

Power supply unit - MINI-SYS-PS-100-240AC/24DC/1.5 - 2866983

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Primary-switched MINI POWER supply for DIN rail mounting, input: 1-phase, output: 24 V DC/1.5 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
- ✓ 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
GTIN	 4 017918 960650
GTIN	4017918960650

Technical data

Dimensions

Width	35 mm
Height	99 mm
Depth	95 mm
Installation distance right/left	0 mm / 0 mm
Installation distance top/bottom	50 mm / 50 mm

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Technical data

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)
Climatic class	3K3 (in acc. with EN 60721)
Degree of pollution	2

Input data

Nominal input voltage range	100 V AC ... 240 V AC
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)
Nominal power consumption	90 VA
Inrush current	< 15 A (0.6 A ² s)
Mains buffering time	typ. 35 ms (120 V AC)
	typ. 150 ms (230 V AC)
Input fuse	3.15 A (slow-blow, internal)
Recommended breaker for input protection	6 A ... 16 A (Characteristics B, C, D, K)
Type of protection	Transient surge protection
Protective circuit/component	Varistor

Output data

Nominal output voltage	24 V DC ±1 %
Nominal output current (I _N)	1.5 A (-25 °C ... 60 °C)
POWER BOOST (I _{Boost})	2 A (-25 °C ... 40 °C permanent)
Derating	60 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for redundancy and increased capacity. Maximum of 2 devices for redundancy on DIN rail connector.
Connection in series	No
Feedback voltage resistance	35 V DC
Protection against overvoltage at the output (OVP)	< 30 V DC
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 ±10 %)
Residual ripple	< 40 mV _{PP} (20 MHz)
Output power	36 W
Typical response time	< 0.5 s
Peak switching voltages idling	< 20 mV _{PP} (20 MHz)
Peak switching voltages nominal load	< 20 mV _{PP} (20 MHz)
Maximum power dissipation in no-load condition	1.5 W

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Output data

Power loss nominal load max.	6.5 W
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General

Net weight	0.25 kg
Operating voltage display	Green LED
Efficiency	> 84 % (for 230 V AC and nominal values)
MTBF (IEC 61709, SN 29500)	> 2789000 h (40 °C)
Insulation voltage input/output	4 kV (type test)
	3 kV (routine test)
Degree of protection	IP20
Protection class	II (in closed control cabinet)
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	alignable: horizontally 0 mm, vertically 50 mm

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
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Connection data for signaling

Screw thread	M3
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Standards

EMC requirements for noise immunity	EN 61000-6-1
	EN 61000-6-2
EMC requirements for noise emission	EN 61000-6-3
	EN 61000-6-4
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)
	EN 60204 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
Standard – Limitation of mains harmonic currents	EN 61000-3-2
Rail applications	EN 50121-4

Conformance/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)

EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Electrostatic discharge	EN 61000-4-2
Electromagnetic HF field	EN 61000-4-3
Fast transients (burst)	EN 61000-4-4
Surge voltage load (surge)	EN 61000-4-5
Conducted interference	EN 61000-4-6
Voltage dips	EN 61000-4-11

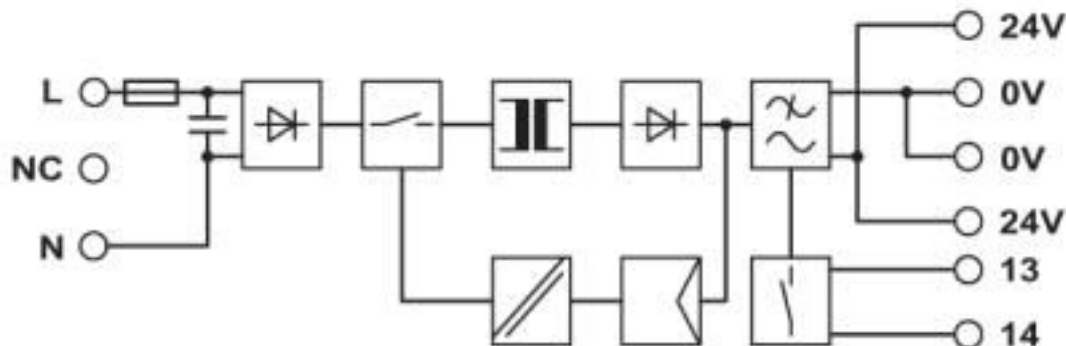
Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 25;
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

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Block diagram



Classifications

eCl@ss

eCl@ss 10.0.1	27040701
eCl@ss 11.0	27040701
eCl@ss 4.0	27040700
eCl@ss 4.1	27040700
eCl@ss 5.0	27049000
eCl@ss 5.1	27049000
eCl@ss 6.0	27049000
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
ETIM 6.0	EC002540
ETIM 7.0	EC002540

UNSPSC

UNSPSC 6.01	30211502
UNSPSC 7.0901	39121004
UNSPSC 11	39121004
UNSPSC 12.01	39121004
UNSPSC 13.2	39121004
UNSPSC 18.0	39121004
UNSPSC 19.0	39121004
UNSPSC 20.0	39121004
UNSPSC 21.0	39121004

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Approvals

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UL Listed / UL Recognized / cUL Recognized / cUL Listed / EAC / EAC / cULus Recognized / cULus Listed

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 123528
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UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 211944
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cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 211944
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cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 123528
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EAC			EAC-Zulassung
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EAC			RU*DE*08.B.01873/19
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cULus Recognized			
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cULus Listed			
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Accessories

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Device protection

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

Type 3 surge protection device - TTC-6P-T3-24DC-PT-I - 1027586



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

DIN rail connector

DIN rail bus connectors - ME 17,5 TBUS 1,5/ 5-ST-3,81 GN - 2709561



DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.