

MINI-SYS-PS-100-240AC/24DC/1.5

Order No.: 2866983



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DIN rail power supply unit, primary-switched mode, slim design,
output: 24 V DC / 1.5 A



Commercial data

EAN	 4 017918 960650
Pack	1
Customs tariff	85044081
Country of Origin	CN
Catalog page information	Page 371 (IF-2011)

Product notes

WEEE/RoHS-compliant since:
04/09/2006



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Product description

With the MINI-SYS-PS power supply, additional modules can be supplied with 24 DC using the optional DIN rail connectors. The low design depth of 95 mm is a particular advantage for use in surroundings with a low height. The system power supply particularly simplifies the power supply of the FO transmission system PSI-MOS as well as of the analog 6 mm MCR measuring transducer. In this way it emphasizes the seamless character of the INTERFACE product range.

Even without the DIN rail connector, the flat power supply unit 24 V/1.5 A is suitable for many applications in areas in which space is restricted, as the housing is 12 mm flatter than other comparable solutions.

The electronic short-circuit and idling-proof device is connected to single-phase AC networks with nominal voltages of 100 V AC to 240 V AC or to two of the phase conductors of three-phase networks with a linked voltage of this value. In the event of a malfunction, the output voltage is limited to 30 V DC.

Due to the U/I characteristic curve with POWER BOOST, miniature circuit breakers blow reliably. For function monitoring, there is the floating DC OK output and the DC OK LED. High operational reliability is provided by the mains failure bridging time of more than 20 ms under full load.

Ambient temperatures can be in the range of -25°C to +70°C, whereby the power reserve of approx. 25% up to 40°C is permanently available.

Technical data

Input data

Nominal input voltage	100 V AC ... 240 V AC
AC input voltage range	85 V AC ... 264 V AC
AC frequency range	45 Hz ... 65 Hz
Current consumption	Approx. 0.75 A (120 V AC) 0.45 A (230 V AC)
Inrush surge current	< 15 A (0.6 A ² s)
Power failure bypass	> 35 ms (120 V AC) > 150 ms (230 V AC)
Input fuse	3.15 A (slow-blow, internal)
Permissible backup fuse	B6 B10 B16
Type of protection	Transient surge protection
Protective circuit/component	Varistor

Output data

Nominal output voltage	24 V DC ±1%
Output current	1.5 A (-25 °C ... 60 °C) 2 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. Maximum of 2 devices for redundancy on DIN rail connector.
Connection in series	No
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)
Peak switching voltages idling	< 20 mV _{pp} (20 MHz)
Peak switching voltages nominal load	< 20 mV _{pp} (20 MHz)
Maximum power dissipation idling	1.5 W
Power loss nominal load max.	6.5 W

General data

Width	35 mm
Height	99 mm
Depth	95 mm
Net weight	0.25 kg
Operating voltage display	Green LED
Efficiency	> 84 % (for 230 V AC and nominal values)
Insulation voltage input/output	3 kV (routine test) 4 kV (type test)
Degree of protection	IP20
Protection class	II (in an enclosed control cabinet)
MTBF (IEC 61709, SN 29500)	> 500000 h
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, no condensation)
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
Noise immunity	EN 61000-6-2:2005
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Standard – Electrical equipment of machines	EN 60204
Standard - Safety of transformers	EN 61558-2-17
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)
Standard - Safe isolation	DIN VDE 0100-410 DIN VDE 0106-1010

Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment	DIN VDE 0106-101
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/C-UL Listed UL 1604 Class I, Division 2, Groups A, B, C, D
Surge voltage category	III

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
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 floating
Output description	$U_{OUT} > 21.5 \text{ V}$: Contact closed
Maximum switching voltage	$\leq 30 \text{ V AC/DC}$
Output voltage	30 V AC/DC
Continuous load current	$\leq 1 \text{ A}$
Status display	"DC OK" LED green
Note on status display	$U_{OUT} > 21.5 \text{ V}$: 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

Certificates



Certification CUL, CUL Listed, UL, UL Listed

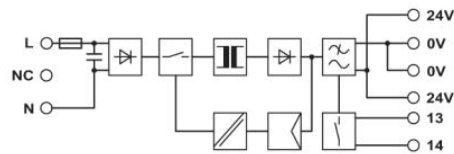
Certification Ex: CUL-EX LIS, UL-EX LIS

Accessories

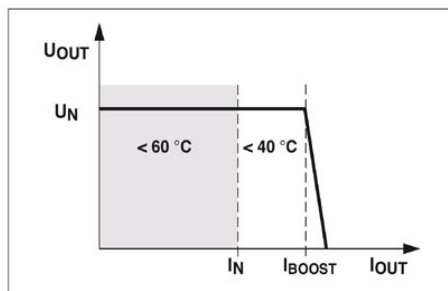
Item	Designation	Description
General		
2709561	ME 17,5 TBUS 1,5/ 5-ST-3,81 GN	DIN rail connector for DIN rail power supply unit, gold-plated contacts, for DIN rail mounting, 5-pos.

Drawings

Block diagram



Diagram



POWER BOOST

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