

## Uninterruptible power supply - STEP-UPS/24DC/24DC/3/46WH - 1081430

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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                                 | <br>4 055626 807850 |
| GTIN                                 | 4055626807850   |
| 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                          | 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) |
|------------|---|

### General

|               |             |
|---------------|-------------|
| IQ technology | no          |
| Net weight    | 0.51 kg     |
| Memory medium | Lithium-ion |

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## Technical data

### General

|                            |  |
|----------------------------|--|
| 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 |

### 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 |
|--------------------------|---|

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## Technical data

### Charging process

|                           |           |
|---------------------------|-----------|
| Deep discharge protection | < 15 V DC |
|---------------------------|-----------|

### Standards

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

# Uninterruptible power supply - STEP-UPS/24DC/24DC/3/46WH - 1081430

## Technical data

### EMC data

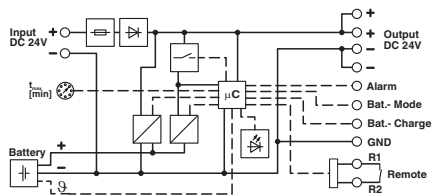
|                 |  |
|-----------------|--|
| Frequency range | 0.15 MHz ... 80 MHz  |
| Voltage         | 10 V (Test Level 3)  |
| Comments        | Criterion A  |
| Criterion A     | Normal operating behavior within the specified limits.                               |
| Criterion B     | Temporary impairment to operational behavior that is corrected by the device itself. |

### Environmental Product Compliance

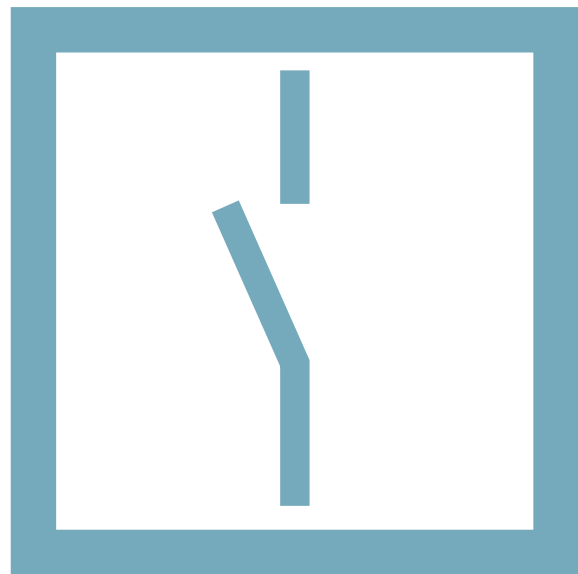
|            |                |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

## Drawings

Block diagram



Pictogram



# Uninterruptible power supply - STEP-UPS/24DC/24DC/3/46WH - 1081430

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 |

## Approvals

### Approvals

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#### Approvals

cULus Listed / cULus Listed

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#### Ex Approvals


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### Approval details

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## Approvals

|              |   |   |               |
|--------------|---|---|---------------|
| 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 |
|--------------|---|---|---------------|

|              |   |   |               |
|--------------|---|---|---------------|
| 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 |
|--------------|---|---|---------------|

## 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/24DC/4.2 - 2868664



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