

Power supply unit - MINI-PS-100-240AC/24DC/1.5/EX - 2866653

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Primary-switched power supply MINI POWER for DIN rail mounting, input: 1-phase, output: 24 V DC/1,5 A, for the potentially explosive area

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

- ✓ For supplying the supply voltage via the foot element (DIN rail connector) where AC voltages are available
- ✓ 100 ... 240 V AC nominal input voltage range
- ✓ 24 V DC output voltage
- ✓ For up to 60 MINI Analog modules
- ✓ For up to 1.5 A, secondary
- ✓ Status and error indication via diagnostic LEDs



Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	293.6 GRM
Custom tariff number	85044030
Country of origin	China

Technical data

Dimensions

Width	35 mm
Height	99 mm
Depth	95 mm

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Technical data

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)	100 % (condensation permitted)

Input data

Input voltage range	85 V AC ... 264 V AC
AC frequency range	45 Hz ... 65 Hz
Current consumption	0.75 A (120 V AC)
	0.45 A (230 V AC)
Inrush surge current	< 15 A (typical)
Power failure bypass	> 35 ms (120 V AC)
	> 150 ms (230 V AC)
Input fuse	3.15 A (slow-blow, internal)
Choice of suitable fuses	6 A ... 16 A (AC: Characteristics B, C, D, K)

Output data

Nominal output voltage	24 V DC $\pm$ 1 %
Output current	1.5 A (-25 °C ... 60 °C)
	2 A (-25 °C ... 40 °C)
Derating	60 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity
Connection in series	Yes
Residual ripple	< 40 mV _{PP} (with nominal values)
Peak switching voltages nominal load	< 20 mV _{PP} (20 MHz)
Maximum power dissipation NO-Load	1.5 W
Power loss nominal load max.	6.5 W

General

Net weight	0.25 kg
Efficiency	> 84 % (for 230 V AC and nominal values)
Insulation voltage input/output	4 kV AC (type test)
	3 kV AC (routine test)
Protection class	II (in closed control cabinet)
	> 2789000 h (40 °C)
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
Declaration of conformity in acc. with EN 60079-15	# II 3 G Ex nAC IIC T4 X

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General

ATEX	# II 3 G Ex nA nC IIC T4 Gc X
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) and 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/C-UL Recognized UL 60950
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
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

Signaling

Output name	DC OK active
Output description	$U_{OUT} > 0.9 \times U_N$; High signal
Maximum switching voltage	≤ 24 V
Output voltage	+ 24 V DC (Signal)
Maximum inrush current	max. 44 mA
Continuous load current	≤ 40 mA

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Signaling

Status display	"DC OK" LED green
Note on status display	$U_{OUT} < 0.9 \times U_N$: LED flashing
Conductor cross section solid min.	0.5 mm ²
Conductor cross section solid max.	16 mm ²
Conductor cross section stranded min.	0.5 mm ²
Conductor cross section stranded max.	10 mm ²
Conductor cross section AWG/kcmil min.	20
Conductor cross section AWG/kcmil max	6
Screw thread	M4
Output name	DC OK floating
Output description	Relay contact, $U_{OUT} > 0.9 \times U_N$: Contact closed
Status display	"DC OK" LED green
Note on status display	$U_{OUT} > 21.5 \text{ V DC}$: LED ON
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

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Classifications

ETIM

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 / UL Recognized / UL Listed / cUL Recognized / cUL Listed / cUL Listed / cULus Recognized / cULus Listed / cULus Listed / cULus Listed / null / null / null / null

Ex Approvals

ATEX

Approvals submitted

Approval details

UL Recognized 

UL Listed 

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cUL Listed 

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Approvals



Drawings

Block diagram

