

## Surge protection device - TTC-6-2X1-24DC-UT - 2906799

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




### Your advantages

- ✔ Space-saving installation due to the narrow overall width of 6.2 mm



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 135540
GTIN	4055626135540

### Technical data

#### Dimensions

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

#### Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 4000 m (amsl (above mean sea level))
Degree of protection	IP20

#### General

Housing material	PBT
Flammability rating according to UL 94	V-0
Color	traffic grey A RAL 7042
Mounting type	DIN rail: TH 35 - 7.5 mm

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## Technical data

### General

Type	DIN rail module, one-piece
Direction of action	Line-Line & Line-Signal Ground/Shield & optional Signal Ground/Shield-Earth Ground

### Protective circuit

IEC test classification	C1
	C2
	C3
	D1
Nominal voltage $U_N$	24 V DC
Maximum continuous voltage $U_C$	30 V DC
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 current $I_n$ (8/20) $\mu\text{s}$ (line-earth)	5 kA
Pulse discharge current $I_{imp}$ (10/350) $\mu\text{s}$ (line-earth)	0.5 kA
Total discharge current $I_{total}$ (8/20) $\mu\text{s}$	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 Ohm system	typ. 960 kHz
Capacity (line-earth)	typ. 2.2 nF
Resistance in series	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) $\mu\text{s}$	20 kA (1x)
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### Connection data

Connection method	Screw connection
Screw thread	M3

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### Connection data

Tightening torque	0.5 Nm ... 0.6 Nm
Stripping length	8 mm
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section solid	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross section AWG	24 ... 12

### Standards and Regulations

Standards/specifications	IEC 61643-21 2000 + corrigendum 2001 + A1:2008, modified + A2:2012
	EN 61643-21 2001 + A1:2009 + A2:2013

### Environmental Product Compliance

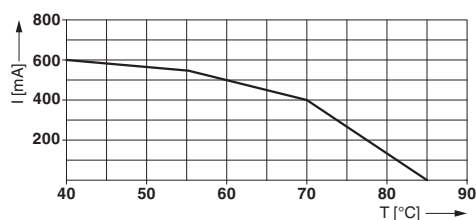
REACH SVHC	Lead 7439-92-1
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## Drawings

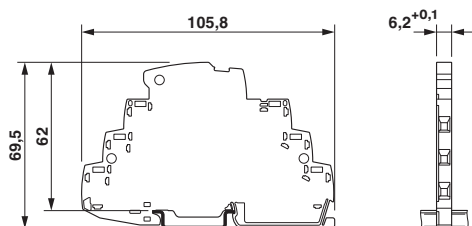
Pictogram



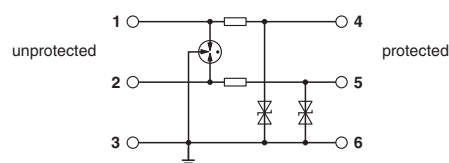
Diagram



Dimensional drawing



Circuit diagram



## Approvals

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#### Approvals

UL Listed / CSA / CSAus / DNV GL / cCSAus





#### Ex Approvals

UL Listed / cUL Listed / cULus Listed

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### Approvals

#### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 138168
CSA		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	70136717
CSAus		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	70136717
DNV GL		<a href="http://exchange.dnv.com/tari/">http://exchange.dnv.com/tari/</a>	TAE000027G
cCSAus		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	

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