

# Redundancy module - TRIO-DIODE/48DC/2X10/1X20 - 2866527

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Redundancy module with function monitoring, 48 V DC, 2x 10 A, 1x 20 A

## Product Description

TRIO DIODE is the DIN-rail mountable redundancy module from the TRIO POWER product range.

Using the redundancy module, it is possible for two power supply units of the same type connected in parallel on the output side to increase performance or for redundancy to be 100 % isolated from one another.

Redundant systems are used in systems that place particularly high demands on operational reliability. The connected power supply units must be large enough that the total current requirements of all loads can be met by one power supply unit. The redundant structure of the power supply therefore ensures long-term, permanent system availability.


In the event of an internal device fault or failure of the mains power supply on the primary side, the other device automatically takes over the entire power supply of the loads without interruption. The floating signal contact and LED immediately indicate the loss of redundancy.

## Your advantages

- Save energy
- Permanent monitoring of redundancy
- Consistent redundancy up to the load



## Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 562973
GTIN	4046356562973

## Technical data

### Dimensions

Width	32 mm
Height	130 mm
Depth	115 mm

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 55° C derating : 2.5%/K)

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## Technical data

### Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)
Climatic class	3K3 (in acc. with EN 60721)
Degree of pollution	2

### Input data

Nominal input voltage range	48 V DC
Input voltage range	30 V DC ... 56 V DC
Nominal input current	2x 10 A (-25 °C ... 55 °C)
	1x 20 A (-25 °C ... 55 °C)
Maximum input current	2x 15 A (-25 °C ... 40 °C)
	1x 30 A (-25 °C ... 40 °C)

### Output data

Nominal output voltage	47.3 V DC (Input/output voltage drop of 48 V ... 0.7 V )
Nominal output current (I <sub>N</sub> )	20 A (Increasing power)
	10 A (Redundancy)
Derating	55 °C ... 70 °C (2.5%/K)
Connection in series	No
Maximum power dissipation in no-load condition	7 W (I <sub>OUT</sub> = 10 A)
Power loss nominal load max.	14 W (I <sub>OUT</sub> = 20 A)

### General

Net weight	0.37 kg
Efficiency	> 97 %
Protection class	III
Degree of protection	IP20
	> 10000000 h (40 °C)
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	alignable: horizontally 0 mm, vertically 50 mm

### Connection data, input

Connection method	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	9 mm
Screw thread	M2,5

### Connection data, output

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## Technical data

### Connection data, output

Connection method	Screw connection
Conductor cross section solid min.	0.5 mm <sup>2</sup>
Conductor cross section solid max.	6 mm <sup>2</sup>
Conductor cross section flexible min.	0.5 mm <sup>2</sup>
Conductor cross section flexible max.	4 mm <sup>2</sup>
Conductor cross section AWG min.	20
Conductor cross section AWG max.	10
Stripping length	14 mm
Screw thread	M3

### Connection data for signaling

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
Screw thread	M2,5

### Standards

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 – Safety extra-low voltage	IEC 60950-1 (SELV) and EN 60204-1 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment	EN 50178

### Conformance/approvals

UL approvals	UL/C-UL listed UL 508
	UL/C-UL Recognized UL 60950-1

### EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Electrostatic discharge	EN 61000-4-2
Contact discharge	6 kV (Test Level 3)
Discharge in air	8 kV (Test Level 3)
Electromagnetic HF field	EN 61000-4-3
Frequency range	80 MHz ... 1 GHz
Test field strength	10 V/m (Test Level 3)
Frequency range	1 GHz ... 2 GHz
Test field strength	10 V/m (Test Level 3)
Frequency range	2 GHz ... 3 GHz

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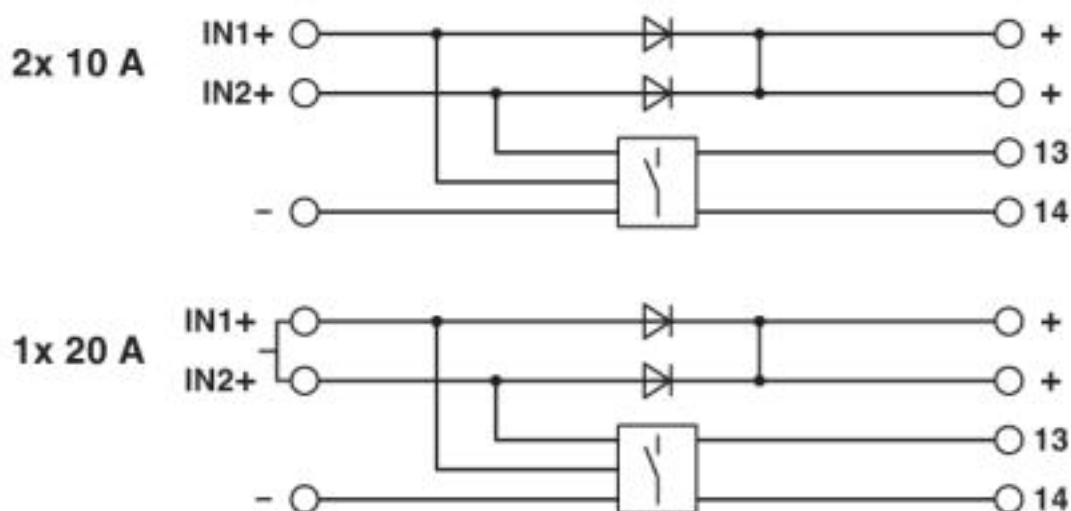
## Technical data

### EMC data

Test field strength	10 V/m (Test Level 3)
Comments	Criterion A
Fast transients (burst)	EN 61000-4-4
Input	2 kV (Test Level 3 - asymmetrical)
Output	2 kV (Test Level 3 - asymmetrical)
Comments	Criterion B
Surge voltage load (surge)	EN 61000-4-5
Input	2 kV (Test Level 3 - asymmetrical)
	1 kV (Test Level 2 - symmetrical)
Output	2 kV (Test Level 3 - asymmetrical)
	1 kV (Test Level 2 - symmetrical)
Comments	Criterion B
I/O/S	asymmetrical
Frequency range	0.15 MHz ... 80 MHz
Voltage	10 V (Test Level 3)
Comments	Criterion A
Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

## Drawings

Block diagram



## Approvals

Approvals

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## Approvals

### Approvals

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

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### Ex Approvals

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### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 123528
UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 211944
cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 211944
cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 123528
EAC			EAC-Zulassung
EAC			RU C- DE.A*30.B.01082
cULus Recognized			
cULus Listed			

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