

# Redundancy module - TRIO-DIODE/12-24DC/2X10/1X20 - 2866514

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Redundancy module with function monitoring, 12-24 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.

## Why buy this product

- ✓ Flexible mounting by simply snapping onto the DIN rail
- ✓ Save energy
- ✓ Rugged design
- ✓ Permanent monitoring of redundancy
- ✓ Consistent redundancy up to the load



## Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 492034
GTIN	4046356492034
Weight per Piece (excluding packing)	370.000 g
Custom tariff number	85049091
Country of origin	China

## Technical data

### Dimensions

Width	32 mm
Height	130 mm

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## Technical data

### Dimensions

Depth	115 mm
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### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 55° C derating : 2.5%/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)

### Input data

Nominal input voltage range	12 V DC ... 24 V DC
Input voltage range	10 V DC ... 30 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

Setting range of the output voltage ( $U_{Set}$ )	12 V DC ... 24 V DC
Nominal output current ( $I_N$ )	20 A (Increasing power)
	10 A (Redundancy)
Derating	55 °C ... 70 °C (2.5%/K)
Connection in series	No
Power loss nominal load max.	7 W ( $I_{OUT} = 10 A$ )

### General

Net weight	0.37 kg
Efficiency	> 97 %
Protection class	III
	> 10000000 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	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

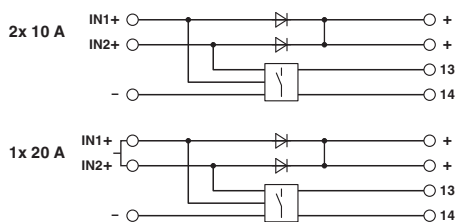
### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Shock	15g in all directions in acc. with IEC 60068-2-27
Connection in acc. with standard	CUL
Standards/regulations	EN 61000-4-2
	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-5
	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)
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
UL approvals	UL/C-UL listed UL 508
	UL/C-UL Recognized UL 60950
Vibration (operation)	< 15 Hz, amplitude ±2.5 mm
	15 Hz ... 150 Hz, 2.3g t <sub>v</sub> = 90 min.
Low Voltage Directive	Conformance with Low Voltage Directive 2006/95/EC

## Drawings

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Block diagram



## Classifications

### eCl@ss

eCl@ss 4.0	27250311
eCl@ss 4.1	27250311
eCl@ss 5.0	27242213
eCl@ss 5.1	27242213
eCl@ss 6.0	27049002
eCl@ss 7.0	27049002
eCl@ss 8.0	27371010
eCl@ss 9.0	27371010

### ETIM

ETIM 3.0	EC001039
ETIM 4.0	EC002542
ETIM 5.0	EC000683
ETIM 6.0	EC002540

### 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 / GL / RINA / NK / LR / DNV / ABS / EAC / EAC / BV / cULus Recognized / cULus Listed

#### Ex Approvals

### Approval details

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## Approvals

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
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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
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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
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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
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GL		<a href="http://www.gl-group.com/newbuilding/approvals/index.html">http://www.gl-group.com/newbuilding/approvals/index.html</a>	60508-13 HH
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RINA		<a href="http://www.rina.org/en">http://www.rina.org/en</a>	ELE096612XG
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NK	<b>ClassNK</b>	<a href="http://www.classnk.or.jp/hp/en/">http://www.classnk.or.jp/hp/en/</a>	14A002
mm <sup>2</sup> /AWG/kcmil		10	
Nominal current IN		63 A	
Nominal voltage UN		500 V	

LR		<a href="http://www.lr.org/en">http://www.lr.org/en</a>	14-20005
mm <sup>2</sup> /AWG/kcmil		6	
Nominal current IN		41 A	
Nominal voltage UN		500 V	

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## Approvals

DNV		<a href="http://exchange.dnv.com/tari/">http://exchange.dnv.com/tari/</a>	E-13924
ABS		<a href="http://www.eagle.org/eagleExternalPortalWEB/">http://www.eagle.org/eagleExternalPortalWEB/</a>	15-GD1354693-PDA
EAC			7500651.22.01.00242
EAC			EAC-Zulassung
BV		<a href="http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials">http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials</a>	36077/A1 BV
cULus 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>	
cULus Listed			