

Surge protection device - TTC-6P-1X2-F-M-24DC-PT-I - 2906790

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Surge protection, consisting of protective plug and base element, with integrated status indicator and disconnect knife for a 2-wire floating signal circuit, e.g., 0(4) ... 20 mA current loop. Indirect grounding via gas-filled surge arrester.

Why buy this product

- ✓ Space-saving installation due to the narrow overall width of 6.2 mm
- ✓ Signaling without additional auxiliary power, thanks to the mechanical status indicator
- ✓ Optional remote signaling module monitors up to 40 items, without additional wiring
- ✓ Quick and tool-free installation of surge protective devices, thanks to Push-in connection technology
- ✓ The signal is not influenced during maintenance work, thanks to the impedance-neutral insertion and removal of protective plugs
- ✓ Error-free replacement of protective plugs, thanks to coding
- ✓ Signal circuits easily interrupted for maintenance work, thanks to vertical knife disconnection
- ✓ Safe behavior in the event of overload, thanks to the integrated disconnect device
- ✓ Grounded or insulated shield grounding, thanks to the third terminal point on the surge protective device
- ✓ Simple testing and documentation with CHECKMASTER 2, thanks to pluggable protective modules



Key Commercial Data

Packing unit	1 STK
GTIN	
GTIN	4055626135465
Custom tariff number	85363010
Country of origin	Germany

Technical data

Dimensions

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Technical data

Dimensions

Height	105.8 mm
Width	6.2 mm +0.1 mm
Depth	100 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 light gray RAL 7035
Mounting type	DIN rail: TH 35 - 7.5 mm
Type	DIN rail module, two-section, divisible
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 (56 °C)
Operating effective current I_C at U_C	≤ 5 μA
Residual current I_{PE}	≤ 1 μA
Nominal discharge current I_n (8/20) μs (Core-Core)	5 kA
Nominal discharge current I_n (8/20) μs (core-earth)	5 kA
Nominal discharge current I_n (8/20) μs (core-GND)	5 kA
Pulse discharge current I_{imp} (10/350) μs (core-core)	0.5 kA
Pulse discharge current I_{imp} (10/350) μs (core-ground)	0.5 kA
Pulse discharge current I_{imp} (10/350) μs (core-GND)	0.5 kA
Total discharge current I_{total} (8/20) μs	10 kA
Voltage protection level U_p (core-core)	≤ 200 V (C1 - 1 kV/500 A)
	≤ 320 V (C2 - 10 kV / 5 kA)

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Technical data

Protective circuit

	≤ 50 V (C3 - 25 A)
	≤ 55 V (C3 - 100 A)
Voltage protection level U_p (core-ground)	≤ 900 V (C1 - 1 kV/500 A)
	≤ 1.05 kV (C2 - 10 kV / 5 kA)
	≤ 1.3 kV (C3 - 25 A)
	≤ 1.4 kV (C3 - 100 A)
Voltage protection level U_p (core-GND)	≤ 750 V (C1 - 1 kV/500 A)
	≤ 750 V (C2 - 10 kV / 5 kA)
	≤ 700 V (C3 - 25 A)
	≤ 750 V (C3 - 100 A)
Voltage protection level U_p static (core-core)	≤ 50 V (C1 - 1 kV/500 A)
	≤ 120 V (C2 - 10 kV / 5 kA)
Voltage protection level U_p static (core-ground)	≤ 900 V (C1 - 1 kV/500 A)
	≤ 1.05 kV (C2 - 10 kV / 5 kA)
Voltage protection level U_p static (core-GND)	≤ 750 V (C1 - 1 kV/500 A)
	≤ 750 V (C2 - 10 kV / 5 kA)
Response time t_A (core-core)	≤ 1 ns
Response time t_A (core-earth)	≤ 100 ns
	≤ 100 ns
Input attenuation a_E , sym.	typ. 0.3 dB (≤ 250 kHz / 150 Ω)
Cut-off frequency f_g (3 dB), sym. in 150 Ohm system	typ. 940 kHz
Capacity (core-core)	typ. 2.2 nF
Resistance in series	1.65 Ω ±20 %
Surge protection fault message	optical
Max. required back-up fuse	630 mA (FF)
Impulse durability (conductor-conductor)	C1 - 1 kV/500 A
	C2 - 10 kV/5 kA
	C3 - 100 A
Impulse durability (conductor-ground)	C1 - 1 kV/500 A
	C2 - 10 kV/5 kA
	C3 - 100 A
	D1 - 500 A
Impulse durability (conductor-GND)	C1 - 1 kV/500 A
	C2 - 10 kV/5 kA
	C3 - 100 A
	D1 - 500 A
Pulse reset time (conductor-conductor)	≤ 700 ms

