

## Uninterruptible power supply - MINI-DC-UPS/12DC/4 - 2866598

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Uninterruptible power supply with integrated power supply unit, 4 A, in combination with MINI-BAT/12/DC 1.6 Ah or 2.6 Ah

### Product Description

The MINI-DC-UPS provide an uninterruptible DC voltage both in case of AC power supply network and in the event of mains interferences. The wide-range input allows input voltages from 85 V AC to 264 V AC; 4 A is provided at the output with a regulated and adjustable output voltage from 10 V DC to 16 V DC. The rechargeable battery module supplies an output voltage from 13.6 V DC to 9.6 V DC in buffer mode. A 1.6 Ah or a 2.6 Ah rechargeable battery module is optionally used depending on the required buffer time. The buffer time varies depending on the load current.



### Key Commercial Data

|                                      |                                                                                      |
|--------------------------------------|--------------------------------------------------------------------------------------|
| Packing unit                         | 1 pc                                                                                 |
| GTIN                                 |  |
| Weight per Piece (excluding packing) | 491.2 g                                                                              |
| Custom tariff number                 | 85371091                                                                             |
| Country of origin                    | China                                                                                |

### Technical data

#### Dimensions

|        |         |
|--------|---------|
| Width  | 67.5 mm |
| Height | 99 mm   |
| Depth  | 107 mm  |

#### Ambient conditions

|                                                |                                              |
|------------------------------------------------|----------------------------------------------|
| Degree of protection                           | IP20                                         |
| Ambient temperature (operation)                | -25 °C ... 70 °C (> 60 °C Derating: 2,5 %/K) |
| Ambient temperature (storage/transport)        | -40 °C ... 80 °C                             |
| Max. permissible relative humidity (operation) | 95 % (at 25 °C, non-condensing)              |
| Noise immunity                                 | EN 61000-6-2:2005                            |

#### Input data

|                             |                       |
|-----------------------------|-----------------------|
| Nominal input voltage range | 100 V AC ... 240 V AC |
|-----------------------------|-----------------------|

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## Technical data

### Input data

|                                          |                                                                                               |
|------------------------------------------|-----------------------------------------------------------------------------------------------|
| AC input voltage range                   | 85 V AC ... 264 V AC                                                                          |
| Input voltage range DC                   | 100 V DC ... 350 V DC (UL508: 100...250 V DC)                                                 |
| Buffer time                              | Can be set to: 0.5 min; 1 min; 2 min; 3 min; 5 min; 10 min; 15 min; 20 min; 30 min; permanent |
| Current consumption                      | 0.65 A (230 V AC)                                                                             |
|                                          | 1.35 A (120 V AC)                                                                             |
| Inrush current limiting/I <sup>2</sup> t | < 1.1 A <sup>2</sup> s                                                                        |
| Power failure bypass                     | see diagram                                                                                   |
| Typical response time                    | 100 ms                                                                                        |
| Power factor (cos phi)                   | approx. 0.5                                                                                   |
| Protective circuit                       | Varistor                                                                                      |
| Input fuse, integrated                   | 3.15 A (slow-blow, internal)                                                                  |

### Output data

|                                                         |                                                                                                                                                           |
|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nominal output voltage                                  | 12 V DC                                                                                                                                                   |
| Setting range of the output voltage (U <sub>Set</sub> ) | 10 V DC ... 16 V DC (AC input voltage available, AC input voltage not available: Output voltage depending on the battery voltage: 13.6 V DC ... 9.6 V DC) |
| Nennausgangsstrom (I <sub>N</sub> )                     | 4 A                                                                                                                                                       |
| Derating                                                | 60 °C ... 70 °C (2.5%/K)                                                                                                                                  |
| Output current limit                                    | max. 7 A                                                                                                                                                  |
| Max. capacitive load                                    | Unlimited                                                                                                                                                 |
| Control deviation                                       | < 1 % (change in load, static 10 % ... 90 %)                                                                                                              |
| Power loss nominal load max.                            | 10.5 W                                                                                                                                                    |
| Maximum power dissipation in no-load condition          | 3.8 W                                                                                                                                                     |
| Power dissipation battery operation                     | 2.9 W                                                                                                                                                     |
| Efficiency                                              | > 82 %                                                                                                                                                    |
| Residual ripple                                         | < 50 mV <sub>PP</sub>                                                                                                                                     |
| Peak switching voltages nominal load                    | < 100 mV <sub>PP</sub>                                                                                                                                    |
| Connection in parallel                                  | No                                                                                                                                                        |
| Surge protection against internal surge voltages        | < 35 V DC                                                                                                                                                 |
| Feedback resistance                                     | 35 V DC                                                                                                                                                   |

