

TTC-6P-2X2-24-PT-I - Surge protection device



1334595

<https://www.phoenixcontact.com/gb/products/1334595>

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Surge protection, consisting of protective plug and base element, with integrated status indicator for two 2-wire floating signal circuits, e.g., two 0(4) ... 20 mA current loops, HART-compatible.

Your advantages

- Efficient use of space: the narrowest pluggable surge protection solution for 4-conductor applications
- Easy function monitoring: on-site or optionally via remote signaling, with optical monitoring, without additional effort
- Servicing without affecting the signal: replace the surge protection module without affecting the measuring signal
- Flexible choice: Push-in Technology or screw connection

Commercial data

Item number	1334595
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL2162
Product key	CL2162
GTIN	4063151633554
Weight per piece (including packing)	50.3 g
Weight per piece (excluding packing)	32.62 g
Customs tariff number	85363010
Country of origin	DE

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Technical data

Product properties

Product family	TERMITRAB complete
IEC test classification	C1
	C2
	C3
	D1
Type	DIN rail module, two-section, divisible

Insulation characteristics

Overvoltage category	III
Pollution degree	2

Electrical properties

Nominal voltage U_N	24 V DC
	24 V AC

Connection data

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

Dimensions

Dimensional drawing	
Width	6.2 mm +0.1 mm
Height	125 mm
Depth	100 mm (incl. DIN rail 7.5 mm)

Material specifications

Color (Base element)	gray (RAL 7042)
Color (Male connector)	light gray (RAL 7035)
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-Earth Ground
Nominal voltage U_N	24 V DC
	24 V AC
Maximum continuous operating voltage U_C	36 V DC
	26 V AC
Rated current	300 mA (40 °C)
Operating effective current I_C at U_C	$\leq 5 \mu\text{A}$
Protective conductor current I_{PE}	$\leq 5 \mu\text{A}$
Nominal discharge current I_n (8/20) μs (line-ground)	8 kA
Pulse discharge current I_{imp} (10/350) μs (line-earth)	1 kA
Total discharge current I_{Total} (8/20) μs	15 kA
Output voltage limitation at 1 kV/ μs (wire-wire)	$\leq 50 \text{ V}$
Voltage protection level U_p (line-line)	$\leq 80 \text{ V}$ (C1 - 1 kV / 500 A)
	$\leq 160 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 55 \text{ V}$ (C3 - 25 A)
Voltage protection level U_p (line-earth)	$\leq 950 \text{ V}$ (C1 - 1 kV / 500 A)
	$\leq 850 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 700 \text{ V}$ (C3 - 25 A)
Response time t_A (line-line)	$\leq 1 \text{ ns}$
Response time t_A (line-earth)	$\leq 100 \text{ ns}$
Input attenuation aE, sym.	typ. 0.3 dB ($\leq 200 \text{ kHz} / 150 \Omega$)
Cut-off frequency f_g (3 dB), sym. in 150 Ω system	$> 900 \text{ kHz}$
Capacity (Core-Core)	typ. 2 nF
Resistance per path	3.3 $\Omega \pm 20 \%$
Surge protection fault message	optical
Max. required back-up fuse	315 mA (FF)
Impulse durability (line-line)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C3 - 100 A
Impulse durability (line-earth)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C3 - 100 A
	D1 - 1 kA
Pulse reset time (line-earth)	$\leq 25 \text{ ms}$

Additional technical data

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

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 85 °C

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Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 4000 m (amsl)
Permissible humidity (operation)	5 % ... 95 %

