

Power supply unit - MINI-PS-100-240AC/24DC/2 - 2938730

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Primary-switched MINI POWER power supply for DIN rail mounting, input: 1-phase, output: 24 V DC/2 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)	325.3 GRM
Custom tariff number	85044030
Country of origin	Germany

Technical data

Dimensions

Width	45 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)

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Ambient conditions

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

Input voltage range	85 V AC ... 264 V AC
	90 V DC ... 350 V DC
AC frequency range	45 Hz ... 65 Hz
Current consumption	0.7 A (120 V AC)
	0.4 A (230 V AC)
	0.65 A (90 V DC)
	0.2 A (350 V DC)
Inrush surge current	< 15 A (typical)
Power failure bypass	> 35 ms (120 V AC)
	> 170 ms (230 V AC)
Input fuse	2.5 A (slow-blow, internal)
Choice of suitable fuses	6 A ... 16 A (Characteristics B, C, D, K)

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	2 A (-25 °C ... 60 °C)
	2.9 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
Control deviation	< 1 % (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)
Peak switching voltages nominal load	< 100 mV _{PP} (20 MHz)
Maximum power dissipation NO-Load	2 W
Power loss nominal load max.	7 W

General

Net weight	0.25 kg
Operating voltage display	Green LED
Efficiency	> 88 % (for 230 V AC and nominal values)
Insulation voltage input/output	4 kV (type test)

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General

	3 kV (Routine test)
Protection class	II (in closed control cabinet)
	> 507000 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
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)
	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
	UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location)
	NEC Class 2 as per UL 1310

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

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Technical data

Connection data, output

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 active
Output description	U _{OUT} > 21.5 V: High signal
Maximum switching voltage	≤ 24 V
Output voltage	+ 24 V
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	27242213
eCl@ss 5.1	27242213
eCl@ss 6.0	27049005
eCl@ss 7.0	27049002
eCl@ss 8.0	27049002

ETIM

ETIM 2.0	EC001039
ETIM 3.0	EC001039
ETIM 4.0	EC000599

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Classifications

ETIM

ETIM 5.0	EC002540
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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 / GOST / cUL Listed / cUL Listed / cULus Recognized / cULus Listed / null / cULus Listed / null / null / null / null / cULus Listed / cULus Listed / null / null / null / null

Ex Approvals

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

Approvals submitted

Approval details

UL Recognized 

UL Listed 

cUL Recognized 
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Approvals

GOST 

cUL Listed 

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Approvals

cULus Listed



Drawings

Block diagram