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Technical data

Protective circuit

Pulse reset time (conductor-ground)	≤ 30 ms
Pulse reset time (conductor-GND)	≤ 1500 ms

Additional technical data

Max. total discharge current $I_{total\ max}$ (8/20) μ s	20 kA (1x)
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Connection data

Connection method	Push-in connection
Stripping length	8 mm
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

Standards and Regulations

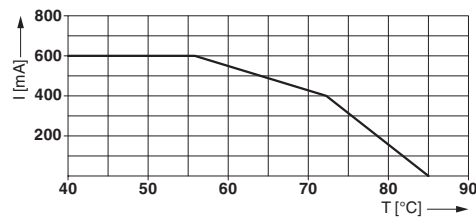
Standards/specifications	IEC 61643-21 2000 + corrigendum 2001 + A1:2008, modified + A2:2012
	EN 61643-21 2001 + A1:2009 + A2:2013

Drawings

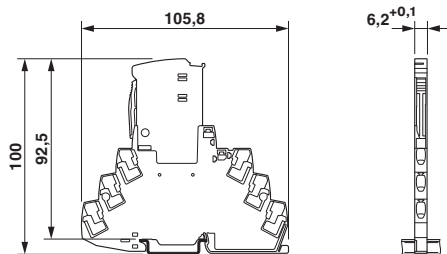
Pictogram



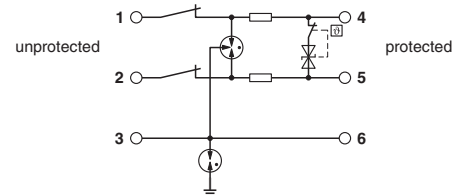
Diagram



Dimensional drawing



Circuit diagram



Classifications

eCl@ss

eCl@ss 4.0	27140201
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Classifications

eCl@ss

eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130807
eCl@ss 7.0	27130807
eCl@ss 8.0	27130807
eCl@ss 9.0	27130807

ETIM

ETIM 2.0	EC000943
ETIM 3.0	EC000943
ETIM 4.0	EC000943
ETIM 5.0	EC000943
ETIM 6.0	EC000943

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

Approvals

Approvals

Approvals

UL Listed / CSA / CSAus / DNV GL / cCSAus

Ex Approvals

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 138168
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Approvals

CSA		http://www.csagroup.org/services-industries/product-listing/	70136717
CSAus		http://www.csagroup.org/services-industries/product-listing/	70136717
DNV GL		http://exchange.dnv.com/tari/	TAE000027G
cCSAus		http://www.csagroup.org/services-industries/product-listing/	

Accessories

Accessories

Labeled terminal marker

Zack Marker strip, flat - ZBF 6 CUS - 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

Zack Marker strip, flat - ZBF 6,QR:FORTL.ZAHLEN - 0808765



Zack Marker strip, flat, Strip, white, labeled, Printed vertically: Consecutive numbers 1 - 10, 11 - 20, etc. up to 91 - 100, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm

Marker pen

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Accessories

Marker pen - X-PEN 0,35 - 0811228



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

Terminal marking

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



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm

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



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm

Additional products

Remote signaling set - TTC-6-FMRS-PT - 2907811



Module set for floating remote signaling of neighboring surge protective devices from the TERMITRAB complete product range.

Shield connection - SSA 3-6 - 2839295



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

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Accessories

Shield connection - SSA 5-10 - 2839512



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