STEP3-DIODE/5-24DC/2X5/1X10/PT - Redundancy module

1283937

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Redundancy module STEP DIODE, DIN rail mounting, 5 V DC ... 24 V DC, 1x 10 A, 2x 5 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, STEP DIODE provides the solution: decoupling with diode.

Your advantages

- Flexible mounting by simply snapping onto the DIN rail
- Rugged design
- Consistent redundancy up to the load

Commercial data

Item number	1283937
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CMRH43
Product key	CMRH43
GTIN	4063151488949
Weight per piece (including packing)	74 g
Weight per piece (excluding packing)	54 g
Customs tariff number	85363010
Country of origin	VN

Technical data

Input data

Nominal input voltage range	5 V DC ... 24 V DC
Input voltage range	4.5 V DC ... 30 V DC
Voltage type of supply voltage	DC
Nominal input current (I_N)	1x 10 A
	2x 5 A
Reverse polarity protection	yes, < 60 V DC
Voltage drop, input/output	typ. 0.5 V (I_{OUT} = 5 A)
Transient surge protection	Transil diode

Output data

Nominal output voltage	U_{In} - 0,5 V
Nominal output current (I_N)	2x 5 A
	1x 10 A
Derating	50 °C ... 70 °C (2 % / K)

Connection data

Conductor connection

Connection method	Push-in connection
rigid	0.2 mm² ... 2.5 mm²
flexible	0.2 mm² ... 2.5 mm²
flexible with ferrule without plastic sleeve	0.5 mm² ... 1.5 mm²
	1 mm² (recommended)
flexible with ferrule with plastic sleeve	0.2 mm² ... 1 mm²
	1 mm² (recommended)
AWG (Terminal block)	24 ... 14 (Cu)
Stripping length (starr/flexibel)	10 mm (rigid/flexible/ferrule without plastic sleeve)
Stripping length (Aderendhülse)	13 mm (Ferrule with plastic sleeve)

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Electrical properties

Insulation voltage input/output	550 V AC
Insulation voltage input, output / housing	550 V AC

Product properties

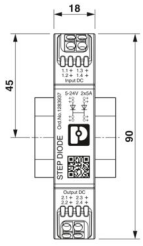
Product type	Redundancy module
Product family	STEP DIODE
MTBF (IEC 61709, SN 29500)	> 29675000 h (25 °C)
	> 18693000 h (40 °C)
	> 13996000 h (50 °C)
LED	yes

Insulation characteristics

Protection class	III
Degree of pollution	2

Dimensions

Item dimensions

Width	18 mm
Height	90 mm
Depth	61 mm
Depth (Device depth (DIN rail mounting))	55 mm (Device depth (DIN rail mounting))
Dimensional drawing	
Horizontal pitch	1 HP (DIN 43880)

Installation dimensions

Installation distance right/left	0 mm / 0 mm
Installation distance top/bottom	30 mm / 30 mm

Mounting

Mounting type	DIN rail mounting
Assembly note	alignable: 0 mm horizontally, 30 mm vertically
Mounting position	horizontal DIN rail NS 35, EN 60715

Material specifications

Flammability rating according to UL 94 (housing / terminal blocks)	V0

Housing material	Metal
Housing material	PC
Foot latch material	Polyamid

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-10 °C ... 70 °C (Derating: > 50 °C; 2 %/K)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Maximum altitude	≤ 5000 m (> 2000 m, Derating: 10 %/1000 m)
Max. permissible relative humidity (operation)	≤ 95 % (at 25 °C, non-condensing)
Dry heat (IEC 60068-2-2)	70 °C (16 h)
Humid heat cyclic (IEC 60068-2-30)	55 °C (95 %, 2 x 23 h)
Cold (IEC 60068-2-1)	-25 °C (16 h)
Shock (operation)	18 ms, 30g, per spatial direction (IEC 60068-2-27)
Vibration (operation)	< 15 Hz, amplitude ±2.5 mm (IEC 60068-2-6)
	15 Hz ... 150 Hz, 2.3g, 90 min.

