# Redundancy module - TRIO2-DIODE/12-24DC/2X10/1X20 - 2907380

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Redundancy module, 12 V - 24 V DC, 2 x 10 A, 1 x 20 A

## Product Description

A safe redundant system is the result of the parallel connection of two power supply units which are decoupled from one another. To further increase system availability, TRIO DIODE provides the solution: decoupling with diode.

## Your advantages

- Quick and easy installation with Push-in connection technology
- Save energy
- Redundant wiring up to the load
- Permanent monitoring of redundancy
- Consistent redundancy up to the load

RoHS


## Key Commercial Data

| | |
|---|---|
| Packing unit | 1 pc |
| GTIN | 4 055626 198262 |
| GTIN | 4055626198262 |

## Technical data

### Dimensions

| | |
|---|---|
| Width | 35 mm |
| Height | 130 mm |
| Depth | 115 mm |
| Installation distance right/left | 0 mm / 0 mm |
| Installation distance top/bottom | 50 mm / 50 mm |

### Ambient conditions

| | |
|---|---|
| Degree of protection | IP20 |
| Inflammability class in acc. with UL 94 (housing / terminal blocks) | V0 |

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## Technical data

### Ambient conditions

| | |
|---|---|
| Ambient temperature (operation) | -25 °C ... 70 °C (> 60 °C Derating: 2,5 %/K) |
| 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 | 12 V DC ... 24 V DC |
| Input voltage range | 10 V DC ... 30 V DC |
| Nominal input current | 2x 10 A (-25 °C ... 60 °C) |
| | 1x 20 A (-25 °C ... 60 °C) |
| Maximum input current | 2x 15 A (-25°C ... 40°C) |
| | 1x 30 A (-25°C ... 40°C) |
| Nominal input current | 2x 10 A (-25 °C ... 60 °C) |
| | 1x 20 A (-25 °C ... 60 °C) |

### Output data

| | |
|---|---|
| Nominal output current ($I_N$) | 20 A |
| | 10 A |
| Derating | 60 °C ... 70 °C (2.5%/K) |
| Connection in series | No |
| Power loss nominal load max. | 5 W ($I_{OUT}$ = 10 A) |

### General

| | |
|---|---|
| Net weight | 0.4 kg |
| Efficiency | > 97 % |
| MTBF (IEC 61709, SN 29500) | 66425178 h (25 °C) |
| | 56586762 h (40 °C) |
| | 41744164 h (60 °C) |
| Degree of protection | IP20 |
| Protection class | III |
| Inflammability class in acc. with UL 94 (housing / terminal blocks) | V0 |
| Mounting position | horizontal DIN rail NS 35, EN 60715 |
| Assembly instructions | alignable: horizontally 0 mm, vertically 50 mm |

### Connection data, input

| | |
|---|---|
| Connection method | Push-in connection |
| Conductor cross section solid min. | 0.2 mm² |
| Conductor cross section solid max. | 4 mm² |
| Conductor cross section flexible min. | 0.2 mm² |
| Conductor cross section flexible max. | 2.5 mm² |
| Conductor cross section AWG min. | 16 |
| Conductor cross section AWG max. | 12 |

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## Technical data

### Connection data, input

| | |
|---|---|
| Stripping length | 10 mm |

### Connection data, output

| | |
|---|---|
| Connection method | Screw connection |
| Conductor cross section solid min. | 0.2 mm² |
| Conductor cross section solid max. | 10 mm² |
| Conductor cross section flexible min. | 0.2 mm² |
| Conductor cross section flexible max. | 6 mm² |
| Conductor cross section AWG min. | 12 |
| Conductor cross section AWG max. | 8 |
| Stripping length | 15 mm |
| Screw thread | M3 |

### Standards

| | |
|---|---|
| EMC requirements for noise immunity | EN 61000-6-1 |
| | EN 61000-6-2 |
| EMC requirements for noise emission | EN 61000-6-3 |
| | EN 61000-6-4 |
| Standard - Electrical safety | IEC 62368-1 (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 62368-1 (SELV) und EN 60204-1 (PELV) |

### 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 Low Voltage Directive 2014/35/EC |
| Electrostatic discharge | EN 61000-4-2 |
| Contact discharge | 4 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 |
| Frequency range | 1 GHz ... 2 GHz |
| Test field strength | 10 V/m |
| Frequency range | 2 GHz ... 3 GHz |
| Test field strength | 10 V/m |
| Comments | Criterion A |
| Fast transients (burst) | EN 61000-4-4 |
| Input | 2 kV (Test Level 3 - asymmetrical) |

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## Technical data

### EMC data

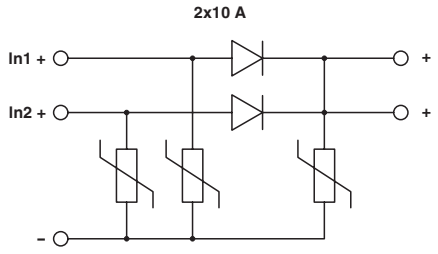
| | |
|---|---|
| Output | 2 kV (Test Level 3 - asymmetrical) |
| Comments | Criterion B |
| Surge voltage load (surge) | EN 61000-4-5 |
| Input | 1 kV (Test Level 3 - symmetrical) |
| | 2 kV (Test Level 4 - asymmetrical) |
| Output | 1 kV (Test Level 2 - symmetrical) |
| | 2 kV (Test Level 3 - asymmetrical) |
| Comments | Criterion B |
| Conducted interference | EN 61000-4-6 |
| I/O/S | asymmetrical |
| Frequency range | 0.15 MHz ... 80 MHz |
| Voltage | 10 V (Test Level 3) |
| Comments | Criterion A |
| Voltage dips | EN 61000-4-11 |
| Criterion A | Normal operating behavior within the specified limits. |

### Environmental Product Compliance

| | |
|---|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

## Drawings

Block diagram




## Classifications

### eCl@ss

| | |
|---|---|
| eCl@ss 10.0.1 | 27371010 |
| eCl@ss 11.0 | 27371010 |
| eCl@ss 4.0 | 27250300 |
| eCl@ss 4.1 | 27250300 |
| eCl@ss 5.0 | 27371000 |
| eCl@ss 5.1 | 27371000 |
| eCl@ss 6.0 | 27371000 |
| eCl@ss 7.0 | 27371010 |

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## Classifications

### eCl@ss

| | |
|---|---|
| eCl@ss 9.0 | 27371010 |

### ETIM

| | |
|---|---|
| ETIM 6.0 | EC002540 |
| ETIM 7.0 | EC000683 |

### UNSPSC

| | |
|---|---|
| UNSPSC 13.2 | 39121004 |
| UNSPSC 18.0 | 32151504 |
| UNSPSC 19.0 | 32151504 |
| UNSPSC 20.0 | 32151504 |
| UNSPSC 21.0 | 32151500 |

## Approvals

### Approvals

Approvals

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

Ex Approvals

### Approval details

| | | | |
|---|---|---|---|
| UL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 123528 |
| UL Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 211944 |
| 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 |

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## Approvals

| | | |
|---|---|---|
| EAC | | RU S-DE.BL08.W.00764 |
| DNV | https://approvalfinder.dnv.com/ | TAA000011F |
| cULus Recognized | | |
| cULus Listed | | |



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