

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

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

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.

Product Features

- For supplying the supply voltage via the foot element (T-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

package_quantity	1
GTIN	4017918960650

Technical data

Dimensions

Width	35 mm
Height	99 mm
Depth	95 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 60 °C derating)

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Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)
Noise immunity	EN 61000-6-2:2005

Input data

Input voltage range	85 V AC ... 264 V AC
AC frequency range	45 Hz ... 65 Hz
Current consumption	0.75 A (120 V AC)
Current consumption	0.45 A (230 V AC)
Inrush surge current	< 15 A (0.6 A ² s)
Power failure bypass	> 35 ms (120 V AC)
Power failure bypass	> 150 ms (230 V AC)
Input fuse	3.15 A (slow-blow, internal)
Choice of suitable fuses	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%
Output current	1.5 A (-25 °C ... 60 °C)
Output current	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 %)
Control deviation	< 3 % (change in load, dynamic 10 % ... 90 %)
Control deviation	< 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 NO-Load	1.5 W
Power loss nominal load max.	6.5 W

General

Net weight	0.25 kg
Operating voltage display	Green LED
Efficiency	> 84 % (for 230 V AC and nominal values)
Insulation voltage input/output	4 kV (type test)
Insulation voltage input/output	3 kV (Routine test)
Protection class	II (in closed control cabinet)
MTBF (IEC 61709, SN 29500)	> 2789000 h (According to EN 29500)

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General

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
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Standard – Electrical equipment of machines	EN 60204
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 – Safety extra-low voltage	EN 60204 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
Standard – Protection against electric shock	DIN 57100-410
Standard – Limitation of mains harmonic currents	EN 61000-3-2
UL approvals	UL/C-UL listed UL 508
UL approvals	UL/C-UL Recognized UL 60950
UL approvals	UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location)
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

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Stripping length	7 mm

Signaling

Output name	DC OK floating
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Signaling

Output description	U _{OUT} > 21.5 V: Contact closed
Maximum switching voltage	≤ 30 V AC/DC
Output voltage	30 V AC/DC
Continuous load current	≤ 1 A
Status display	"DC OK" LED green
Note on status display	U _{OUT} > 21.5 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

classifications

eCl@ss

eCl@ss 4.0	27040702
eCl@ss 4.1	27040702
eCl@ss 5.0	27049002
eCl@ss 5.1	27049002
eCl@ss 6.0	27049002
eCl@ss 7.0	27049002
eCl@ss 8.0	27049002

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

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

Approval details

UL Listed

cUL Listed

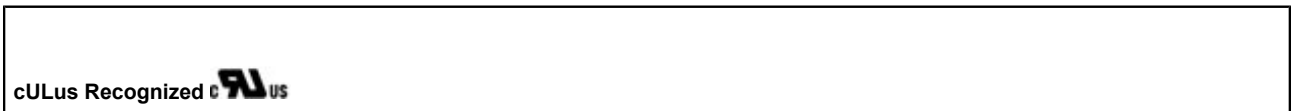
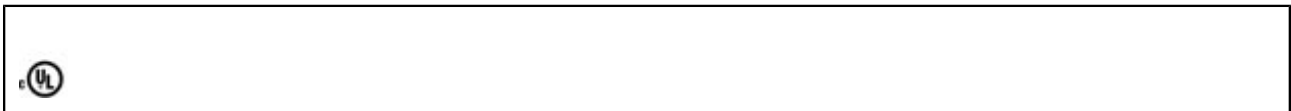
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approvals



