

## MINI-PS-100-240AC/24DC/4

Order No.: 2938837



<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2938837>

DIN rail power supply unit 24 V DC/4 A, primary-switched mode, slim design

Commercial data	
GTIN (EAN)	4017918924058
sales group	H041
Pack	1 pcs.
Customs tariff	85044081
Weight/Piece	0.491 KG
Catalog page information	Page 577 (IF-2009)

### Product notes

WEEE/RoHS-compliant since:  
08/18/2006



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### Product description

MINI POWER is the extremely slim power supply unit with constructional widths of 22.5 mm, 45 mm and 67.5 mm.

In addition to a 24 V version with output currents of 1.3 A, 2 A and 4 A, special voltages with 5 V/3 A and  $\pm 15$  V/1 A and 10 V...15 V/2 A and 8 A are also available.

A reliable starting of complex loads is ensured by a power reserve of up to 100% – the POWER BOOST.

The high operational reliability is thus dependably guaranteed in complex global networks as well. MINI POWER also functions in applications where static voltage dips, transient failures of the supply voltage or phase failure are to be expected.

Generously dimensioned capacitors guarantee a mains buffering of more than 20 ms under full load.

Worldwide use is realized by the consistent implementation of a wide-range input.

In this way, your whole system can be tested at any manufacturing location in the world and be delivered to global destinations without switching over the input voltage, often a source of faults. This saves storage costs and reduces the logistical work.

An international approval package including UL 60950 for information technology equipment and UL 508 for industrial regulating devices pave the way for worldwide applications.

#### 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	90 V DC ... 350 V DC
AC frequency range	45 Hz ... 65 Hz
DC frequency range	0 Hz
Current consumption	Approx. 1.3 A (120 V AC)
	0.8 A (230 V AC)
	Approx. 1.3 A (90 V DC)
	Approx. 0.4 A (350 V DC)
Inrush surge current	< 15 A (typical)
Power failure bypass	> 20 ms (120 V AC)
	> 100 ms (230 V AC)
Input fuse	3.15 A (slow-blow, internal)
Permissible backup fuse	B6
	B10
	B16
Type of protection	Transient surge protection
Protective circuit/component	Varistor

##### Output data

Nominal output voltage	24 V DC $\pm$ 1%
Setting range of the output voltage	22.5 V DC ... 28.5 V DC (> 24 V constant capacity)
Output current	4 A (-25 °C ... 60 °C)
	5 A (with POWER BOOST, -25°C ... 40°C permanent)

Derating	from +60 °C to +70 °C: 2.5% per Kelvin 60 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	Yes
Starting delay with capacitive load	(Unrestricted)
Max. capacitive load	Unlimited
Current limitation	Approx 9 A (in the event of a short-circuit)
Control deviation	(change in load, static 10% ... 90%) < 3 % (change in load, dynamic 10% ... 90%) < 0.1 % (change in input voltage ±10%)
Residual ripple	< 20 mV <sub>PP</sub> (20 MHz)
Peak switching voltages nominal load	< 100 mV <sub>PP</sub> (20 MHz)
Maximum power dissipation idling	2.5 W
Power loss nominal load max.	12 W

**General data**

Width	67.5 mm
Height	99 mm
Depth	107 mm
Net weight	0.4 kg
Operating voltage display	LED green
Efficiency	> 88 % (At 230 V AC and nominal values)
Insulation voltage input/output	3 kV (routine test) 3 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 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/VDE 0805 (SELV)
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 – Limitation of mains harmonic currents	EN 61000-3-2
Standard – Equipment safety	GS (tested safety)
UL approvals	UL/C-UL listed UL 508
	UL/C-UL Recognized UL 60950
	UL/C-UL Listed UL 1604 Class I, Division 2, Groups A, B, C, D
Surge voltage category	III

**Connection data, input**

Type of connection	Pluggable screw connection
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	7 mm
Screw thread	M3

**Connection data, output**

Type of connection	Pluggable screw connection
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	7 mm

### Signaling

Output name	DC OK, status indicator
Output description	$U_{OUT} > 21.5 \text{ V}$ : High signal
Maximum switching voltage	$\leq 24 \text{ V}$
Output voltage	+ 24 V (signal)
Continuous load current	$\leq 20 \text{ mA}$
Status display	"DC OK" LED green
Note on status display	$U_{OUT} > 21.5 \text{ V}$ : LED lights up
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

### Certificates / Approvals



Certification

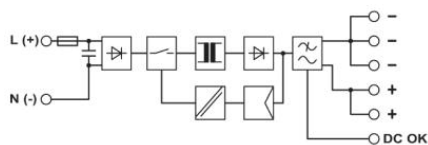
CUL, CUL Listed, UL, UL Listed

Certification Ex:

CUL-EX LIS, UL-EX LIS

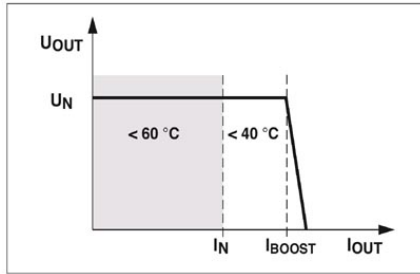
### Diagrams/Drawings

Block diagram



Diagram

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POWER BOOST

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