TRIO2-DIODE/12-24DC/2X20/1X40 - Redundancy module

2907379

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Redundancy module, 12 V - 24 V DC, 2 x 20 A, 1 x 40 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

Commercial data

Item number	2907379
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CM17
Product key	CMRO43
GTIN	4055626198279
Weight per piece (including packing)	431 g
Weight per piece (excluding packing)	377.94 g
Customs tariff number	85363030
Country of origin	CN

Technical data

Input data

DC operation

Nominal input voltage range	12 V DC ... 24 V DC
Input voltage range	10 V DC ... 30 V DC
Voltage type of supply voltage	DC
Reverse polarity protection	yes, < 60 V
Nominal input current (I_N)	2x 20 A (-25 °C ... 60 °C)
	1x 40 A (-25 °C ... 60 °C)
Maximum current I_{max}	2x 25 A (-25 °C ... 40 °C)
	1x 50 A (-25 °C ... 40 °C)
Nominal input current (I_N)	2x 20 A (-25 °C ... 60 °C)
	1x 40 A (-25 °C ... 60 °C)
Transient surge protection	Varistor
Voltage drop, input/output	0.5 V

Output data

Efficiency	> 97 %
Nominal output voltage	U_{In} - 0,5 V
Nominal output current (I_N)	40 A
	20 A
Derating	60 °C ... 70 °C (2.5 %/K)
Power loss nominal load max.	10 W (I_{OUT} = 20 A)
Connection in series	no

Connection data

Input

Connection method	Push-in connection
Conductor cross-section, rigid min.	0.2 mm²
Conductor cross-section, rigid 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

Output

Connection method	Screw connection
Conductor cross-section, rigid min.	0.75 mm²
Conductor cross-section, rigid max.	16 mm²
Conductor cross-section flexible min.	0.75 mm²
Conductor cross-section flexible max.	16 mm²

Conductor cross-section AWG min.	8
Conductor cross-section AWG max.	4
Stripping length	18 mm
Screw thread	M3
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

Electrical properties

Insulation voltage input, output / housing	500 V

Product properties

Product type	Redundancy module
Product family	TRIO DIODE
MTBF (IEC 61709, SN 29500)	82870031 h (25 °C)
	50190012 h (40 °C)
	26315113 h (60 °C)
LED	no

Insulation characteristics

Protection class	III
Degree of pollution	2

Dimensions

Width	41 mm
Height	130 mm
Depth	115 mm

Installation dimensions

Installation distance right/left	0 mm / 0 mm
Installation distance top/bottom	50 mm / 50 mm

Mounting

Mounting type	DIN rail mounting
Assembly note	alignable: horizontally 0 mm, vertically 50 mm
Mounting position	horizontal DIN rail NS 35, EN 60715

Material specifications

Flammability rating according to UL 94 (housing / terminal blocks)	V0
Housing material	Metal
Type of housing	Steel sheet, zinc-plated
Side element version	Aluminum

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C (> 60 °C Derating: 2,5 %/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Climatic class	3K3 (in acc. with EN 60721)
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)
Shock	18 ms, 30g, in each space direction (according to IEC 60068-2-27)
Vibration (operation)	< 15 Hz, amplitude ±2.5 mm (according to IEC 60068-2-6)
	15 Hz ... 150 Hz, 2.3g, 90 min.

Standards and regulations

Standard – Electronic equipment for use in electrical power installations and their assembly into electrical power installations	EN 50178/VDE 0160 (PELV)
Standard - Electrical safety	IEC 62368-1 (SELV)
Standard – Safety extra-low voltage	IEC 62368-1 (SELV) und EN 60204-1 (PELV)

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
EMC requirements for noise emission	EN 61000-6-3
	EN 61000-6-4
EMC requirements for noise immunity	EN 61000-6-1
	EN 61000-6-2

Electrostatic discharge

Standards/regulations	EN 61000-4-2

Electrostatic discharge

Contact discharge	4 kV (Test Level 3)
Discharge in air	8 kV (Test Level 3)
Comments	Criterion B

Electromagnetic HF field

Standards/regulations	EN 61000-4-3

Electromagnetic HF field

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)

Standards/regulations	EN 61000-4-4

Fast transients (burst)

Input	2 kV (Test Level 3 - asymmetrical)
Output	2 kV (Test Level 3 - asymmetrical)
Comments	Criterion B

Surge voltage load (surge)

Standards/regulations	EN 61000-4-5

Surge voltage load (surge)

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

Standards/regulations	EN 61000-4-6

Conducted interference

Input/output/signal	asymmetrical
Frequency range	0.15 MHz ... 80 MHz
Comments	Criterion A
Voltage	10 V (Test Level 3)

Voltage dips

Standards/regulations	EN 61000-4-11

Emitted interference

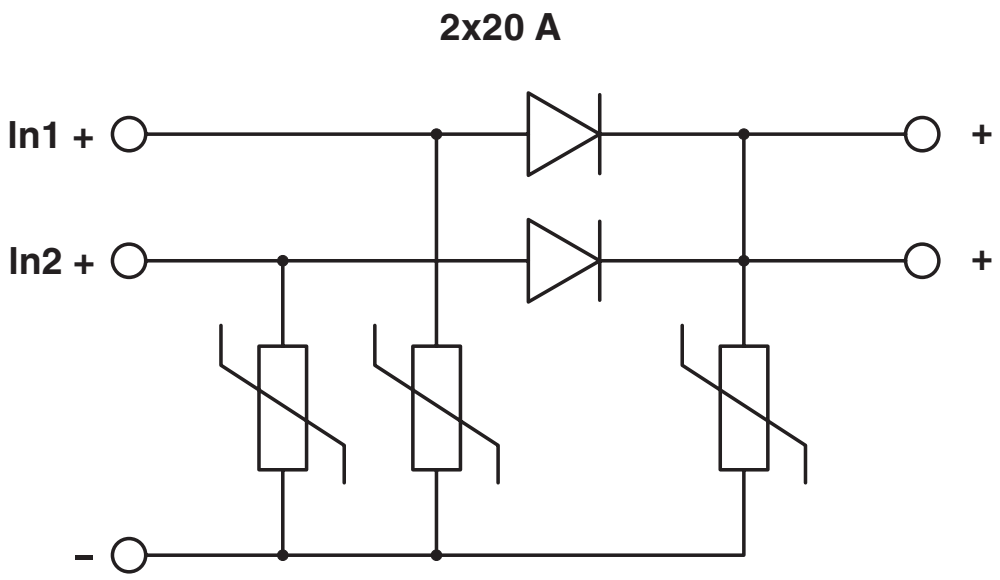
Standards/regulations	EN 61000-6-3
Radio interference voltage in acc. with EN 55011	EN 55011 (EN 55022) Class B, area of application: Industry and residential
Emitted radio interference in acc. with EN 55011	EN 55011 (EN 55022) Class B, area of application: Industry and residential

Criteria

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

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cUL Recognized
Approval ID: E211944

UL Recognized
Approval ID: E211944

EAC
Approval ID: RU S-DE.BL08.W.00764

UL Listed
Approval ID: E123528

cUL Listed
Approval ID: E123528

DNV
Approval ID: TAA000011F

NK
Approval ID: TA25015M

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	500 V	63 A	-	- 10

Classifications

ECLASS

ECLASS-13.0	27371010
ECLASS-15.0	27371010

ETIM

ETIM 10.0	EC002878

UNSPSC

UNSPSC 21.0	32151500

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions

China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%

EF3.1 Climate Change

CO2e kg	64.44 kg CO2e

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