

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

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



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 STK
GTIN	 4 017918 960902
GTIN	4017918960902
Weight per Piece (excluding packing)	200.000 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)

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

### Technical data

#### 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

Nominal input voltage range	12 V DC ... 24 V DC
Input voltage range	10 V DC ... 32 V DC
Frequency range DC	0 Hz
Current consumption	2.6 A (12 V DC)
	1.3 A (24 V DC)
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)
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	< 30 mV <sub>PP</sub> (20 MHz)
Output power	24 W
Typical response time	< 0.5 s
Peak switching voltages nominal load	< 100 mV <sub>PP</sub> (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 mm <sup>2</sup>

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

### Technical data

#### Connection data, input

Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
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 <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
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 <sub>OUT</sub> > 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 <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
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
Connection in acc. with standard	CUL
Standards/regulations	EN 61000-4-2

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

## Technical data

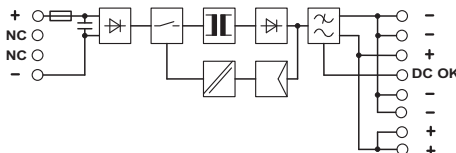
### Standards and Regulations

	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-5
	EN 61000-4-6
	EN 61000-4-11
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
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

## Drawings

Block diagram

Diagram



## 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
eCl@ss 9.0	27210901

### ETIM

ETIM 2.0	EC001039
----------	----------

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

## Classifications

### ETIM

ETIM 3.0	EC001039
ETIM 4.0	EC000599
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	39121004

## Approvals

### Approvals

#### Approvals


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

UL Listed  <http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm> FILE E 123528

cUL Recognized  <http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm> FILE E 211944

cUL Listed  <http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm> FILE E 123528


EAC EAC-Zulassung

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

### Approvals

EAC 7500651.22.01.00242

GL <http://www.gl-group.com/newbuilding/approvals/index.html> 45285-07 HH

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