

MINI-DC-UPS/24DC/2


Order No.: 2866640



<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2866640>

Uninterruptible power supply with integrated power supply unit, 2 A, in combination with MINI-BAT/24/DC 0.8 AH or 1.3 AH



| Commercial data | |
|--------------------------|--|
| GTIN (EAN) |  4 046356 113533 |
| sales group | H061 |
| Pack | 1 pcs. |
| Customs tariff | 85044082 |
| Catalog page information | Page 622 (IF-2011) |

Product notes

WEEE/RoHS-compliant since:
02/01/2007



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Product description

Especially compact and easy-to-use, the new MINI-DC-UPS/24 DC/2 is a combination of the power supply unit and an uninterruptible power supply in the conventional ME housing. It secures the operation of all connected 24 V consumers in the electrical systems both in the case of an error-free supply network and in the event of mains interferences.

The combined solution enables a slim design with dimensions of 67.5 x 99 x 107 mm. The wide-range input allows input voltages between 85 V AC and 264 V AC; 2 A is provided at the output with a regulated and adjustable output voltage between 22.5 V DC and 29.5 V DC. The rechargeable battery module supplies an output voltage between 27.9 V DC and 19.2 V DC in the buffer mode. A 0.8 Ah or a 1.3 Ah rechargeable battery module is used depending on the required

buffer time: The module thus supplies 2 A for five minutes with the 0.8 Ah rechargeable battery module or 2 A for 30 minutes with the 1.3 Ah rechargeable battery module. The buffer time varies depending on the load current.

The system availability is increased using extensive signaling through control lamps and active switching outputs. The charging process of the rechargeable battery module, the operational readiness, the buffer mode and the alarm messages are displayed before the rechargeable battery module is discharged. The service life of the rechargeable battery module can be increased by optimum battery management; for example, a temperature-compensated charging protects the rechargeable battery module at high ambient temperatures. An integrated timeout minimizes installation costs considerably.

Technical data

Input data

| | |
|------------------------------|--|
| Nominal input voltage | 100 V AC ... 240 V AC |
| AC input voltage range | 85 V AC ... 264 V AC |
| DC input voltage range | 100 V DC ... 350 V DC |
| Current consumption | Approx. 0.6 A |
| | 0.85 A (230 V AC) |
| | Approx. 1.1 A |
| | 1.5 A (120 V AC) |
| Inrush surge current | < 34 A (< 1.1 A ² s) |
| Power failure bypass | (refer to the diagram) |
| Buffer period | (depends on the storage medium, e.g. 20 min / 2 A) |
| Input fuse | 3.15 A (slow-blow, internal) |
| Permissible backup fuse | B6 |
| | B10 |
| | B16 |
| Power factor (cos phi) | Approx. 0.5 |
| Protective circuit/component | Varistor |

Output data

| | |
|-------------------------------------|--|
| Nominal output voltage | 24 V DC (AC input voltage available: 22.5 to 29.5 V DC, AC input voltage not available: 27.9 to 19.2 V DC) |
| Setting range of the output voltage | 22.5 V DC ... 29.5 V DC (normal mode; in the buffer mode, dependent on a battery voltage of 27.9 V DC ... 19.2 V DC) |
| Output current | 2 A |
| Derating | 60 °C ... 70 °C (2.5%/K) |
| Connection in parallel | No |
| Connection in series | Yes |
| Max. capacitive load | Unlimited |
| Control deviation | < 1 % (change in load, static 10% ... 90%) |

| | |
|--------------------------------------|------------------------|
| Residual ripple | < 50 mV _{pp} |
| Peak switching voltages nominal load | < 100 mV _{pp} |
| Maximum power dissipation idling | 3.8 W |
| Power loss nominal load max. | 15 W |

General data

| | |
|--|--|
| Width | 67.5 mm |
| Height | 99 mm |
| Depth | 107 mm |
| Net weight | 0.45 kg |
| Memory medium | External, battery 0.8 Ah / 1.3 Ah |
| Efficiency | > 83 % |
| Insulation voltage input/output | 2 kV (routine test) 4 kV (type test) |
| Degree of protection | IP20 |
| Protection class | II (in an enclosed control cabinet) |
| MTBF (IEC 61709, SN 29500) | > 500000 h |
| Ambient temperature (operation) | -25 °C ... 70 °C (> 60 °C derating) |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Max. permissible relative humidity (operation) | 95 % (at 25 °C, no condensation) |
| Mounting position | horizontal DIN rail NS 35, EN 60715 |
| Assembly instructions | Can be aligned: Horizontal 0 cm, vertical 5 cm |
| Electromagnetic compatibility | Conformance with EMC Directive 2004/108/EC |
| Noise emission | EN 50081-2 |
| Noise immunity | EN 61000-6-2:2005 |
| Low Voltage Directive | Conformance with LV directive 2006/95/EC |
| Standard – Electrical equipment of machines | EN 60204 |
| Standard - Safety of transformers | EN 61558-2-17 |
| 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 DIN VDE 0106-1010 |

