

Power supply unit - MINI-PS-100-240AC/10-15DC/2 - 2938756

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Primary-switched MINI POWER power supply for DIN rail mounting, input: 1-phase, output: 10 V DC ... 15 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)	250.6 g
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: 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)
	> 120 ms (230 V AC)
Input fuse	2 A (slow-blow, internal)
Choice of suitable circuit breakers	6 A ... 16 A (Characteristics B, C, D, K)

Output data

Nominal output voltage	12 V DC $\pm 1\%$
	10 V DC $\pm 1\%$
	15 V DC $\pm 1\%$
Setting range of the output voltage (U_{set})	10 V DC ... 15 V DC (> 12 V DC, constant capacity restricted)
Nominal output current (I_N)	2 A (-25 °C ... 60 °C)
POWER BOOST (I_{Boost})	2.3 A (-25 °C ... 40 °C permanent)
Derating	60 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for assembling redundant systems and increasing efficiency
Connection in series	Yes
Residual ripple	< 20 mV _{PP} (20 MHz)
Output power	30 W
Typical response time	< 1 s
Peak switching voltages nominal load	< 100 mV _{PP} (20 MHz)
Maximum power dissipation in no-load condition	< 1 W
Power loss nominal load max.	< 7 W

General

Net weight	0.25 kg
Operating voltage display	Green LED
Efficiency	> 86 % (for 230 V AC and nominal values)
Insulation voltage input/output	4 kV (type test)
	3 kV (Routine test)
Protection class	II (in closed control cabinet)
MTTF/ MTBF (IEC 61709, SN 29500)	> 507000 h (40 °C)
Mounting position	horizontal DIN rail NS 35, EN 60715

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General

Assembly instructions	Can be aligned: Horizontally 0 mm, vertically 50 mm
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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
Conductor cross section AWG max.	12
Screw thread	M3

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Noise emission	EN 55011 (EN 55022)
Noise immunity	EN 61000-6-2:2005
Connection in acc. with standard	CUL
Standard – Electrical equipment of machines	EN 60204-1

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Standards and Regulations

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)
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Rail applications	EN 50121-4

Classifications

eCl@ss

eCl@ss 4.0	27250202
eCl@ss 4.1	27250202
eCl@ss 5.0	27143114
eCl@ss 5.1	27143114
eCl@ss 6.0	27143114
eCl@ss 7.0	27049002
eCl@ss 8.0	27049002
eCl@ss 9.0	27040701

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

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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 

cUL Listed 

EAC

EAC

cULus Recognized 

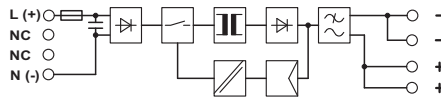
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Approvals

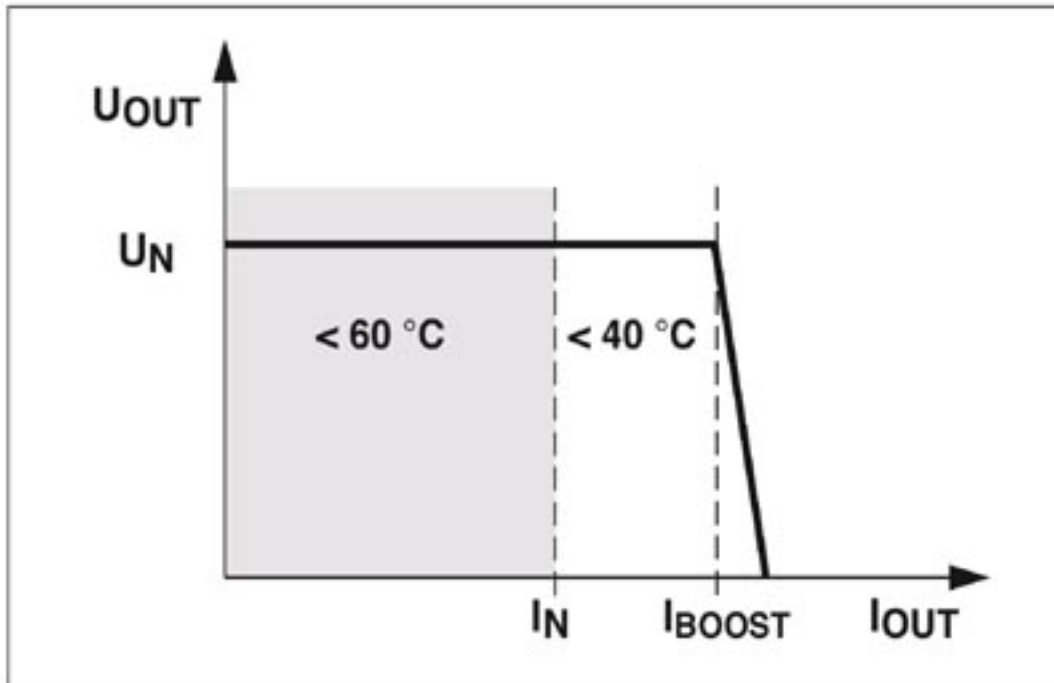
cULus Listed

Drawings

Block diagram



Diagram



POWER BOOST