### General

|                                 |                                                |
|---------------------------------|------------------------------------------------|
| IQ technology                   | No                                             |
| Net weight                      | 0.45 kg                                        |
| Memory medium                   | External, rechargeable battery 1.6 Ah / 2.6 Ah |
| Insulation voltage input/output | 4 kV (type test)                               |
|                                 | 2 kV (routine test)                            |
| Protection class                | II (in closed control cabinet)                 |
|                                 | > 728000 h (40°C)                              |
| Mounting position               | horizontal DIN rail NS 35, EN 60715            |

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## Technical data

### General

|                       |                                                     |
|-----------------------|-----------------------------------------------------|
| Assembly instructions | Can be aligned: Horizontally 0 mm, vertically 50 mm |
|-----------------------|-----------------------------------------------------|

### Connection data, input

|                                       |                                       |
|---------------------------------------|---------------------------------------|
| Connection method                     | Pluggable COMBICON screw connections, |
| 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                      | 8 mm                                  |
| Screw thread                          | M3                                    |

### Connection data, output

|                                       |                                       |
|---------------------------------------|---------------------------------------|
| Connection method                     | Pluggable COMBICON screw connections, |
| 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                      | 8 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                  |
| Screw thread                          | M3                  |

### Standards and Regulations

|                                             |                                                    |
|---------------------------------------------|----------------------------------------------------|
| Electromagnetic compatibility               | Conformance with EMC Directive 2004/108/EC         |
| Shock                                       | 30g in each direction, according to IEC 60068-2-27 |
| Noise emission                              | EN 55011 (EN 55022)                                |
| Noise immunity                              | EN 61000-6-2:2005                                  |
| Connection in acc. with standard            | CUL                                                |
| Standards/regulations                       | EN 61000-4-3                                       |
|                                             | EN 61000-4-4                                       |
|                                             | EN 61000-4-6                                       |
| Standard – Electrical equipment of machines | EN 60204-1                                         |

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## Technical data

### Standards and Regulations

|                                                                                                                                  |                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Standard - Electrical safety                                                                                                     | EN 60950-1/VDE 0805 (SELV)                                                       |
|                                                                                                                                  | EN 61558-2-17                                                                    |
| Standard – Electronic equipment for use in electrical power installations and their assembly into electrical power installations | EN 50178/VDE 0160 (PELV)                                                         |
| Standard – Safety extra-low voltage                                                                                              | EN 60950-1 (SELV)                                                                |
|                                                                                                                                  | EN 60204 (PELV)                                                                  |
| Standard - Safe isolation                                                                                                        | DIN VDE 0100-410                                                                 |
| Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment               | EN 50178                                                                         |
| UL approvals                                                                                                                     | UL Listed UL 508                                                                 |
|                                                                                                                                  | UL/C-UL Recognized UL 60950                                                      |
|                                                                                                                                  | UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location) |
| Vibration (operation)                                                                                                            | < 15 Hz, amplitude $\pm 2.5$ mm (according to IEC 60068-2-6)                     |
| Low Voltage Directive                                                                                                            | Conformance with LV directive 2006/95/EC                                         |
| Rail applications                                                                                                                | EN 50121-4                                                                       |

## 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 |

### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC000382 |
| ETIM 3.0 | EC000382 |
| 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 |

## Uninterruptible power supply - MINI-DC-UPS/12DC/4 - 2866598

### Approvals

#### Approvals

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#### Approvals

UL Recognized / UL Listed / cUL Recognized / EAC / EAC / cULus Recognized

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#### Ex Approvals

UL Listed / cUL Listed / cULus Listed

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#### Approvals submitted

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#### Approval details

UL Recognized 

UL Listed 

cUL Recognized 

EAC

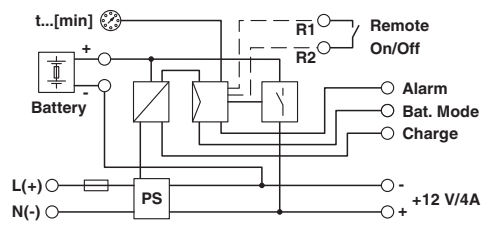
EAC

cULus Recognized 

### Drawings

## Uninterruptible power supply - MINI-DC-UPS/12DC/4 - 2866598

Block diagram



Diagram

