

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

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Primary-switched MINI POWER power supply for DIN rail mounting, input: 1-phase, output: 24 V DC/4 A

Product Description

MINI POWER power supplies for MCR technology

In measurement and control technology (MCR), modular electronics housing has become the industry standard. MINI POWER is the power supply unit to go with it. The devices are flexible, thanks to special voltages and special versions.

Product Features

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



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	500.0 g
Custom tariff number	85044030
Country of origin	China

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: 2,5 %/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)

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Ambient conditions

Noise immunity	EN 61000-6-2:2005
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Input data

Nominal input voltage range	100 V AC ... 240 V AC
Input voltage range	85 V AC ... 264 V AC
	90 V DC ... 350 V DC
AC frequency range	45 Hz ... 65 Hz
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)
Choice of suitable circuit breakers	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 (U_{set})	22.5 V DC ... 28.5 V DC (> 24 V DC, constant capacity restricted)
Nominal output current (I_N)	4 A (-25 °C ... 60 °C)
POWER BOOST (I_{Boost})	5 A (-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
Active 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 \pm 10 %)
Residual ripple	< 20 mV _{PP} (20 MHz)
Output power	96 W
Typical response time	< 0.4 s
Peak switching voltages nominal load	< 100 mV _{PP} (20 MHz)
Maximum power dissipation in no-load condition	2.5 W
Power loss nominal load max.	12 W

General

Net weight	0.4 kg
Operating voltage display	Green LED

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General

Efficiency	> 88 % (for 230 V AC and nominal values)
Insulation voltage input/output	3 kV (type test)
	3 kV (Routine test)
Protection class	II (in closed control cabinet)
MTTF/ MTBF (IEC 61709, SN 29500)	> 815000 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 screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG 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 flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	7 mm
Screw thread	M3

Connection data for signaling

Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
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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)
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 – Limitation of mains harmonic currents	EN 61000-3-2
UL approvals	UL/C-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	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
eCl@ss 9.0	27040701

ETIM

ETIM 2.0	EC001039
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Classifications

ETIM

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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UL Recognized / UL Listed / cUL Recognized / cUL Listed / EAC / EAC / cULus Recognized / cULus Listed

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

UL Recognized

UL Listed

cUL Recognized

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Approvals

cUL Listed

EAC

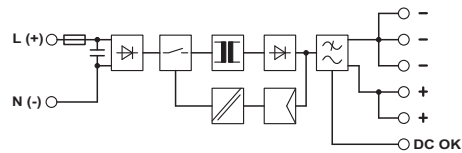
EAC

cULus Recognized

cULus Listed

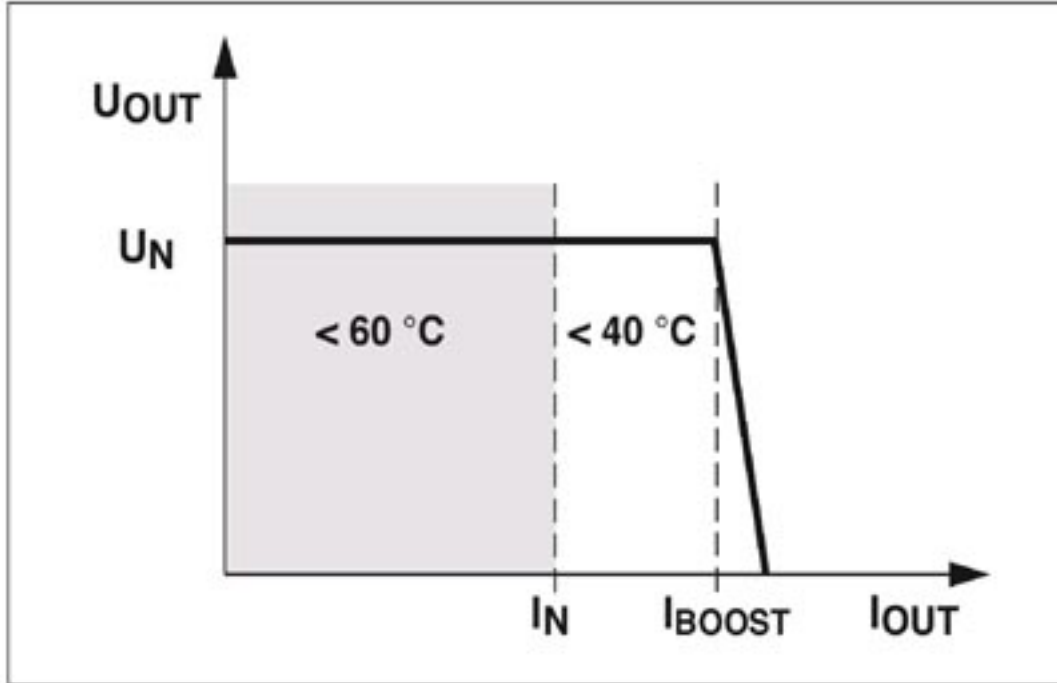
Drawings

Block diagram



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Diagram



POWER BOOST