DC/DC converters - MINI-PS- 12- 24DC/24DC/1 - 2866284

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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.

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 pc
GTIN	4 017918 960902
Weight per Piece (excluding packing)	200.0 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
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)

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Ambient conditions

Noise immunity	EN 61000-6-2:2005

Input data

Nominal input voltage range	12 V DC ... 24 V DC
Input voltage range	10 V DC ... 32 V DC
Frequency range DC	0 Hz
Inrush surge current	< 15 A (typical)
Power failure bypass	> 3 ms (12 V DC)
	> 20 ms (24 V DC)
Input fuse	6.3 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)
Nennausgangsstrom (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	< 30 mV_{PP} (20 MHz)
Output power	24 W
Typical response time	< 0.5 s
Peak switching voltages nominal load	< 100 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	> 83 % (at 24 V DC and nominal values)
Insulation voltage input/output	1.5 kV (type test)
	1 kV (routine test)
Protection class	III
	> 2569000 h (40°C)
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	Can be aligned: Horizontally 0 mm, vertically 50 mm

Connection data, input

Connection method	Pluggable screw connection
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	24

DC/DC converters - MINI-PS- 12- 24DC/24DC/1 - 2866284

Technical data

Connection data, input

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 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
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 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
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 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)

DC/DC converters - MINI-PS- 12- 24DC/24DC/1 - 2866284

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Standards and Regulations

Standard - Safe isolation	DIN VDE 0100-410
	DIN VDE 0106-101
Shipbuilding approval	Germanischer Lloyd (EMC 2)
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	27210901
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
UNSPSC 7.0901	39121004
UNSPSC 11	39121004
UNSPSC 12.01	39121004
UNSPSC 13.2	39121004

Approvals

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

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Approvals

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

UL Recognized

UL Listed

cUL Recognized

cUL Listed

GL

EAC

EAC

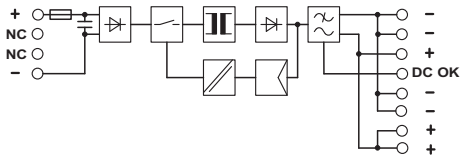
cULus Recognized

cULus Listed

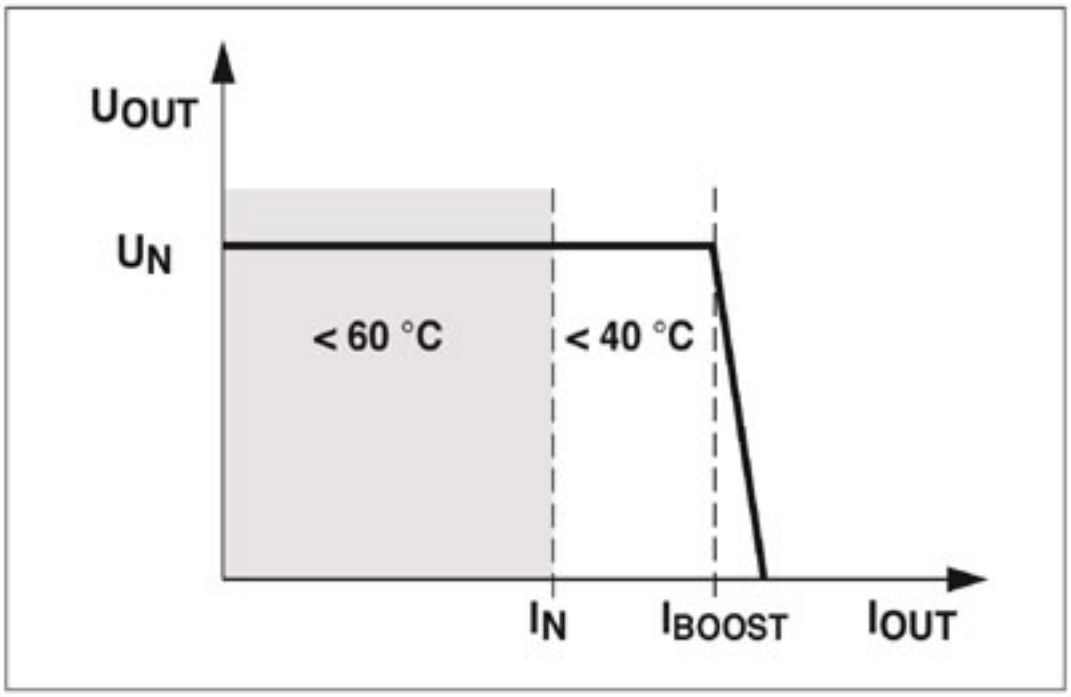
Drawings

DC/DC converters - MINI-PS- 12- 24DC/24DC/1 - 2866284

Block diagram



Diagram



POWER BOOST