accessories

DIN rail connector

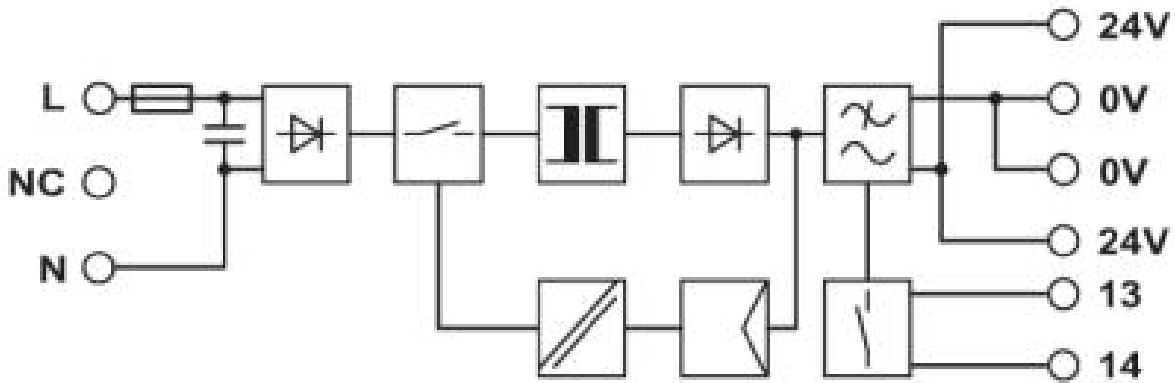
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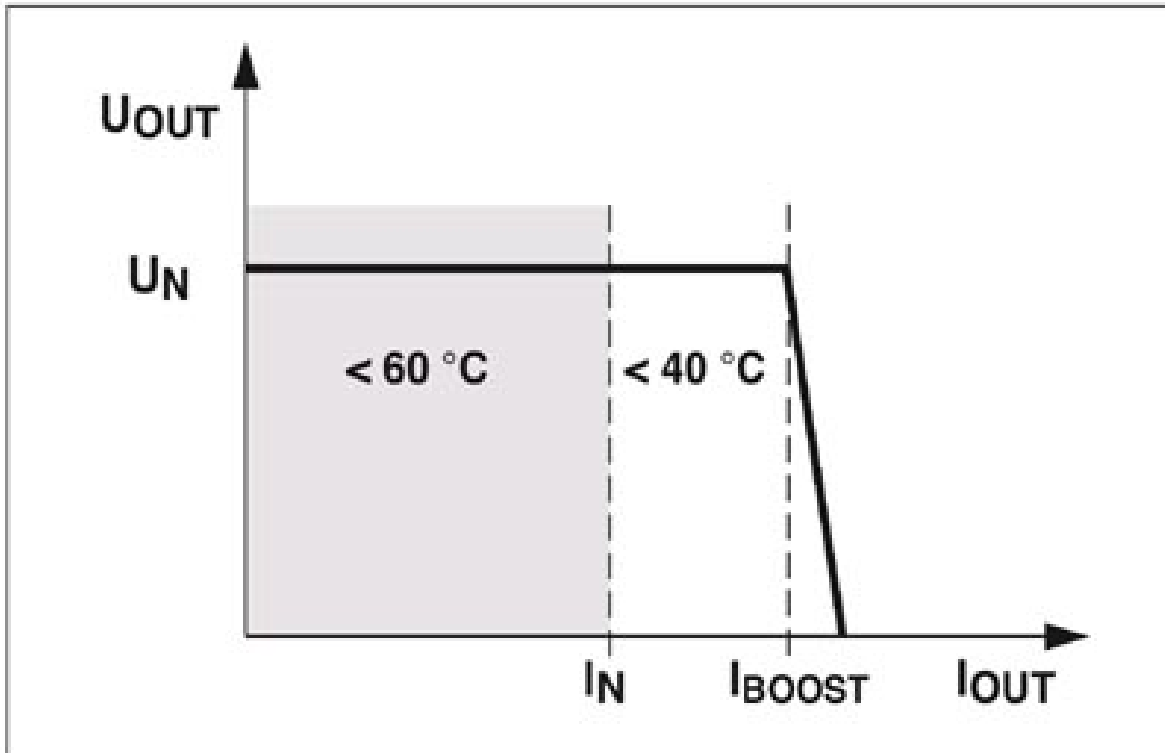
Drawings

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Block diagram



Diagram



POWER BOOST

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