

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.



Key commercial data

Packing unit	1 PCE
GTIN	 4 046356 562973
Custom tariff number	85044082
Country of origin	CHINA

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)
Ambient temperature (storage/transport)	-40 °C ... 85 °C

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Ambient conditions

Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, no condensation)
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Input data

Nominal input voltage	48 V DC
Nominal input voltage range	<p></p>
	30 V DC ... 56 V DC
Input voltage range DC	<p></p>
Nominal input current I _N	2x 10 A (-25°C ... 55°C)
	1x 20 A (-25°C ... 55°C)
Maximum current I _{max}	2x 15 A (-25°C ... 40°C)
	1x 30 A (-25°C ... 40°C)

Output data

Output current	20 A (Increasing power)
	10 A (Redundancy)
Derating	55 °C ... 70 °C (2.5%/K)
Maximum power dissipation NO-Load	7 W (I _{OUT} = 10 A)
Power loss nominal load max.	14 W (I _{OUT} = 20 A)

General

Net weight	0.37 kg
Efficiency	> 97 %
Protection class	III
MTBF (IEC 61709, SN 29500)	> 10000000 h (According to EN 29500)
Mounting position	horizontal DIN rail NS 35, EN 60715
Assembly instructions	Can be aligned: Horizontally 0 mm, vertically 50 mm
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Low Voltage Directive	Conformance with LV directive 2006/95/EC
Standard – Electrical equipment of machines	EN 60204
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 (PELV)
Standard - Safe isolation	DIN VDE 0100-410
	DIN VDE 0106-1010
Standard – Protection against electric shock	DIN 57100-410
Standard – Protection against shock currents, basic requirements for protective separation in electrical equipment	DIN VDE 0106-101
UL approvals	UL/C-UL listed UL 508

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Technical data

General

	UL/C-UL Recognized UL 60950
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Connection data, input

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	14
Stripping length	9 mm
Screw thread	M2,5

Connection data, output

Connection method	Screw connection
Conductor cross section solid min.	0.5 mm ²
Conductor cross section solid max.	6 mm ²
Conductor cross section stranded min.	0.5 mm ²
Conductor cross section stranded max.	4 mm ²
Conductor cross section AWG/kcmil min.	20
Conductor cross section AWG/kcmil max	10
Stripping length	14 mm

Signaling

Output name	Floating redundancy OK
Output description	Contact closed when U_{IN1} & $U_{IN2} > 28$ V
Maximum switching voltage	30 V AC/DC
Maximum inrush current	≤ 100 mA (short-circuit resistant)
Status display	LED redundancy OK
Note on status display	U_{IN1} & $U_{IN2} > 28$ V: LED lights up green
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	14
Tightening torque, min	0.4 Nm
Tightening torque max	0.5 Nm

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Signaling

Screw thread	M2,5
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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	27049002

ETIM

ETIM 3.0	EC001039
ETIM 4.0	EC002540
ETIM 5.0	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 / cULus Recognized / cULus Listed

Ex Approvals

Approvals submitted

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Approvals

Approval details

UL Recognized

UL Listed

cUL Recognized

cUL Listed

cULus Recognized

cULus Listed

Drawings

Block diagram