Standards and regulations

Electrical safety

Standard designation	Electrical safety
Standards/specifications	IEC 61010-1 (SELV)

Protective extra-low voltage

Standard designation	Protective extra-low voltage
Standards/specifications	IEC 61010-1 (SELV)
	IEC 61010-2-201 (PELV)

Approvals

Shipbuilding

Identification	DNV

UL

Identification	UL/C-UL Listed UL 61010-1

UL

Identification	UL/C-UL Listed UL 61010-2-201

UL

Identification	UL/C-UL Listed ANSI/UL 121201 Class I, Division 2, Groups A, B, C, D (Hazardous Location)
Note	T4 (-10°C ... +70°C, >50°C, derating: 2%/K)

EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU

Low Voltage Directive	Conformance with Low Voltage Directive 2014/35/EC
Noise immunity	EN 61000-6-2:2019

Fast transients (burst)

Standards/regulations	EN 61000-4-4

Fast transients (burst)

Input	4 kV (Test Level 4 - 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 3 - asymmetrical)
Output	1 kV (Test Level 3 - symmetrical)
	2 kV (Test Level 3 - asymmetrical)
Comments	Criterion B

Conducted interference

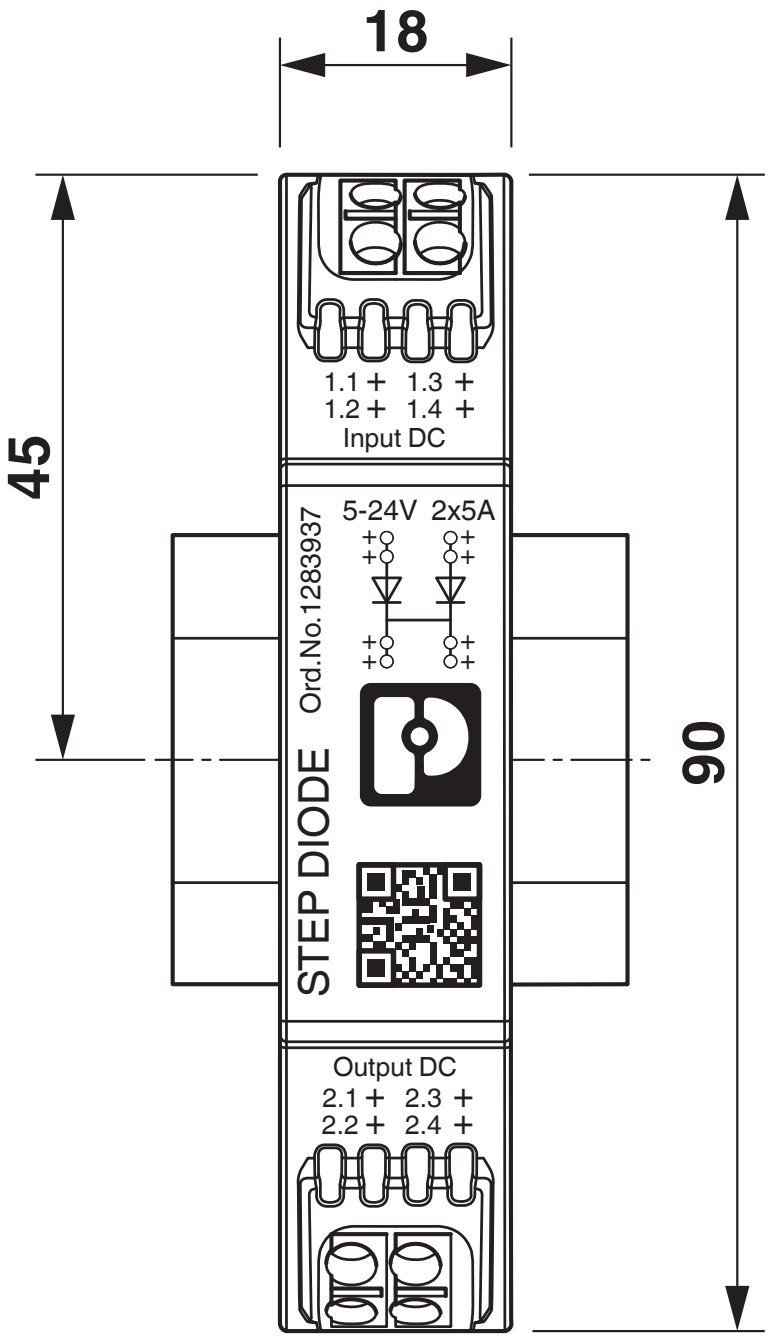
Input/output/signal	asymmetrical
Frequency range	150 kHz ... 80 MHz
Comments	Criterion A
Voltage	10 V (Test Level 3)

