

DC/DC converters - MINI-PS- 12- 24DC/48DC/0.7 - 2320021

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Primary-switched MINI DC/DC converter for DIN rail mounting, input: 1-phase, output: 48 V DC/0.7 A

Product Description

MINI DC/DC converter for MCR technology.

DC/DC converters alter the voltage level, regenerate the voltage at the end of long cables or enable the creation of independent supply systems by means of electrical isolation.

Why buy this product

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



Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 479448
GTIN	4046356479448
Weight per Piece (excluding packing)	200.000 g
Weight per piece (including packing)	247.300 g
Custom tariff number	85044030
Country of origin	China

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

Input data

Nominal input voltage range	12 V DC ... 24 V DC
Input voltage range	10 V DC ... 32 V DC (> 10.5 V DC start)
Frequency range DC	0 Hz
Current consumption	3.2 A (12 V DC)
	1.6 A (24 V DC)
Inrush surge current	< 10 A (typical)
Power failure bypass	> 2 ms (12 V DC)
	> 12 ms (24 V DC)
Input fuse	6.3 A (slow-blow, internal)

Output data

Nominal output voltage	48 V DC ±1 %
Setting range of the output voltage (U_{Set})	30 V DC ... 56 V DC (> 48 V DC, constant capacity restricted)
Nominal output current (I_N)	0.7 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
Feedback resistance	60 V DC
Circuit breaker against surge voltage at output by invasive foreign matter	< 60 V DC
Residual ripple	< 20 mV _{PP} (20 MHz)
Typical response time	< 0.5 s
Peak switching voltages nominal load	< 10 mV _{PP} (20 MHz)
Maximum power dissipation in no-load condition	< 1.5 W
Power loss nominal load max.	< 4.5 W

General

Net weight	0.2 kg
Efficiency	> 87 % (at 24 V DC and nominal values)
Insulation voltage input/output	1.5 kV (type test)
	1 kV (routine test)
Protection class	III
Degree of protection	IP20
	> 1993000 h (40 °C)
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	Can be aligned: Horizontally 0 mm, vertically 50 mm

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Technical data

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.	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 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.	14
Stripping length	7 mm
Screw thread	M3

Signaling

Output name	DC OK active
Output description	$U_{OUT} > 0.9 \times U_N$: High signal
Output voltage	+ 24 V (Signal)
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 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.	14
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm
Screw thread	M3

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 55011 (EN 55022)
Noise immunity	EN 61000-6-2:2005

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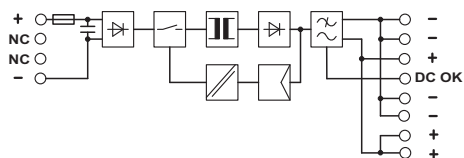
Technical data

Standards and Regulations

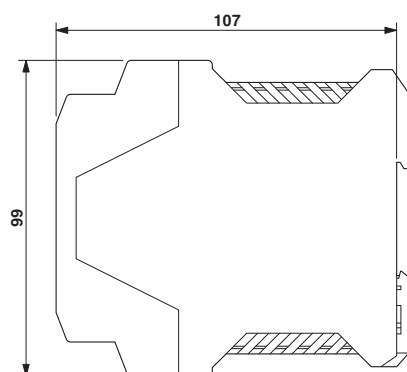
Connection in acc. with standard	CUL
Standards/regulations	EN 61000-4-2
Contact discharge	8 kV (Contact discharge)
Standards/regulations	EN 61000-4-3
Frequency range	80 MHz ... 3 GHz
Test field strength	10 V/m
Standards/regulations	EN 61000-4-4
Comments	Criterion B
Standards/regulations	EN 61000-4-5
	EN 61000-6-3
	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz (10 V)
Standards/regulations	EN 61000-4-11
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
	DIN VDE 0106-101
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)
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
Rail applications	EN 50121-4

Drawings

Block diagram



Dimensional drawing



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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
eCl@ss 9.0	27210901

ETIM

ETIM 3.0	EC001039
ETIM 4.0	EC002542
ETIM 5.0	EC002046
ETIM 6.0	EC002046

UNSPSC

UNSPSC 6.01	30211502
UNSPSC 7.0901	39121004
UNSPSC 11	39121004
UNSPSC 12.01	39121004
UNSPSC 13.2	39121041

Approvals

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

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details

UL Recognized



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 211944

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Approvals

UL Listed



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 123528

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<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 211944

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FILE E 123528

GL



<http://exchange.dnv.com/tari/>

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EAC



EAC-Zulassung

EAC



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DE.A*30.B.01082

cULus Recognized



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