

Power supply unit - MINI-PS-100-240AC/24DC/4 - 2938837

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

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 ± 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.

Product Features

- Easy-maintenance connection technology thanks to keyed COMBICON connectors
- Remote monitoring of output voltage via switching output



Key commercial data

package_quantity	1
GTIN	4017918924058

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)
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

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Input data

Input voltage range	85 V AC ... 264 V AC
Input voltage range	90 V DC ... 350 V DC
AC frequency range	45 Hz ... 65 Hz
Current consumption	1.3 A (120 V AC)
Current consumption	0.8 A (230 V AC)
Current consumption	1.3 A (90 V DC)
Current consumption	0.4 A (350 V DC)
Inrush surge current	< 15 A (typical)
Power failure bypass	> 20 ms (120 V AC)
Power failure bypass	> 100 ms (230 V AC)
Input fuse	3.15 A (slow-blow, internal)
Choice of suitable fuses	6 A ... 16 A (Characteristics B, C, D, K)
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)
Output current	5 A (with POWER BOOST, -25°C ... 40°C permanent)
Derating	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 %
Control deviation	< 3 % (change in load, dynamic 10 % ... 90 %)
Control deviation	< 0.1 % (change in input voltage \pm 10 %)
Residual ripple	< 20 mV _{PP} (20 MHz)
Peak switching voltages nominal load	< 100 mV _{PP} (20 MHz)
Maximum power dissipation NO-Load	2.5 W
Power loss nominal load max.	12 W

General

Net weight	0.4 kg
Operating voltage display	Green LED
Efficiency	> 88 % (for 230 V AC and nominal values)
Insulation voltage input/output	3 kV (type test)
Insulation voltage input/output	3 kV (Routine test)
Protection class	II (in closed control cabinet)
MTBF (IEC 61709, SN 29500)	> 815000 h (According to EN 29500)

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General

Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	Can be aligned: Horizontally 0 mm, vertically 50 mm
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Noise emission	EN 50081-2
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Standard – Electrical equipment of machines	EN 60204
Standard - Electrical safety	EN 60950-1/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 60950-1 (SELV)
Standard – Safety extra-low voltage	EN 60204 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
Standard – Protection against electric shock	DIN 57100-410
Standard – Limitation of mains harmonic currents	EN 61000-3-2
UL approvals	UL/C-UL listed UL 508
UL approvals	UL/C-UL Recognized UL 60950
UL approvals	UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location)
Surge voltage category	III

Connection data, input

Connection method	Pluggable screw connection
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	7 mm
Screw thread	M3

Connection data, output

Connection method	Pluggable screw connection
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	7 mm

Signaling

Output name	DC OK, status indicator
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Signaling

Output description	U _{OUT} > 21.5 V: High signal
Maximum switching voltage	≤ 24 V
Output voltage	+ 24 V (Signal)
Continuous load current	≤ 20 mA
Status display	"DC OK" LED green
Note on status display	U _{OUT} > 21.5 V: LED lights up
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

classifications

eCl@ss

eCl@ss 4.0	27040702
eCl@ss 4.1	27040702
eCl@ss 5.0	27049002
eCl@ss 5.1	27049002
eCl@ss 6.0	27049002
eCl@ss 7.0	27049002
eCl@ss 8.0	27049002

