

TTC-3-1X2-24DC-PT - Surge protection device



2907325

<https://www.phoenixcontact.com/us/products/2907325>

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Surge protection for a 2-wire floating signal circuit, e.g., 0(4) ... 20 mA current loop, HART-compatible.



Your advantages

- Extremely space-saving installation with the narrowest overall width of just 3.5 mm
- Cost-optimized with tailored product features
- Finding the right product for all possible requirements in MCR applications is easy, thanks to the complete range of products with customized features

Commercial data

Item number	2907325
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL23
Product key	CL2266
Catalog page	Page 119 (C-4-2019)
GTIN	4055626199917
Weight per piece (including packing)	25 g
Weight per piece (excluding packing)	19.5 g
Customs tariff number	85363030
Country of origin	DE

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Technical data

Product properties

IEC test classification	C1
	C2
	C3
	D1
Type	DIN rail module, one-piece
Product type	Surge protection for MCR technology
Product family	TERMITRAB complete
Wire pairs per module	1

Insulation characteristics

Overvoltage category	III
Pollution degree	2

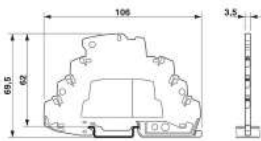
Electrical properties

Nominal voltage U_N	24 V DC
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Connection data

Connection method	Push-in connection
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.2 mm ² ... 1 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.2 mm ² ... 1.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross section rigid	0.2 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16

Dimensions

Dimensional drawing	
Width	3.5 mm
Height	106 mm
Depth	69.5 mm (incl. DIN rail 7.5 mm)

Material specifications

Flammability rating according to UL 94	V-0
Insulating material	PBT
Housing material	PBT

Mechanical properties

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Mechanical data

Open side panel	Yes
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Protective circuit

Direction of action	Line-Line & Line-Signal Ground/Shield & optional Signal Ground/Shield-Earth Ground
Maximum continuous voltage U_C	30 V DC
	21 V AC
Rated current	250 mA (70 °C)
Operating effective current I_C at U_C	$\leq 1 \mu\text{A}$
Residual current I_{PE}	$\leq 1 \mu\text{A}$
Nominal discharge current I_n (8/20) μs (line-line)	5 kA
Nominal discharge current I_n (8/20) μs (line-ground)	5 kA
Pulse discharge current I_{imp} (10/350) μs (line-earth)	0.5 kA
Total discharge current I_{total} (8/20) μs	10 kA
Voltage protection level U_p (line-line)	$\leq 50 \text{ V}$ (C1 - 500 V / 250 A)
	$\leq 70 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 45 \text{ V}$ (C3 - 30 A)
Voltage protection level U_p (line-earth)	$\leq 1000 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 1000 \text{ V}$ (C3 - 100 A)
Voltage protection level U_p static (line-line)	$\leq 50 \text{ V}$ (C1 - 1 kV / 500 A)
Response time t_A (line-line)	$\leq 1 \text{ ns}$
Input attenuation aE, sym.	typ. 0.3 dB ($\leq 600 \text{ kHz}$ / 150 Ω)
Cut-off frequency f_g (3 dB), sym. in 150 Ω system	typ. 2.4 MHz
Capacity (Core-Core)	typ. 1 nF
Resistance per path	2.2 $\Omega \pm 10 \%$
Surge protection fault message	none
Max. required back-up fuse	250 mA (FF)
Impulse durability (line-line)	C1 - 500 V / 250 A
	C2 - 10 kV / 5 kA
	C3 - 30 A
Impulse durability (line-earth)	C2 - 10 kV / 5 kA
	C3 - 100 A
	D1 - 500 A
Pulse reset time (line-line)	$\leq 30 \text{ ms}$

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20 (with end cover)
Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	$\leq 4000 \text{ m}$ (amsl)
Permissible humidity (operation)	5 % ... 95 %

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Standards and regulations

Standards/specifications	IEC 61643-21
Note	2000 + corrigendum 2001 + A1:2008, modified + A2:2012

