

DC/DC converters - MINI-PS- 12- 24DC/ 5-15DC/2 - 2320018

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DC/DC converter, primary-switched, slim design, input: 12 - 24 V DC, output: 5 - 15 V DC/2 A

Product description

The DC/DC converter converts the DC voltage of 12 V DC ... 24 V DC to an adjustable, controlled and electrically isolated 5 V DC ... 15 V DC output voltage.


Due to electrical isolation, the DC voltage circuits are electrically isolated from each other in a safe way. The active "DC-OK" switching output as well as an LED are available for signaling. With a design width of only 22.5 mm, the housing is extremely slim.

Why buy this product

- Constant voltage: output voltage regenerated even at the end of long cables
- Electrical isolation: for setting up independent supply systems
- Support conversion to various voltage levels



Key commercial data

Packing unit	1 pc
GTIN	 4 046356 478519
Weight per Piece (excluding packing)	245.4 g
Weight per piece (including packing)	245.4 g
Custom tariff number	85044030
Country of origin	China
Sales Key	H1 - Power supply units

Technical data

Dimensions

Width	22.5 mm
Height	99 mm
Depth	107 mm

Ambient conditions

Degree of protection	IP20
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Technical data

Ambient conditions

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, non-condensing)
Noise immunity	EN 61000-6-2:2005

Input data

Input voltage range	10 V DC ... 32 V DC (> 10.5 V DC start)
Frequency range DC	0 Hz
Current consumption	2.3 A (12 V DC)
	1.1 A (24 V DC)
Inrush surge current	< 10 A (typical)
Power failure bypass	> 4 ms (12 V DC)
	> 18 ms (24 V DC)
Input fuse	6.3 A (slow-blow, internal)

Output data

Nominal output voltage	12 V DC ±1%
Setting range of the output voltage	5 V DC ... 15 V DC
Output current	2 A (-25 °C ... 60 °C)
Derating	60 °C ... 70 °C (2.5%/K)
Connection in parallel	Yes, for assembling redundant systems and increasing efficiency
Connection in series	Yes
Residual ripple	< 20 mV _{PP} (20 MHz)
Peak switching voltages nominal load	< 10 mV _{PP} (20 MHz)
Maximum power dissipation NO-Load	< 1 W
Power loss nominal load max.	< 4.2 W

General

Net weight	0.2 kg
Efficiency	> 88 % (at 24 V DC and nominal values)
Insulation voltage input/output	1.5 kV (type test)
	1 kV (routine test)
Protection class	III
MTBF (IEC 61709, SN 29500)	> 2072000 h (According to EN 29500)
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 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 - Safe isolation	DIN VDE 0100-410

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Technical data

General

	DIN VDE 0106-101
UL approvals	UL/C-UL listed UL 508
	UL/C-UL Recognized UL 60950

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	14
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	14
Stripping length	7 mm

Signaling

Output name	DC OK active
Output description	$U_{OUT} > 0.9 \times U_N$: High signal
Output voltage	U_{out}
Continuous load current	≤ 20 mA
Status display	"DC OK" LED green
Note on status display	$U_{OUT} > 0.9 \times U_N$: LED ON
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	14
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm
Screw thread	M3

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Classifications

eCl@ss

eCl@ss 4.0	27250311
eCl@ss 4.1	27250311
eCl@ss 5.0	27242213
eCl@ss 5.1	27210901
eCl@ss 6.0	27210901
eCl@ss 7.0	27210901
eCl@ss 8.0	27210901

ETIM

ETIM 3.0	EC001039
ETIM 4.0	EC002542
ETIM 5.0	EC002046

UNSPSC

UNSPSC 6.01	30211502
UNSPSC 7.0901	39121004
UNSPSC 11	39121004
UNSPSC 12.01	39121004
UNSPSC 13.2	39121004

Approvals

Approvals

Approvals

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

Ex Approvals

UL Listed / cUL Listed / cULus Listed

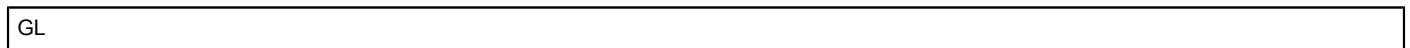
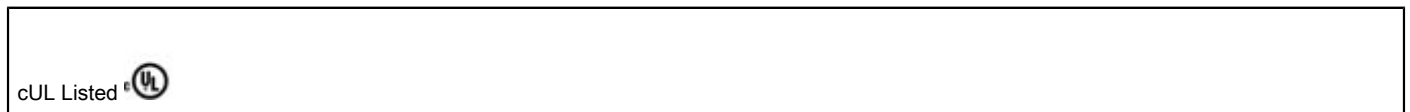
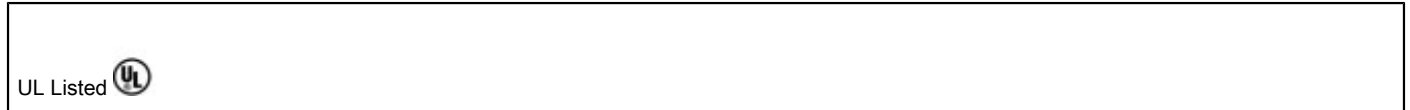
Approvals submitted

Approval details

UL Recognized

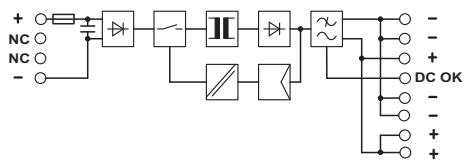
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Approvals



Drawings

Block diagram



Dimensioned drawing