ETIM

ETIM 2.0	EC001039
ETIM 3.0	EC001039
ETIM 4.0	EC000599
ETIM 5.0	EC002540

UNSPSC

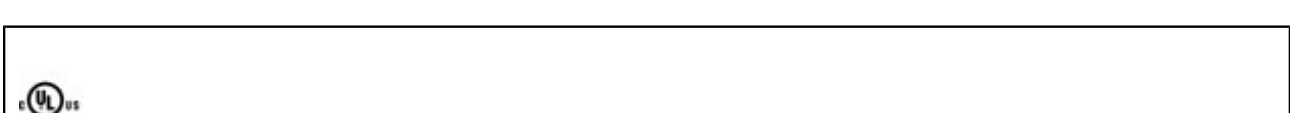
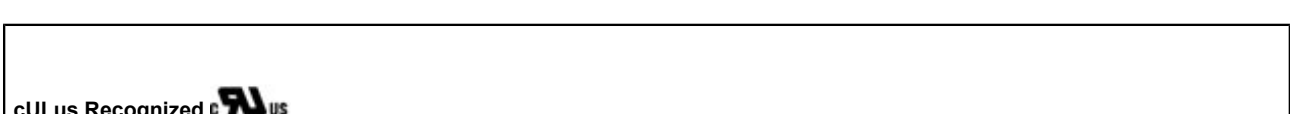
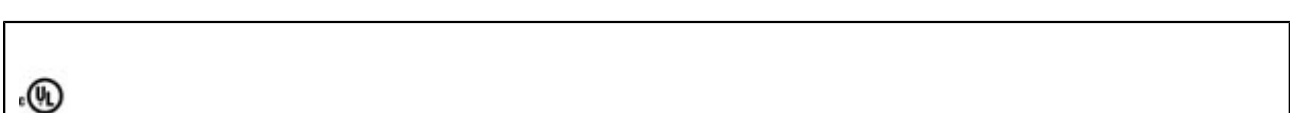
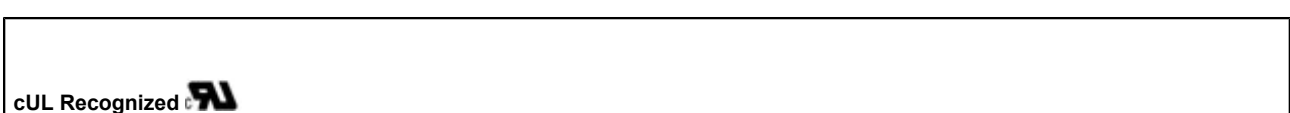
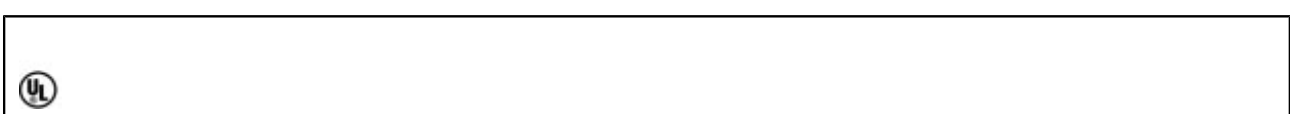
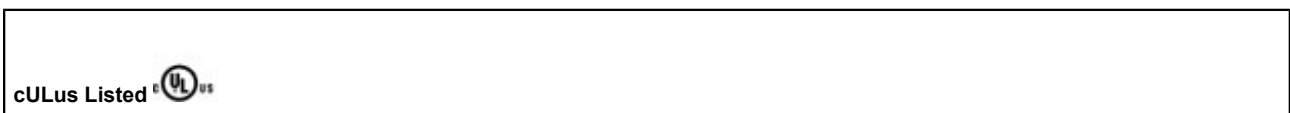
UNSPSC 6.01	30211502
UNSPSC 7.0901	39121004
UNSPSC 11	39121004
UNSPSC 12.01	39121004
UNSPSC 13.2	39121004

