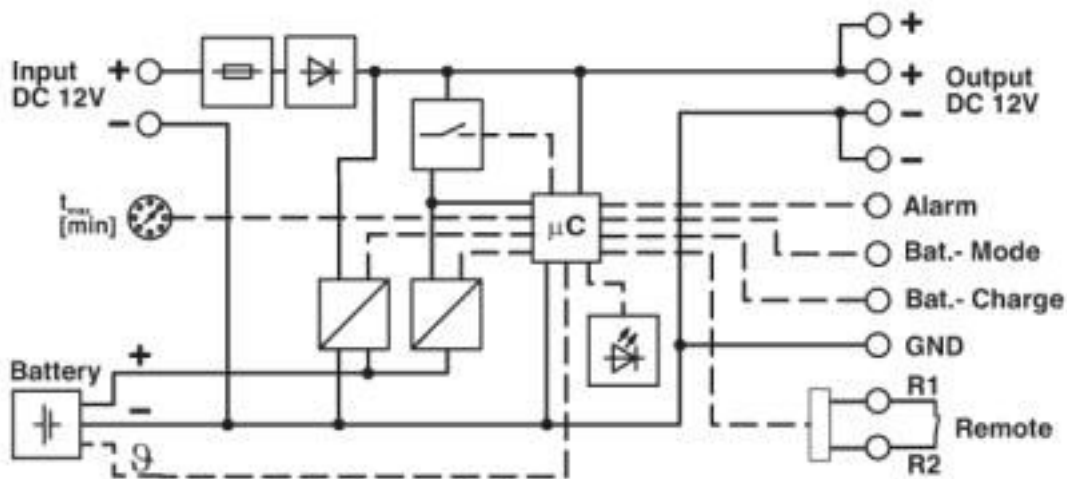
### Environmental Product Compliance

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

## Drawings

# Uninterruptible power supply - STEP-UPS/12DC/12DC/4 - 2868693

Block diagram



## Classifications

eCl@ss

eCl@ss 10.0.1	27040705
eCl@ss 4.0	27040600
eCl@ss 4.1	27040600
eCl@ss 5.0	27040600
eCl@ss 5.1	27040600
eCl@ss 6.0	27040600
eCl@ss 7.0	27040603
eCl@ss 8.0	27040603
eCl@ss 9.0	27040705

ETIM

ETIM 4.0	EC000382
ETIM 5.0	EC000382
ETIM 6.0	EC000382
ETIM 7.0	EC000382

UNSPSC

UNSPSC 6.01	30211510
UNSPSC 7.0901	39121011
UNSPSC 11	39121011
UNSPSC 12.01	39121011
UNSPSC 13.2	39121011
UNSPSC 18.0	39121011
UNSPSC 19.0	39121011
UNSPSC 20.0	39121011
UNSPSC 21.0	39121011

# Uninterruptible power supply - STEP-UPS/12DC/12DC/4 - 2868693

## Approvals

### Approvals

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#### Approvals

UL Listed / UL Recognized / cUL Recognized / IECCEB Scheme / cUL Listed / EAC / EAC / cULus Recognized / cULus Listed

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#### Ex Approvals

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### Approval details

UL 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
UL Recognized		<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
cUL Recognized		<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
IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	DK-28030
cUL 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
EAC			EAC-Zulassung
EAC			RU*DE*08.B.01873/19
cULus Recognized			

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## Approvals

cULus Listed



## Accessories

### Accessories

#### Battery unit

Battery - STEP-BAT/LIPO/18.5DC/1.4AH - 2320364



Replacement battery module, lithium polymer, 18.5 V DC, 1.4 Ah.

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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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