



DC/DC Converter PS1000-D2-24.10

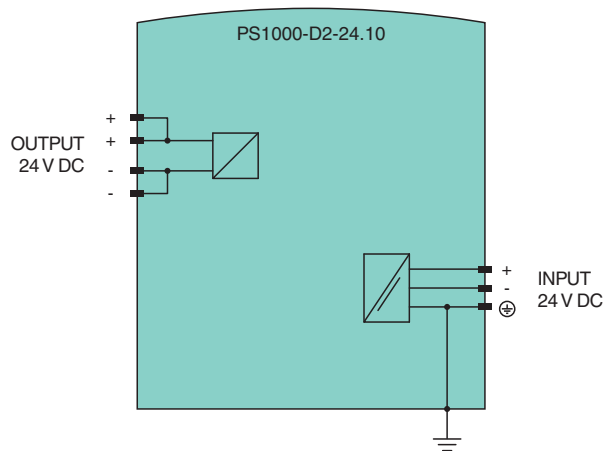
- 24 V DC input
- Isolated output 24 V DC, 10 A, 240 W
- Housing width 42 mm
- Efficiency up to 94.2 %
- Minimal inrush current surge
- Reverse input polarity protection
- 20 % output power reserves



Function

The device provides a stable, galvanically isolated SELV/PELV output voltage of 24 V DC. The device has a power reserve of 20 % included, which may even be used continuously at temperatures up to +45 °C. A reverse polarity protection prevents damage to the device caused by faulty wiring. The output voltage can be adjusted via a potentiometer. The device status is indicated by an LED. The device is mounted on a 35 mm DIN mounting rail according to EN 60715.

Connection



Technical Data

Electrical specifications

Efficiency		94.2 %
Power dissipation		14.8 W
Input		
Rated voltage	U_r	24 V DC
Voltage range		18 ... 35 V DC
Current		10.5 mA at 24 V DC
Inrush current		6 A peak at ambient temperature 25 °C (77 °F)
Output		
Voltage range		24 ... 28 V DC factory setting: 24.1 V
Rated current	I_r	10 A

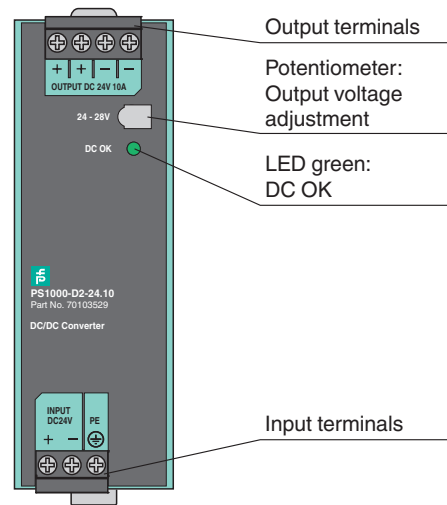
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Technical Data

Current	12 ... 10.3 A at ambient temperature < 45 °C (113 °F) 10 ... 8.6 A at ambient temperature 60 °C (140 °F) 7.5 ... 6.4 A at ambient temperature 70 °C (158 °F) linear power derating see technical information
Power	240 W
Ripple	max. 50 mV _{pp}
Hold-up time	4 ms at 24 V DC
Short-circuit current	max. 15 A
Galvanic isolation	
Input/Output	SELV/PELV
Indicators/settings	
Display elements	LED green: status DC OK - LED lights up if the output voltage is > 21 V
Control elements	potentiometer
Configuration	setting of the output voltage via potentiometer
Directive conformity	
Electromagnetic compatibility	
Directive 2014/30/EU	IEC/EN 61000-6-1 , IEC/EN 61000-6-2 , IEC/EN 61000-6-3 , IEC/EN 61000-6-4
Low voltage	
Directive 2014/35/EU	EN 61010-1
RoHS	
Directive 2011/65/EU (RoHS)	IEC/EN 63000:2019
Conformity	
Degree of protection	EN 60529
Shock resistance	EN 60068-2-27
Vibration resistance	EN 60068-2-6
Ambient conditions	
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F) , see technical information
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)
Relative humidity	5 ... 95 % , noncondensing
Shock resistance	20 g , 11 ms or 30 g , 6 ms
Vibration resistance	2 ... 17.8 Hz : ± 1.6 mm , 17.8 ... 500 Hz : 2 g
Mechanical specifications	
Housing material	aluminum alloy , galvanized steel
Degree of protection	IP20
Connection	
Input/Output	screw terminals conductor cross section: max. 6 mm ² (AWG 20-10) cable diameter: max. 2.8 mm, wire end ferrules included stripped insulation length: 7 mm tightening torque: max. 1 Nm
Mass	approx. 500 g
Dimensions	42 x 124 x 117 mm (W x H x D) , without DIN mounting rail
Mounting	on 35 mm DIN mounting rail acc. to EN 60715:2001
International approvals	
UL approval	E223176
General information	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com .

Assembly

Front view



Installation Conditions

Mount the device on the DIN mounting rail so that the input terminals are located on the bottom of the device.

This device is designed for convection cooling and does not require an external ventilator. Do not obstruct airflow. Do not cover the ventilation grid by more than 15 %, e. g. cable ducts.

If you load the device with more than 50 % of the rated power permanently keep the following mounting distances:

- 40 mm above
- 20 mm below
- 5 mm on the left and right side

Increase this distance to 15 mm if the adjacent device is a heat source, e. g. another power supply.