

## 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     |
| Weight per Piece (excluding packing) | 500.0 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

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## Technical data

### Input data

|                                 |   |
|---------------------------------|---|
| Nominal input voltage range     | 100 V AC ... 240 V AC   |
| 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)<br>1.35 A (120 V AC)  |
| Inrush current limiting/ $I^2t$ | < 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 ( $U_{Set}$ ) | 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) |
| Nominal output current ( $I_N$ )                  | 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)                               |

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## Technical data

### General

|                       |   |
|-----------------------|---|
|                       | 2 kV (routine test)                                 |
| Protection class      | II (in closed control cabinet)                      |
|                       | > 728000 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                     | 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 |
|-------------------------------|--|

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## Technical data

### Standards and Regulations

|  |  |
|--|--|
| 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   |
| 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 ±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 |
| eCl@ss 9.0 | 27040705 |

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## Classifications

### 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 |

## 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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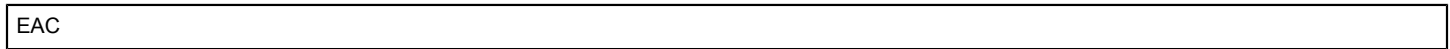
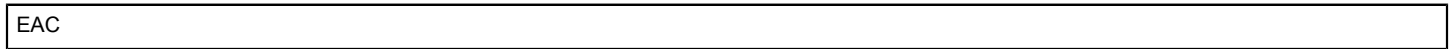
### Approval details

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

|   |
|---|
| UL Listed  |
|---|

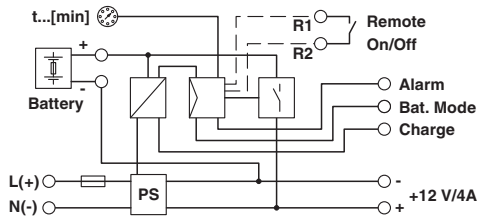
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## Approvals



## Drawings

Block diagram



Diagram

