

DC/DC converters - MINI-PS- 48- 60DC/24DC/1 - 2866271

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Primary-switched MINI DC/DC converter for DIN rail mounting, input: 1-phase, output: 24 V DC/1 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.

Product Features

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



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	241.4 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
Ambient temperature (operation)	-25 °C ... 70 °C (> 60 °C Derating: 2,5 %/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C

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Ambient conditions

Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)
Noise immunity	EN 61000-6-2:2005

Input data

Nominal input voltage range	48 V DC ... 60 V DC
Input voltage range	36 V DC ... 75 V DC
Frequency range DC	0 Hz
Current consumption	0.6 A (48 V DC)
	0.5 A (60 V DC)
Inrush surge current	< 15 A (typical)
Power failure bypass	> 15 ms (48 V DC)
	> 20 ms (60 V DC)
Input fuse	3.15 A (slow-blow, internal)

Output data

Nominal output voltage	24 V DC ±1 %
Setting range of the output voltage (U_{Set})	22.5 V DC ... 28.5 V DC (> 24 V DC, constant capacity restricted)
Nominal output current (I_N)	1 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	< 40 mV _{PP}
Output power	24 W
Typical response time	< 0.5 s
Peak switching voltages nominal load	< 50 mV _{PP} (20 MHz)
Maximum power dissipation in no-load condition	< 1.2 W
Power loss nominal load max.	< 5 W

General

Net weight	0.2 kg
Operating voltage display	Green LED
Efficiency	> 85 % (at 60 V DC and nominal values)
Insulation voltage input/output	1.5 kV (type test)
	1 kV (routine test)
Protection class	II
	> 1147000 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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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} > 21.5 V: High signal
Maximum switching voltage	≤ 24 V DC
Output voltage	+ 24 V (Signal)
Continuous load current	≤ 20 mA
Status display	"DC OK" LED green
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

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Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Noise emission	EN 55011 (EN 55022)
Noise immunity	EN 61000-6-2:2005
Connection in acc. with standard	CUL
Standards/regulations	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-6
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
	UL ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D (Hazardous Location)
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Rail applications	EN 50121-4

Classifications

eCl@ss

eCl@ss 4.0	27230209
eCl@ss 4.1	27230209
eCl@ss 5.0	27230209
eCl@ss 5.1	27230209
eCl@ss 6.0	27230209
eCl@ss 7.0	27230209
eCl@ss 8.0	27210901

ETIM

ETIM 2.0	EC001039
ETIM 3.0	EC001039
ETIM 4.0	EC000599
ETIM 5.0	EC002046

UNSPSC

UNSPSC 6.01	30211502
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Classifications

UNSPSC

UNSPSC 7.0901	39121004
UNSPSC 11	39121004
UNSPSC 12.01	39121004
UNSPSC 13.2	39121004

Approvals

Approvals

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

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

UL Recognized

UL Listed

cUL Recognized


cUL Listed


EAC

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Approvals

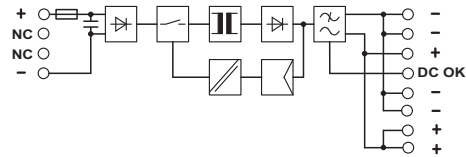
EAC

cULus Recognized 

cULus Listed 

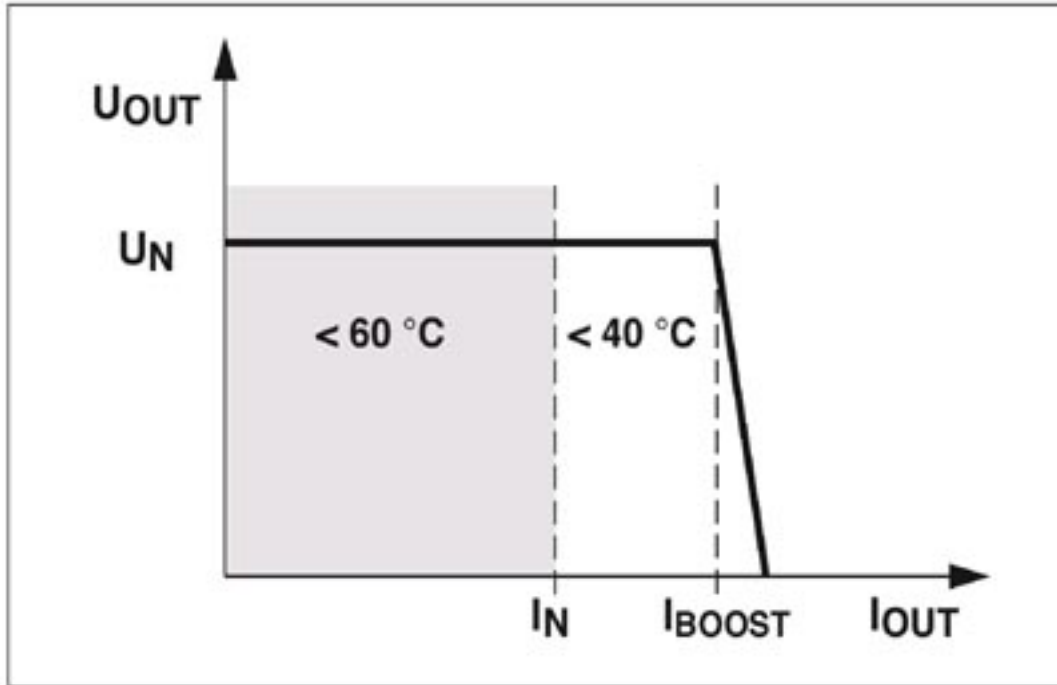
Drawings

Block diagram



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Diagram



POWER BOOST