Criteria

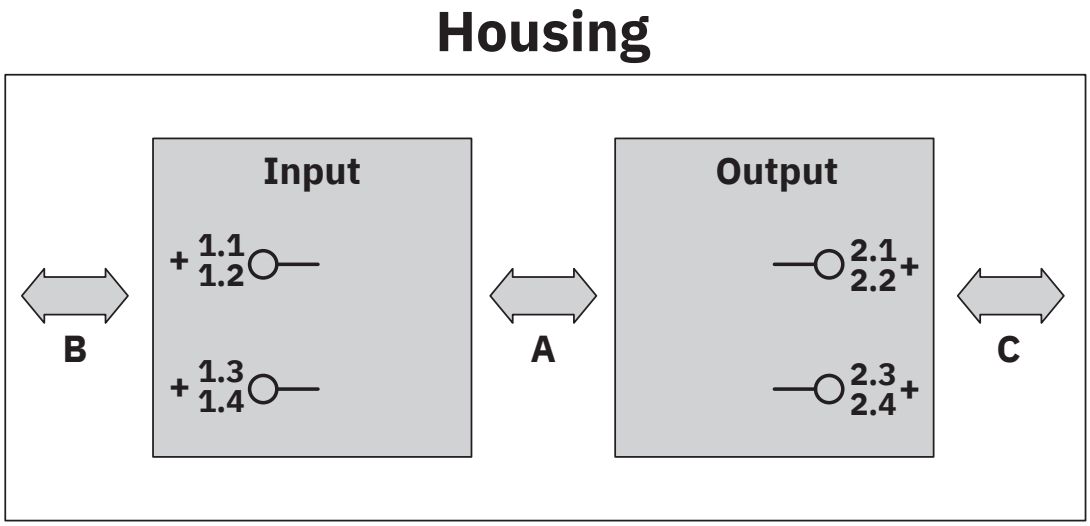
Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