approvals

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approvals

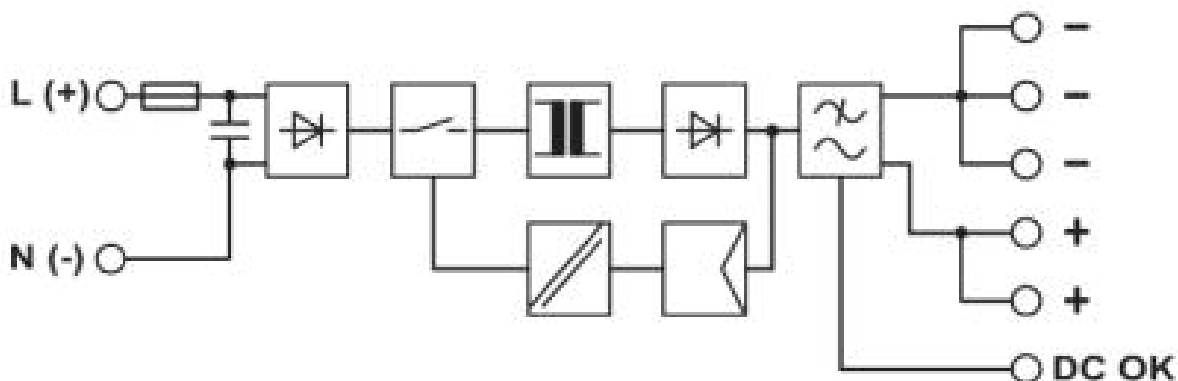
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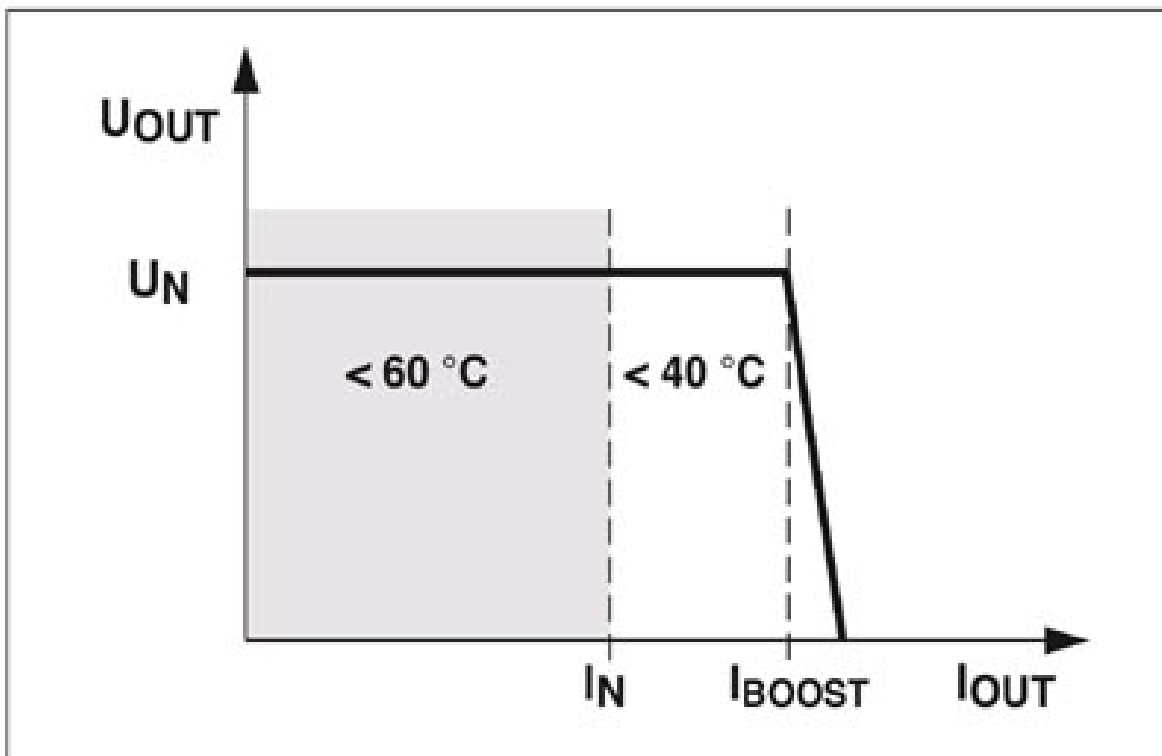
Drawings

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Block diagram



Diagram



POWER BOOST

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