

MINI-PS-100-240AC/ 5DC/3 - Power supply unit



2938714

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Please use the following item in new systems: 2904595

Primary-switched MINI POWER power supply for DIN rail mounting, input: 1-phase, output: 5 V DC/3 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	2938714
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	CMPM11
Catalog page	Page 277 (C-4-2019)
GTIN	4017918900502
Weight per piece (including packing)	190.2 g
Weight per piece (excluding packing)	170 g
Customs tariff number	85044083
Country of origin	PL

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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	< 15 A (typical)
Inrush current integral (I^2t)	1.5 A ² s
AC frequency range	45 Hz ... 65 Hz
Mains buffering time	typ. 30 ms (120 V AC)
	typ. 140 ms (230 V AC)
Current consumption	0.4 A (120 V AC)
	0.2 A (230 V AC)
	0.4 A (90 V DC)
	0.2 A (350 V DC)
Nominal power consumption	43 VA
Typical response time	< 1 s
Input fuse	2 A (slow-blow, internal)
Recommended breaker for input protection	6 A ... 16 A (Characteristics B, C, D, K)

Output data

Efficiency	> 73 % (for 230 V AC and nominal values)
Nominal output voltage	5 V DC $\pm$ 1 %
Setting range of the output voltage (U_{Set})	4.5 V DC ... 5.5 V DC (> 5 V DC, constant capacity restricted)
Nominal output current (I_N)	3 A (-25 °C ... 60 °C)
POWER BOOST (I_{Boost})	5 A (-25 °C ... 40 °C permanent)
Derating	60 °C ... 70 °C (2.5%/K)
Residual ripple	< 40 mV _{PP} (20 MHz)
Output power	15 W
Peak switching voltages nominal load	< 100 mV _{PP} (20 MHz)
Maximum no-load power dissipation	1 W
Power loss nominal load max.	5 W
Connection in parallel	yes, for assembling redundant systems and increasing efficiency
Connection in series	yes

Connection data

Input

Connection method	Pluggable screw connection
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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

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

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

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)	> 766000 h (40 °C)

Insulation characteristics

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

Dimensions

Width	22.5 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 instructions	alignable: horizontally 0 mm, vertically 50 mm
Mounting position	horizontal DIN rail NS 35, EN 60715

Material specifications

Type of housing	Polyamide PA, color: green
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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

Standards and regulations

Rail applications	EN 50121-4
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

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	UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location)
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Conformity/Approvals

SIL in accordance with IEC 61508	0
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EMC data

Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
EMC requirements for noise immunity	EN 61000-6-2
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 55011 (EN 55022)

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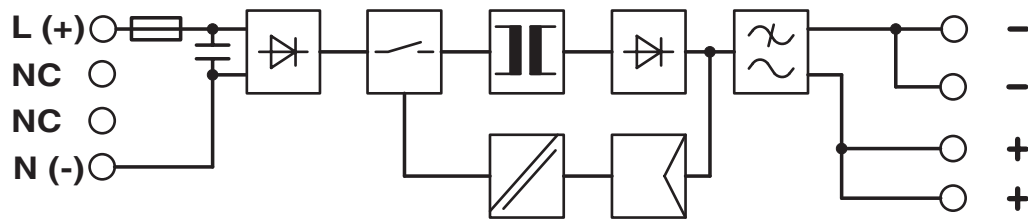


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Drawings

Block diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/2938714>



cUL Recognized
Approval ID: FILE E 214596



UL Recognized
Approval ID: FILE E 214596



EAC
Approval ID: EAC-Zulassung



EAC
Approval ID: RU S-DE.BL08.W.00764



UL Listed
Approval ID: FILE E 123528



cUL Listed
Approval ID: FILE E 123528



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Approval ID: FILE E 199827



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Classifications

UNSPSC

UNSPSC 21.0	39121004
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Environmental product compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 25;
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

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

2907919

<https://www.phoenixcontact.com/pc/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/pc/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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