

Surge protection device - TTC-6-2X1-24DC-PT



2906805

<https://www.phoenixcontact.com/gb/products/2906805>

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Surge protection for two signal wires with common reference potential, e.g., Digital IN/OUT.



Your advantages

- Space-saving and cost-saving with a narrow overall width of just 6 mm
- Quick and tool-free installation of surge protective devices, thanks to Push-in connection technology
- 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	2906805
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	CL2262
Product Key	CL2262
Catalog Page	Page 130 (C-4-2019)
GTIN	4055626135595
Weight per Piece (including packing)	34.1 g
Weight per Piece (excluding packing)	31.242 g
Customs tariff number	85363010
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

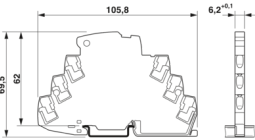
Insulation characteristics

Overvoltage category	III
Pollution degree	2

Connection data

Connection method	Push-in connection
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section solid	0.2 mm ² ... 4 mm ²
Conductor cross section AWG	24 ... 12

Dimensions

Dimensional drawing	
Width	6.2 mm +0.1 mm
Height	105.8 mm
Depth	69.5 mm (incl. DIN rail 7.5 mm)

Material specifications

Color	traffic grey A RAL 7042
Flammability rating according to UL 94	V-0
Insulating material	PBT
Housing material	PBT

Mechanical properties

Mechanical data

Open side panel	No
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Protective circuit

Direction of action	Line-Line & Line-Signal Ground/Shield & optional Signal Ground/Shield-Earth Ground
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Maximum continuous voltage U_C	30 V DC
	21 V AC
Rated current	600 mA (40 °C)
Operating effective current I_C at U_C	$\leq 5 \mu\text{A}$
Residual current I_{PE}	$\leq 10 \mu\text{A}$
Nominal discharge surge current I_n (8/20) μs (Core-Earth)	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-earth)	$\leq 140 \text{ V}$ (C1 - 1 kV / 500 A)
	$\leq 130 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 45 \text{ V}$ (C3 - 25 A)
	$\leq 50 \text{ V}$ (C3 - 100 A)
Voltage protection level U_p static (line-earth)	$\leq 55 \text{ V}$ (C1 - 1 kV / 500 A)
	$\leq 80 \text{ V}$ (C2 - 10 kV / 5 kA)
Response time t_A (line-earth)	$\leq 1 \text{ ns}$
Input attenuation aE, asym.	typ. 0.3 dB ($\leq 270 \text{ kHz}/150 \Omega$)
Cut-off frequency f_g (3 dB), asym. (PE) in 150 Ω system	typ. 960 kHz
Capacity (Core-Earth)	typ. 2.2 nF
Resistance per path	1.65 $\Omega \pm 20 \%$
Surge protection fault message	none
Max. required back-up fuse	630 mA (FF)
Impulse durability (line-earth)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C3 - 100 A
	D1 - 500 A
Pulse reset time (line-earth)	$\leq 300 \text{ ms}$

Additional technical data

Max. total discharge current $I_{total \max}$ (8/20) μs	20 kA (1x)
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Environmental and real-life conditions