Drawings

Dimensional drawing

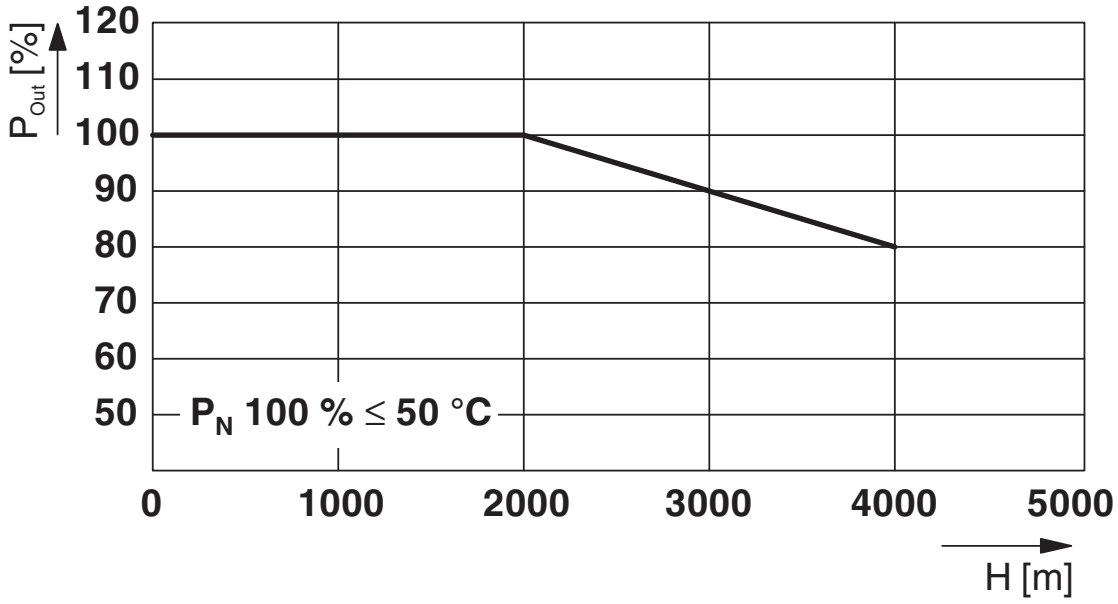


Schematic diagram

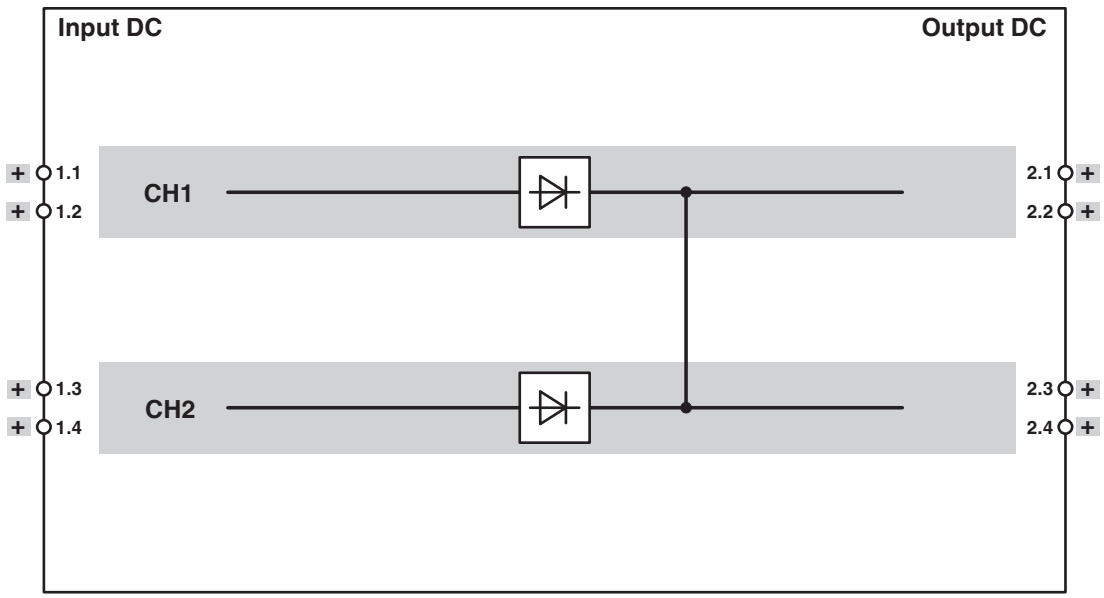


Test sections, insulation voltage

Diagram



Block diagram



Approvals

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IECEE CB Scheme
Approval ID: DK-122039-UL

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

cULus Listed
Approval ID: FILE E 123528

DNV
Approval ID: TAA000011F

cULus Listed
Approval ID: FILE E 199827

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
Exemption	6(c), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-25
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	8f786d5d-f2f8-461e-ac91-4f048febfbd2

EF3.1 Climate Change

CO2e kg	2.263 kg CO2e

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