

Surge protection device - TTC-6P-1X2-M-EX-24DC-UT-I - 2906824

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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 Ex i signal circuit, e.g., 0(4) ... 20 mA current loop, HART-capable.

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
- ✓ 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
- ✓ Worldwide use in potentially explosive areas, thanks to ATEX and IECEx approvals
- ✓ Simple testing and documentation with CHECKMASTER 2, thanks to pluggable protective modules



Key Commercial Data

Packing unit	1 STK
GTIN	 4 055626 135861
GTIN	4055626135861
Weight per Piece (excluding packing)	41.190 g
Weight per piece (including packing)	63.000 g
Custom tariff number	85363010
Country of origin	Germany

Technical data

Dimensions

Height	105.8 mm
Width	6.2 mm +0.1 mm

Surge protection device - TTC-6P-1X2-M-EX-24DC-UT-I - 2906824

Technical data

Dimensions

Depth	100 mm (incl. DIN rail 7.5 mm)
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Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m (amsl (above mean sea level))
Degree of protection	IP20

General

Housing material	PBT
Flammability rating according to UL 94	V-0
Color	sky blue RAL 5015
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 (40 °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
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
Total discharge current I_{total} (8/20) μs	10 kA
Voltage protection level U_p (core-core)	≤ 55 V (C1 - 1 kV/500 A)
	≤ 65 V (C2 - 10 kV / 5 kA)
	≤ 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)
	≤ 1.4 kV (C3 - 100 A)
Voltage protection level U_p static (core-core)	≤ 50 V (C1 - 1 kV/500 A)
	≤ 65 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)

Surge protection device - TTC-6P-1X2-M-EX-24DC-UT-I - 2906824

Technical data

Protective circuit

Response time tA (core-core)	≤ 1 ns
Response time tA (core-earth)	≤ 100 ns
Input attenuation aE, sym.	typ. 0.3 dB (≤ 250 kHz / 150 Ω)
Cut-off frequency fg (3 dB), sym. in 150 Ohm system	typ. 940 kHz
Capacity (core-core)	typ. 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
Pulse reset time (conductor-conductor)	≤ 700 ms
Pulse reset time (conductor-ground)	≤ 30 ms

Additional technical data

Max. total discharge current I _{total max} (8/20) μs	20 kA (1x)
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Connection data

Connection method	Screw connection
Screw thread	M3
Tightening torque	0.5 Nm ... 0.6 Nm
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	EN 60079-0 2012 + A11:2013 EN 60079-11 2012 EN 61643-21 2001 + A1:2009 + A2:2013 IEC 60079-0 2011 (modified) + corrigendum 2012 + corrigendum 2013 IEC 60079-11 2008 IEC 61643-21 2000 + corrigendum 2001 + A1:2008, modified + A2:2012
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General

Maximum inner capacitance C _i	negligible
Max. internal inductance L _i	negligible
Max. input current I _i	400 mA (T4 / ≤ 50 °C) 350 mA (T6 / ≤ 35 °C)

Surge protection device - TTC-6P-1X2-M-EX-24DC-UT-I - 2906824

Technical data

General

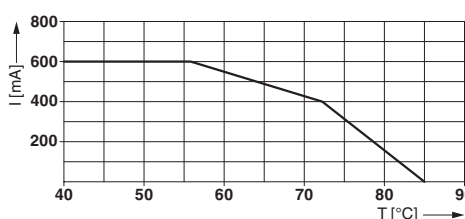
max. input voltage U_i	30 V DC
Insulation voltage to ground	> 180 V DC
Ambient temperature (operation)	-40 °C ... 35 °C (T6 / 85 °C)
	-40 °C ... 50 °C (T4 / 135 °C)

Drawings

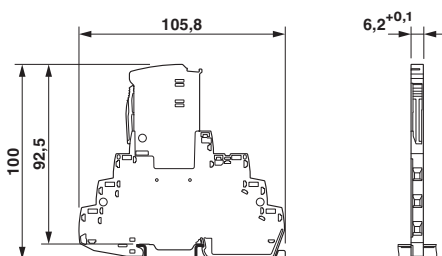
Pictogram



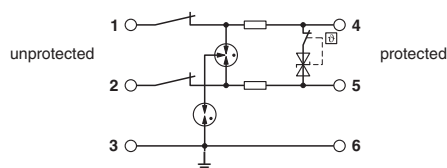
Diagram



Dimensional drawing



Circuit diagram



Classifications

eCl@ss

eCl@ss 4.0	27140201
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 3.0	EC000943
ETIM 4.0	EC000943
ETIM 5.0	EC000943
ETIM 6.0	EC000943

Surge protection device - TTC-6P-1X2-M-EX-24DC-UT-I - 2906824

Classifications

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

IECEx / ATEX / UL Listed / cUL Listed / cULus Listed

Approval details

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

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Labeled terminal marker

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Accessories

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

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

Surge protection device - TTC-6P-1X2-M-EX-24DC-UT-I - 2906824

Accessories

Remote signaling set - TTC-6-FMRS-UT - 2907810



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

Shield connection - SSA 5-10 - 2839512



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

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