

## 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 Features

- UPS with integrated LiPo-based power storage



### Key Commercial Data

|                                      |          |
|--------------------------------------|----------|
| Packing unit                         | 1 pc     |
| Weight per Piece (excluding packing) | 580.0 g  |
| Custom tariff number                 | 85371091 |
| Country of origin                    | Germany  |

### Technical data

#### Dimensions

|        |        |
|--------|--------|
| Width  | 108 mm |
| Height | 90 mm  |
| Depth  | 61 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) |
| Noise immunity                                 | EN 61000-6-2                      |

#### Input data

|                             |                         |
|-----------------------------|-------------------------|
| Nominal input voltage range | 24 V DC                 |
| Input voltage range         | 22.5 V DC ... 29.5 V DC |

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## Technical data

### Input data

|                                        |                                                                      |
|----------------------------------------|----------------------------------------------------------------------|
| 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                                                              |
| Buffer period                          | 50 min. (1 A)                                                        |
|                                        | 25 min. (2 A)                                                        |
|                                        | 17 min. (3 A)                                                        |
| Input fuse                             | 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 ( $U_{Out} = U_{In} - 0,3 \text{ V DC}$ ) |
| 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 ( $U_{Out} = U_{In(t-1)}$ ) |
| Nominal output current (I <sub>N</sub> )            | 3 A (0°C ... 40°C)                                |

### General output data

|            |                                                      |
|------------|------------------------------------------------------|
| Efficiency | > 98 % (Mains operation, with charged power storage) |
|------------|------------------------------------------------------|

### General

|                                  |                                                     |
|----------------------------------|-----------------------------------------------------|
| IQ technology                    | No                                                  |
| Net weight                       | 0.45 kg                                             |
| Memory medium                    | Lithium polymer                                     |
| Protection class                 | III                                                 |
| MTTF/ MTBF (IEC 61709, SN 29500) | > 1401000 h (40°C)                                  |
| Mounting position                | horizontal DIN rail NS 35, EN 60715                 |
| Assembly instructions            | Can be aligned: 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                  |

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## Technical data

### 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 and Regulations

|                                                                                                                                  |                                                         |
|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Electromagnetic compatibility                                                                                                    | Conformance with EMC Directive 2004/108/EC              |
| Shock                                                                                                                            | 30g in each direction, according to IEC 60068-2-27      |
| Noise immunity                                                                                                                   | EN 61000-6-2                                            |
| Connection in acc. with standard                                                                                                 | CUL                                                     |
| Standards/regulations                                                                                                            | EN 61000-4-3                                            |
|                                                                                                                                  | EN 61000-4-4                                            |
|                                                                                                                                  | EN 61000-4-6                                            |
| 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)                                |
| UL approvals                                                                                                                     | UL Listed UL 508                                        |
|                                                                                                                                  | UL/C-UL Recognized UL 60950                             |
| Vibration (operation)                                                                                                            | < 15 Hz, amplitude ±2.5 mm (according to IEC 60068-2-6) |

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### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27040603 |
| eCl@ss 4.1 | 27040603 |
| eCl@ss 5.0 | 27040603 |
| eCl@ss 5.1 | 27040603 |
| eCl@ss 6.0 | 27040603 |
| eCl@ss 7.0 | 27040603 |
| eCl@ss 8.0 | 27040603 |
| eCl@ss 9.0 | 27040705 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 4.0 | EC000382 |
| ETIM 5.0 | EC000382 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211510 |
| UNSPSC 7.0901 | 39121011 |
| UNSPSC 11     | 39121011 |
| UNSPSC 12.01  | 39121011 |
| UNSPSC 13.2   | 39121011 |

### Approvals

#### Approvals

##### Approvals

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

##### Ex Approvals

##### Approvals submitted

##### Approval details

|                                                                                                   |
|---------------------------------------------------------------------------------------------------|
| UL Recognized  |
|---------------------------------------------------------------------------------------------------|

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### Approvals

UL Listed 

cUL Recognized 

cUL Listed 

IECEE CB Scheme 

EAC

EAC

cULus Recognized 

cULus Listed 

### Drawings

Block diagram