Ambient conditions

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

Standards and regulations

Standards/specifications	IEC 61643-21
Standards/specifications	EN 61643-21

Mounting

Mounting type	DIN rail: TH 35 - 7.5 mm
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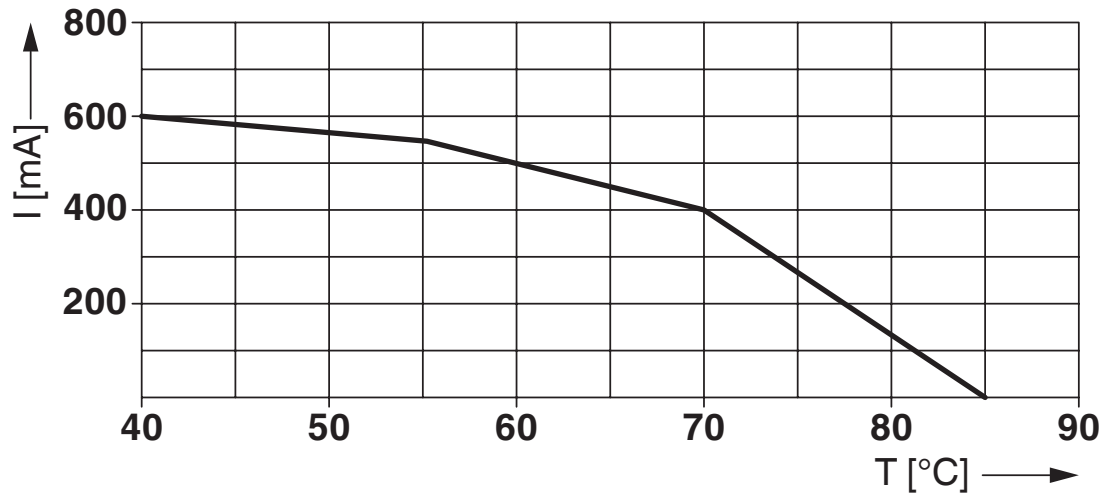
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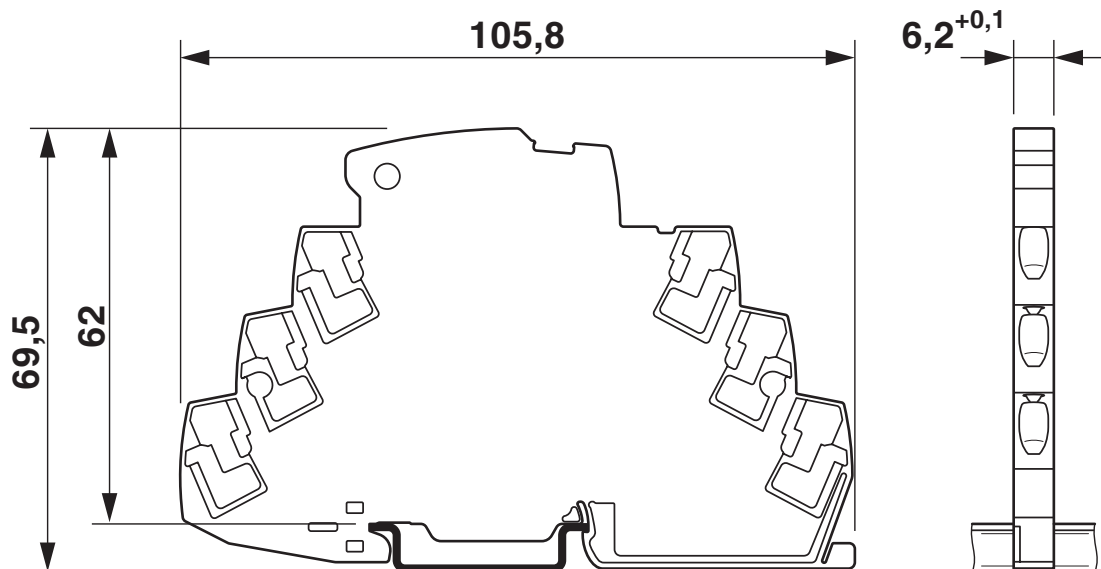
<https://www.phoenixcontact.com/gb/products/2906805>

Drawings

Diagram



Dimensional drawing



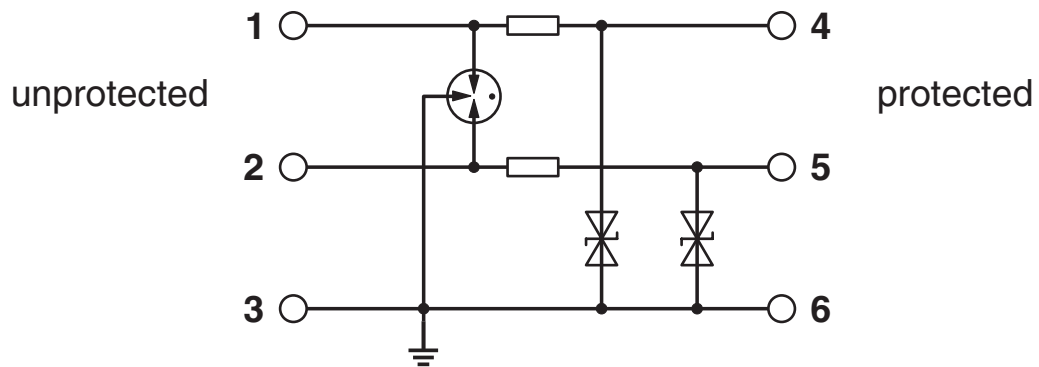
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Circuit diagram



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Approvals



CSA

Approval ID: 70136717



DNV GL

Approval ID: TAE000027G

Nominal Voltage U_N

Nominal Current I_N

Cross Section AWG

Cross Section mm^2

-

-



UL Listed

Approval ID: FILE E 138168



CSAus

Approval ID: 70136717

cCSAus

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Classifications

ECLASS

ECLASS-9.0	27130807
ECLASS-10.0.1	27130807
ECLASS-11.0	27130807

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

Marker pen

Marker pen - X-PEN 0,35 - 0811228

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



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

Zack Marker strip, flat

Zack Marker strip, flat - ZBF 6 CUS - 0825027

<https://www.phoenixcontact.com/gb/products/0825027>



Zack Marker strip, flat, Strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

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Zack Marker strip, flat

Zack Marker strip, flat - ZBF 6:UNBEDRUCKT - 0808710

<https://www.phoenixcontact.com/gb/products/0808710>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

Zack Marker strip, flat

Zack Marker strip, flat - ZBF 6/WH-100:UNBEDRUCKT - 0808736

<https://www.phoenixcontact.com/gb/products/0808736>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 1000

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End clamp

End clamp - CLIPFIX 35-5 - 3022276

<https://www.phoenixcontact.com/gb/products/3022276>



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

Shield connection

Shield connection - SSA 3-6 - 2839295

<https://www.phoenixcontact.com/gb/products/2839295>



Shield fast connection for 3 ... 6 mm cable diameter. Potential connecting cable: 200 mm, 1 mm², color: black

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Shield connection

Shield connection - SSA 5-10 - 2839512

<https://www.phoenixcontact.com/gb/products/2839512>

Shield fast connection for 5 ... 10 mm cable diameter. Potential connecting cable:
200 mm, 1 mm², color: black



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