

MINI-PS-100-240AC/2X15DC/1 - Power supply



2938743

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Please use the following item in new systems: 2904596

Primary-switched MINI POWER power supply for DIN rail mounting, input: 1-phase, output: 2 x 15 V DC / 1 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.

Your advantages

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

Commercial data

Item number	2938743
Packing unit	1 pc
Sales key	CM11
Product key	CMPM19
Catalog page	Page 277 (C-4-2019)
GTIN	4017918906870
Weight per piece (including packing)	325.4 g
Weight per piece (excluding packing)	250 g
Customs tariff number	85044083
Country of origin	PL

Technical data

Input data

AC operation

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
Input voltage range AC	85 V AC ... 264 V AC
Input voltage range DC	90 V DC ... 350 V DC
Voltage type of supply voltage	AC/DC
Inrush current	< 35 A (typical)
Inrush current integral (I^2t)	4 A ² s
AC frequency range	45 Hz ... 65 Hz
Mains buffering time	typ. 30 ms (120 V AC) typ. 150 ms (230 V AC)
Current consumption	0.6 A (120 V AC) 0.4 A (230 V AC) 0.8 A (90 V DC) 0.3 A (350 V DC)
Nominal power consumption	61 VA
Typical response time	< 1 s
Input fuse	2.5 A (slow-blow, internal)
Recommended breaker for input protection	6 A ... 16 A (Characteristics B, C, D, K)

Output data

Efficiency	> 80 % (for 230 V AC and nominal values)
Nominal output voltage	± 15 V DC ±1 %
Nominal output current (I_N)	2x 1 A (-25 °C ... 60 °C)
POWER BOOST (I_{Boost})	2x 1.5 A (-25 °C ... 40 °C permanent)
Derating	60 °C ... 70 °C (2.5 %/K)
Feedback voltage resistance	17 V DC
Active current limitation	Approx 4.4 A (in the event of a short circuit)
Control deviation	< 2 % (change in load, static 10 % ... 90 %) < 3 % (change in load, dynamic 10 % ... 90 %) < 0.1 % (change in input voltage ±10 %)
Residual ripple	< 30 mV _{PP} (20 MHz)
Output power	15 W
Peak switching voltages nominal load	< 20 mV _{PP} (20 MHz)
Maximum no-load power dissipation	2 W
Power loss nominal load max.	8 W
Rise time	< 100 ms (typ.)
Connection in parallel	yes, for assembling redundant systems and increasing efficiency
Connection in series	yes

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2938743

<https://www.phoenixcontact.com/us/products/2938743>

Connection data

Input

Connection method	Pluggable screw connection
Conductor cross section, rigid min.	0.2 mm ²
Conductor cross section, rigid 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
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

Output

Connection method	Pluggable screw connection
Conductor cross section, rigid min.	0.2 mm ²
Conductor cross section, rigid 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
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

Signal

Conductor cross section, rigid min.	0.2 mm ²
Conductor cross section, rigid 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

Signaling

Types of signaling	LED
Operating voltage display	Green LED

Signal output: DC OK active

Status display	"DC OK" LED green
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Electrical properties

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Insulation voltage input/output	4 kV (type test)
	3 kV (routine test)

Product properties

Product type	Power supply
Product family	MINI POWER
MTBF (IEC 61709, SN 29500)	> 500000 h (40 °C)

Insulation characteristics

Protection class	II (in closed control cabinet)
Degree of pollution	2

Dimensions

Width	45 mm
Height	99 mm
Depth	107 mm

Installation dimensions

Installation distance right/left	0 mm / 0 mm
Installation distance top/bottom	50 mm / 50 mm

Mounting

Assembly note	alignable: horizontally 0 mm, vertically 50 mm
Mounting position	horizontal DIN rail NS 35, EN 60715
With protective coating	no

Material specifications

Housing material	Plastic
Type of housing	Polyamide PA, color: green

Environmental and real-life conditions

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
Climatic class	3K3 (in acc. with EN 60721)
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)
Shock	18 ms, 30g, in each space direction (according to IEC 60068-2-27)
Vibration (operation)	< 15 Hz, amplitude ±2.5 mm (according to IEC 60068-2-6) 15 Hz ... 150 Hz, 2.3g, 90 min.
Temp code	T4A ≤ 60 °C

Standards and regulations

Rail applications	EN 50121-4
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2938743