Standards and regulations

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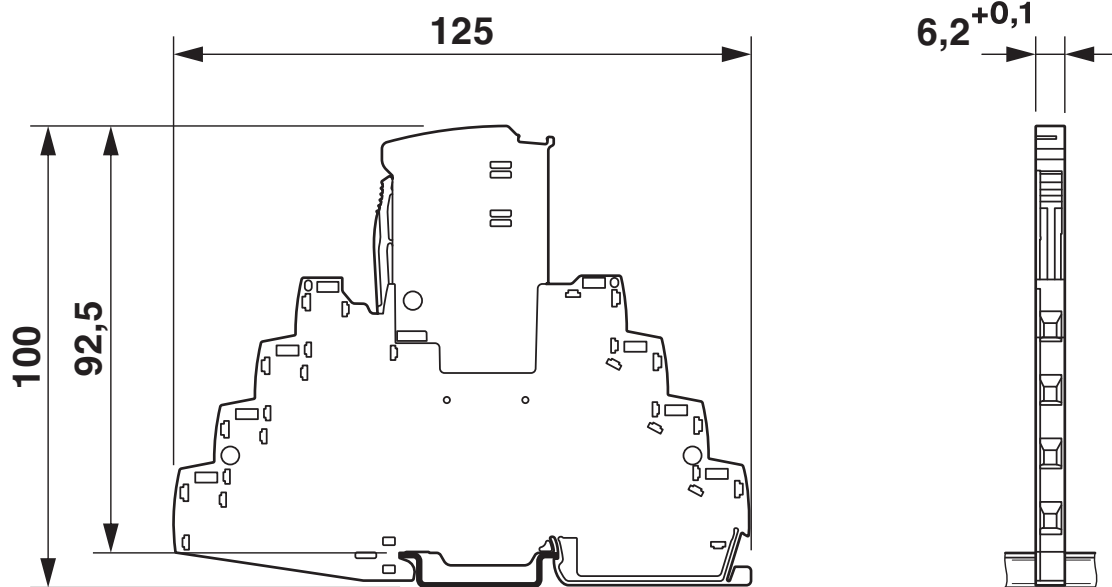
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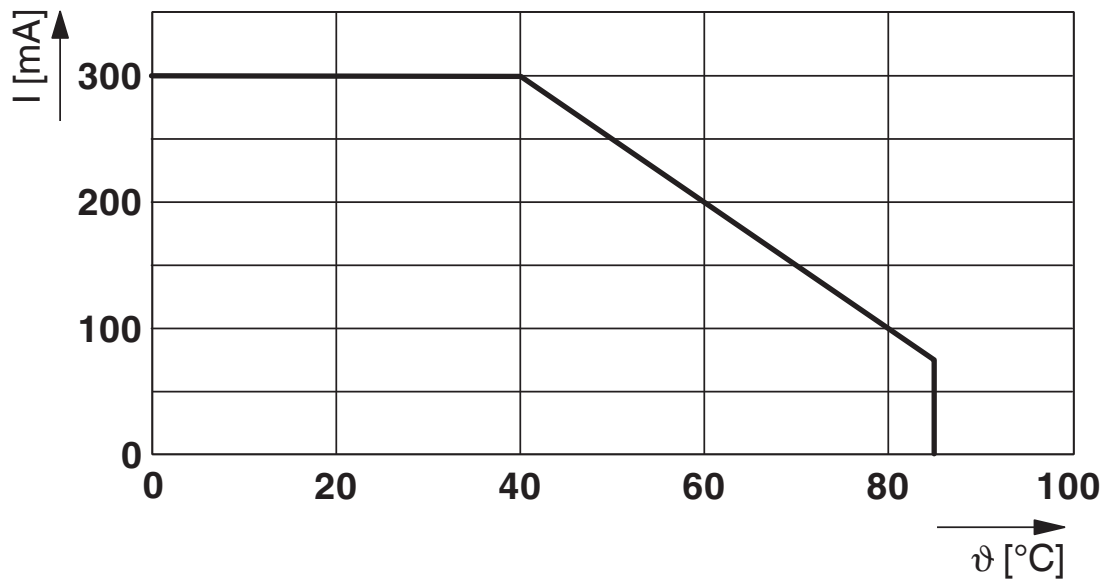
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Drawings

Dimensional drawing



Diagram



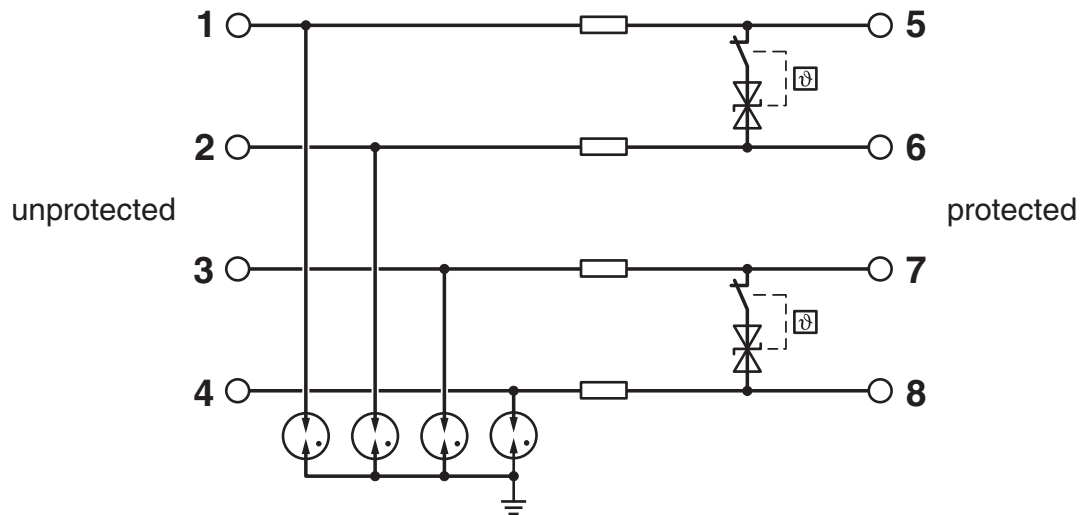
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Circuit diagram



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Approvals

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DNV GL

Approval ID: TAE000027G



UL Listed

Approval ID: FILE E 138168



cULus Listed

Approval ID: File E 333250

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Classifications

ECLASS

ECLASS-13.0	27171501
ECLASS-15.0	27171501

ETIM

ETIM 10.0	EC001466
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UNSPSC

UNSPSC 21.0	39121600
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	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	61079a7b-9210-4fc9-8a0e-831a4b6cc6b3

EF3.1 Climate Change

CO2e kg	8.156 kg CO2e
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