| | |
|--|-----------------------------|
| Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment | DIN VDE 0106-101 |
| UL approvals | UL Listed UL 508 |
| | UL/C-UL Recognized UL 60950 |

Connection data, input

| | |
|--|---------------------------------------|
| Connection method | Pluggable COMBICON screw connections, |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section stranded min. | 0.2 mm ² |
| Conductor cross section stranded max. | 2.5 mm ² |
| Conductor cross section AWG/kcmil min. | 24 |
| Conductor cross section AWG/kcmil 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 ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section stranded min. | 0.2 mm ² |
| Conductor cross section stranded max. | 2.5 mm ² |
| Conductor cross section AWG/kcmil min. | 24 |
| Conductor cross section AWG/kcmil max | 12 |
| Stripping length | 8 mm |

Signaling

| | |
|---------------------------------------|---|
| Output name | Active (high = buffer module is loaded) |
| Output description | Power Good |
| Maximum switching voltage | ≤ 24 V |
| Output voltage | + 24 V |
| Continuous load current | ≤ 20 mA |
| Status display | LED "Power Good", green |
| Note on status display | Buffer module is loaded: LED ON |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |
| Conductor cross section stranded min. | 0.2 mm ² |

| | |
|--|---|
| Conductor cross section stranded max. | 2.5 mm ² |
| Conductor cross section AWG/kcmil min. | 24 |
| Conductor cross section AWG/kcmil max | 12 |
| Tightening torque, min | 0.5 Nm |
| Tightening torque max | 0.6 Nm |
| Screw thread | M3 |
| Output name | Alarm |
| Output description | Relay output |
| Maximum switching voltage | ≤ 24 V |
| Output voltage | 24 V |
| Continuous load current | ≤ 200 mA |
| Status display | LED red |
| Note on status display | Malfunction/alarm: LED permanently lit |
| Output name | Battery charge |
| Output description | Relay output |
| Maximum switching voltage | ≤ 24 V |
| Output voltage | 24 V |
| Continuous load current | ≤ 200 mA |
| Status display | LED yellow, flashing |
| Note on status display | Battery charge/battery is being charged: LED flashing |
| Output name | Battery mode |
| Output description | Relay output |
| Type of signaling | LED, active switching output |
| Maximum switching voltage | ≤ 24 V |
| Output voltage | 24 V |
| Continuous load current | ≤ 200 mA |
| Status display | Yellow LED |
| Note on status display | Battery mode/buffer mode: LED permanently lit |

Certificates / Approvals



Certification

CUL, UL, UL Listed

Certifications applied for:

UL-EX LIS / CUL-EX LIS

Accessories

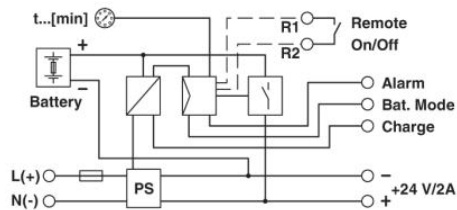
| Item | Designation | Description |
|------|-------------|-------------|
|------|-------------|-------------|

General

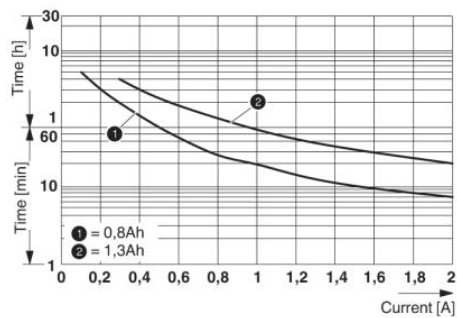
| | | |
|---------|---------------------|--|
| 2866666 | MINI-BAT/24DC/0.8AH | Rechargeable battery module, lead AGM, VRLA technology, 24 V DC, 0.8 Ah. |
| 2866417 | MINI-BAT/24DC/1.3AH | Rechargeable battery module, lead AGM, VRLA technology, 24 V DC, 1.3 Ah. |

Diagrams/Drawings

Block diagram



Diagram



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