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Standard – Electronic equipment for use in electrical power installations and their assembly into electrical power installations	EN 50178/VDE 0160 (PELV)
Standard – Limitation of mains harmonic currents	EN 61000-3-2
Standard - Electrical safety	EN 60950-1/VDE 0805 (SELV)
Standard – Safety extra-low voltage	EN 60950-1 (SELV)
	EN 60204 (PELV)
Standard - Safe isolation	DIN VDE 0100-410

Approvals

UL approvals	UL/C-UL listed UL 508
	UL/C-UL Recognized UL 60950-1
	UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location)
	NEC Class 2 as per UL 1310

Conformity/Approvals

SIL in accordance with IEC 61508	0
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EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
EMC requirements for noise immunity	EN 61000-6-2

Noise emission

Standards/regulations	EN 55011 (EN 55022)
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Electrostatic discharge

Standards/regulations	EN 61000-4-2
Housing	Level 3

Electrostatic discharge

Contact discharge	8 kV
Discharge in air	8 kV
Comments	Criterion B

Electromagnetic HF field

Standards/regulations	EN 61000-4-3
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Electromagnetic HF field

Frequency range	80 MHz ... 1 GHz
Test field strength	10 V/m
Frequency range	1 GHz ... 2 GHz
Test field strength	3 V/m
Frequency range	2 GHz ... 2.7 GHz
Test field strength	1 V/m
Comments	Criterion A

Fast transients (burst)

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2938743

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Standards/regulations	EN 61000-4-4
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Fast transients (burst)

Input	4 kV (level 4 - asymmetrical: conductor to ground)
Output	2 kV (level 3 - asymmetrical: conductor to ground)
Signal	1 kV (level 2 - asymmetrical: conductor to ground)
Comments	Criterion B

Surge voltage load (surge)

Standards/regulations	EN 61000-4-5
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Surge voltage load (surge)

Input	4 kV (level 4 - asymmetrical: conductor to ground)
	2 kV (level 4 - symmetrical: conductor to conductor)
Output	0.5 kV (level 1 - asymmetrical: conductor to ground)
	0.5 kV (level 1 - symmetrical: conductor to conductor)
Signal	0.5 kV (level 1 - asymmetrical: conductor to ground)
Comments	Criterion B

Conducted interference

Standards/regulations	EN 61000-4-6
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Conducted interference

Input/output/signal	Level 3 - asymmetrical
Frequency range	0.15 MHz ... 80 MHz
Comments	Criterion A
Voltage	10 V

Voltage dips

Standards/regulations	EN 61000-4-11
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Emitted interference

Standards/regulations	EN 61000-6-3
Radio interference voltage in acc. with EN 55011	EN 55011 (EN 55022) Class B, area of application: Industry and residential
Emitted radio interference in acc. with EN 55011	EN 55011 (EN 55022) Class B, area of application: Industry and residential

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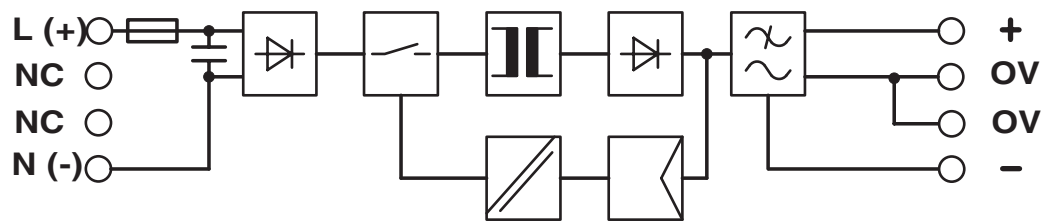


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Drawings

Block diagram



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Classifications

ETIM

ETIM 8.0	EC002540
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UNSPSC

UNSPSC 21.0	39121000
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-25
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	fb58912b-cb24-40ea-a218-e2243908242d

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Accessories

PLT-SEC-T3-230-FM-UT - Type 3 surge protection device

2907919

<https://www.phoenixcontact.com/us/products/2907919>



Type 2/3 surge protection, consisting of protective plug and base element with screw connection. For single-phase power supply network with integrated status indicator and remote signaling. Nominal voltage: 230 V AC/DC

TTC-6P-T3-24DC-PT-I - Type 3 surge protection device

1027586

<https://www.phoenixcontact.com/us/products/1027586>



Type 3 surge protection, consisting of protective plug and base element, with integrated status indicator for 24 V DC power supplies

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