

## MINI-DC-UPS/24DC/2

Order No.: 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

Commercial data	
EAN	4046356113533
sales group	H061
Pack	1 pcs.
Customs tariff	85044081
Weight/Piece	0.502 KG
Catalog page information	Page 589 (IF-2009)

### 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 <sup>2</sup> 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)
Power factor (cos phi)	Approx. 0.5
Protective circuit/component	Varistor

### Output data

Nominal output voltage	24 V DC (Normal operation: 22.5 to 29.5 V DC, buffer mode: 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	From +60°C to 70°C: 2.5% per Kelvin
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 <sub>PP</sub>
Peak switching voltages nominal load	< 100 mV <sub>PP</sub>
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
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
Class of protection	II (in an enclosed control cabinet)
MTBF	> 500 000 h in acc. with IEC 61709 (SN 29500)
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 guideline 2004/108/EC and for low-voltage guideline 2006/95/EC
Emitted interference	EN 50081-2
Immunity to interference	EN 61000-6-2:2005
Standard – Electrical equipment of machines	EN 60204
Standard - Safety of transformers	EN 61558-2-17
Standard - Electrical safety	EN 60950/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 (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**

Type of connection	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 stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	12
Stripping length	8 mm
Screw thread	M3

**Connection data, output**

Type of connection	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 stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
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 <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
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:

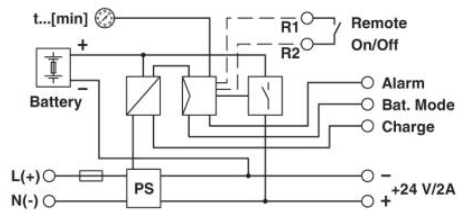
UL-EX LIS / CUL-EX LIS

**Accessories**

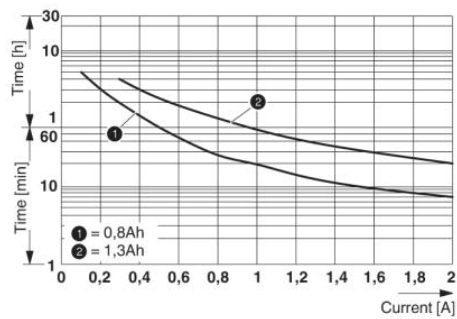
Item	Designation	Description
<b>General</b>		
2866666	MINI-BAT/24DC/0.8AH	Rechargeable battery module, 24 V DC, 0.8 Ah, for use with DC-UPS/2A
2866417	MINI-BAT/24DC/1.3AH	Rechargeable battery module, 24 V DC, 1.3 Ah, for use with MINI-UPS/2A and TRIO-UPS/5A

**Diagrams/Drawings**

Block diagram



Diagram



**Address**

PHOENIX CONTACT Inc., USA  
586 Fulling Mill Road  
Middletown, PA 17057, USA  
Phone (800) 888-7388  
Fax (717) 944-1625  
<http://www.phoenixcon.com>



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