

## Uninterruptible power supply - MINI-DC-UPS/24DC/2 - 2866640

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

### 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 20 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.



### 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
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## Technical data

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 70 °C (> 60 °C Derating: 2,5 %/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °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
AC input voltage range	85 V AC ... 264 V AC
Input voltage range DC	100 V DC ... 350 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	0.85 A (230 V AC) 1.5 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	24 V DC
Setting range of the output voltage (U <sub>Set</sub> )	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)
Nominal output current (I <sub>N</sub> )	2 A
Derating	60 °C ... 70 °C (2.5%/K)
Output current limit	max. 3 A
Max. capacitive load	Unlimited
Control deviation	< 1 % (change in load, static 10 % ... 90 %)
Power loss nominal load max.	15 W
Maximum power dissipation in no-load condition	3.8 W
Efficiency	> 83 %
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

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## Technical data

### General

IQ technology	No
Net weight	0.45 kg
Memory medium	External, battery 0.8 Ah / 1.3 Ah
Insulation voltage input/output	4 kV (type test) 2 kV (routine test)
Protection class	II (in closed control cabinet) > 753000 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

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## Technical data

### Connection data for signaling

Screw thread	M3
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### 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
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

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## Classifications

### eCl@ss

eCl@ss 9.0	27040705
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### 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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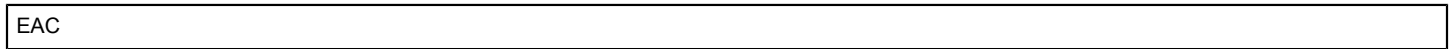
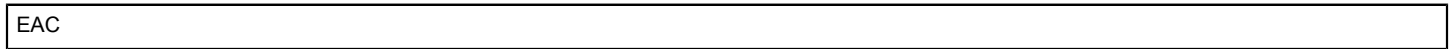
### Approval details

UL Recognized
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UL Listed
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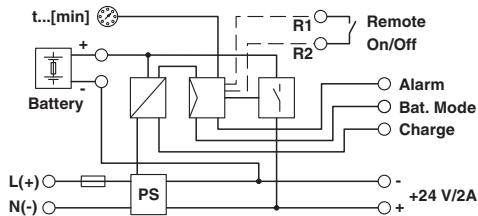
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## Approvals



## Drawings

Block diagram



Diagram

