

## Uninterruptible power supply - STEP-UPS/24DC/24DC/3 - 2868703

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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	 4 046356 519939
GTIN	4046356519939
Weight per Piece (excluding packing)	580.000 g
Custom tariff number	85371091
Country of origin	Poland

### 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

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## Technical data

### 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	24 V DC
Nominal input voltage	24 V DC
Input voltage range	22.5 V DC ... 29.5 V DC
Current consumption (charging process)	< 0.5 A (Charging (I <sub>Charge</sub> = max, I <sub>Out</sub> = 0))
Current consumption (maximum)	4.7 A
Current consumption (idle)	< 30 mA
Fixed backup threshold	< 22.5 V
Variable connect threshold	1 V / 1 s
Input fuse, integrated	7 A (slow-blow, internal)

### Output data (24 V DC mains operation)

Nominal output voltage	24 V DC
Output voltage range (depends on the input voltage)	22.5 V DC ... 29.5 V DC (U <sub>Out</sub> = U <sub>In</sub> - 0.3 V DC)
Nominal output current (I <sub>N</sub> )	3 A (0 °C ... 40 °C)

### Output data (24 V DC battery operation)

Nominal output voltage	24 V DC
Output voltage range (depends on the input voltage)	23 V DC ... 26.5 V DC (U <sub>Out</sub> = U <sub>In(t-1)</sub> )
Nominal output current (I <sub>N</sub> )	3 A (0 °C ... 40 °C)

### General output data

Efficiency	> 98 % (Mains operation, with charged energy storage)
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### General

IQ technology	no
Net weight	0.45 kg
Memory medium	Lithium polymer
Protection class	III
MTBF (IEC 61709, SN 29500)	> 1401000 h (40 °C)
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	alignable: horizontally 0 mm, vertically 50 mm

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## Technical data

### 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

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

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## Technical data

### Standards

	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)
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

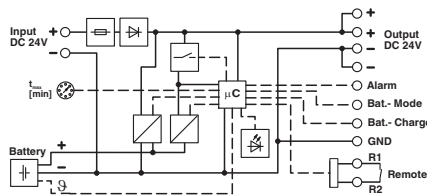
Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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	27040705
eCl@ss 11.0	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

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## Classifications

### 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

## Approvals

### Approvals

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#### Approvals

cULus Recognized / cULus Listed

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#### Ex Approvals

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### Approval details

cULus Recognized	
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cULus Listed	
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## Accessories

### Accessories

Battery unit

## Uninterruptible power supply - STEP-UPS/24DC/24DC/3 - 2868703

### Accessories

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/24DC/4.2 - 2868664



Primary-switched STEP POWER power supply for DIN rail mounting, input: 1-phase, output: 24 V DC/4.2 A