EN 61643-21

Standards/specifications	EN 61643-21
Note	2001 + A1:2009 + A2:2013

Mounting

Mounting type	DIN rail: TH 35 - 7.5 mm
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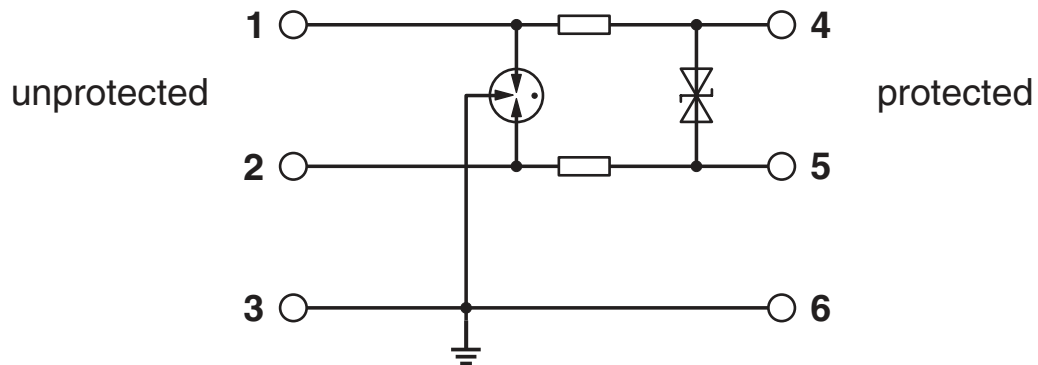
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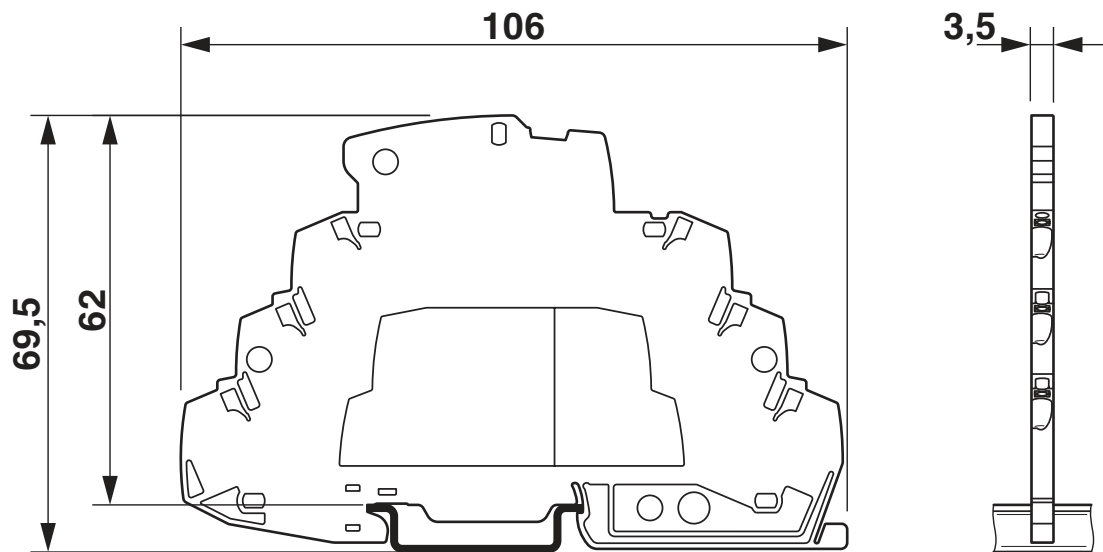
<https://www.phoenixcontact.com/us/products/2907325>

Drawings

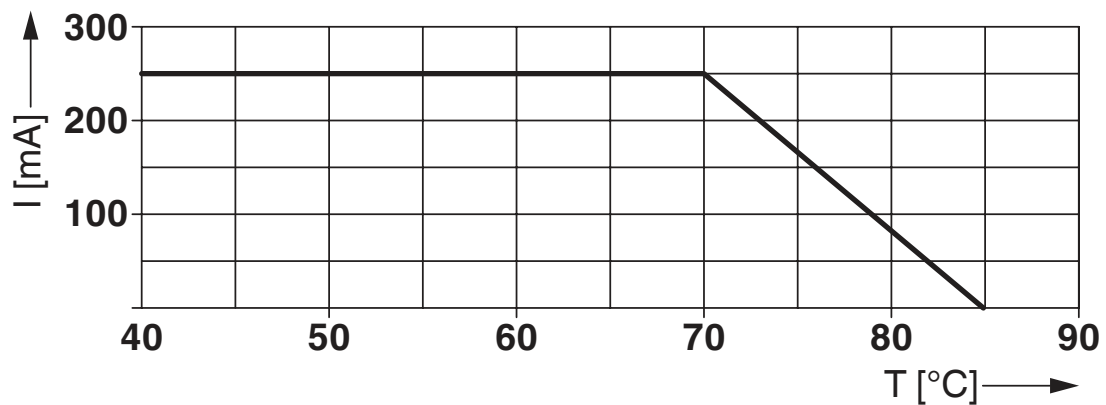
Circuit diagram



Dimensional drawing



Diagram



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Approvals

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CSA

Approval ID: 70136717



DNV GL

Approval ID: TAE000027G



UL Listed

Approval ID: FILE E 138168



CSAus

Approval ID: 70136717

cCSAus

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Classifications

ECLASS

ECLASS-11.0	27130807
ECLASS-13.0	27171501

ETIM

ETIM 8.0	EC000943
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UNSPSC

UNSPSC 21.0	39121600
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Environmental product compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

ZBF 3,5:UNBEDRUCKT - Zack Marker strip, flat

0829392

<https://www.phoenixcontact.com/us/products/0829392>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 3.5 mm, lettering field size: 3.5 x 5.2 mm, Number of individual labels: 10

ZBF 3,5,LGS:FORTL.ZAHLEN - Zack Marker strip, flat

0801406

<https://www.phoenixcontact.com/us/products/0801406>



Zack Marker strip, flat, Strip, white, labeled, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: snapped, for terminal block width: 3.5 mm, lettering field size: 5.15 x 3.5 mm, Number of individual labels: 10

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CLIPFIX 35-5 - End clamp

3022276

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Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, with parking option for FBS...5, FBS...6, KSS 5, KSS 6, width: 5.15 mm, color: gray

TTC-3-LCP - Cover

2908843

<https://www.phoenixcontact.com/us/products/2908843>



End cover for terminating a row of TERMITRAB complete TTC-3... terminal blocks

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AI-S 1 - 8 TQ - Ferrule

1200293

<https://www.phoenixcontact.com/us/products/1200293>



Ferrule, S-Slimline, sleeve length: 8 mm, length: 14.5 mm, color: turquoise

X-PEN 0,35 - Marker pen

0811228

<https://www.phoenixcontact.com/us/products/0811228>



Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

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