



## Redundancy Module PS1000-D2-24.40.RM

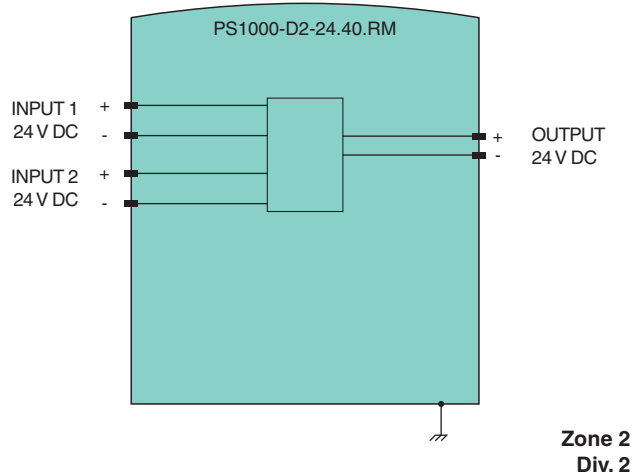
- 12 V DC to 28 V DC input
- 2 inputs with 1 output
- Output 24 V DC, 40 A
- Housing width 36 mm
- Built-in decoupling mosfets for 1+1 and N+1 redundancy
- Only 72 mV voltage drop at 20 A output current
- Only 1.7 W loss at 2 x 10 A and 5.9 W at 2 x 20 A input current
- Reverse input polarity protection
- Suitable for Zone 2/Div. 2 mounting



### Function

The device is a redundancy module for building redundant power supply systems. The device is equipped with 2 inputs and 1 output. Power supplies with an output current of up to 20 A and one output can be connected to the inputs. The power supplies can transmit a rated current of up to 40 A and 40 A to 65 A for 5 s. The both inputs are decoupled by MOSFETs. This reduces heat generation and voltage drop between input and output. The device is mounted on a 35 mm DIN mounting rail according to EN 60715.

### Connection



### Technical Data

#### Electrical specifications

Voltage drop		input to output 72 mV at input 2 x 10 A 140 mV at input 2 x 20 A
Power dissipation		0.23 W no load 1.7 W at input 2 x 10 A 5.9 W at input 2 x 20 A
<b>Input</b>		
Rated voltage	$U_r$	12 ... 28 V
Voltage range		8.4 ... 36.4 V DC
Current		2 x 20 A at ambient temperature < 60 °C (140 °F) 2 x 15 A at ambient temperature 70 °C (158 °F) 2 x 20 ... 32.5 A for up to 5 s for lower output currents see technical information

## Technical Data

<b>Output</b>	
Voltage range	12 ... 28 V DC
Current	40 A at ambient temperature < 60 °C (140 °F) 30 A at ambient temperature < 70 °C (158 °F) 65 A for up to 5 s max. 26 A in overload or short circuit mode (voltage < 6 V DC)
<b>Galvanic isolation</b>	
Input/Output	SELV/PELV
<b>Directive conformity</b>	
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
<b>Conformity</b>	
Degree of protection	EN 60529
Shock resistance	EN 60068-2-27
Vibration resistance	EN 60068-2-6
<b>Ambient conditions</b>	
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
Corrosion resistance	IEC 60068-2-60, Method 4 ISA-71.04, severity level G3
<b>Mechanical specifications</b>	
Housing material	aluminum alloy , galvanized steel
Degree of protection	IP20
Connection	
Input	screw terminals conductor cross section: max. 6 mm <sup>2</sup> (AWG 20-10) cable diameter: max. 2.8 mm, wire end ferrules included stripped insulation length: 7 mm tightening torque: recommendet 0.8 Nm
Output	screw terminals conductor cross section: max. 16 mm <sup>2</sup> (AWG 22-8) cable diameter: max. 5.2 mm, wire end ferrules included stripped insulation length: 12 mm tightening torque: recommendet 1.2 Nm
Mass	approx. 280 g
Dimensions	36 x 124 x 127 mm (W x H x D) , without DIN mounting rail
Height	124 mm
Width	36 mm
Depth	127 mm
Mounting	on 35 mm DIN mounting rail acc. to EN 60715:2001
<b>Data for application in connection with hazardous areas</b>	
ATEX approval	
ATEX certificate	EPS 11 ATEX 1 312 X
ATEX marking	Ⓔ II 3G Ex ec II T4 Gc
Directive conformity	
Directive 2014/34/EU	EN 60079-0:2012+A11:2013 , EN 60079-7:2016 , EN 60079-15:2010
<b>International approvals</b>	
UL approval	E223176
IECEX approval	
IECEX certificate	IECEX EPS 20.0057X

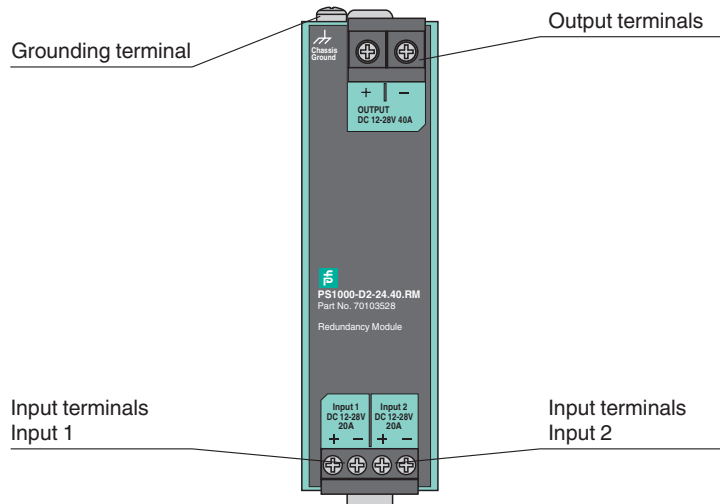
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## Technical Data

IECEX marking	Ex ec IIC T4 Gc
Standards	IEC 60079-0:2011 , IEC 60079-7:2015 , IEC 60079-15:2010
<b>General information</b>	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

## 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.