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PHŒNIX CONTACT

Surge protection device - TTC-6-1X2-M-24DC-UT-I - 2906713

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Surge protection with integrated status indicator and knife disconnection for a 2-wire floating signal circuit, e.g., 0(4) ... 20 mA current loop.

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

☑ 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

RoHS | 600 mA IEC | 24 V IEC | 2,5 mm² | IP20 | SIL evaluated IEC 61508 | H D W

Key Commercial Data

Packing unit	1 STK
GTIN	
GTIN	4055626134376

Technical data

Dimensions

Height	105.8 mm
Width	6.2 mm +0.1 mm
Depth	83.5 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

Surge protection device - TTC-6-1X2-M-24DC-UT-I - 2906713

Technical data

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
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 µA
Residual current I_{PE}	$\leq$ 1 µA
Nominal discharge current I_n (8/20) µs (line-line)	5 kA
Nominal discharge current I_n (8/20) µs (line-earth)	5 kA
Pulse discharge current I_{imp} (10/350) µs (line-line)	0.5 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-line)	$\leq$ 55 V (C1 - 1 kV/500 A)
	$\leq$ 65 V (C2 - 10 kV / 5 kA)
	$\leq$ 50 V (C3 - 25 A)
	$\leq$ 55 V (C3 - 100 A)
Voltage protection level U_p (line-earth)	$\leq$ 750 V (C1 - 1 kV/500 A)
	$\leq$ 750 V (C2 - 10 kV / 5 kA)
	$\leq$ 700 V (C3 - 25 A)
	$\leq$ 750 V (C3 - 100 A)
Voltage protection level U_p static (line-line)	$\leq$ 50 V (C1 - 1 kV/500 A)
	$\leq$ 65 V (C2 - 10 kV / 5 kA)
Voltage protection level U_p static (line-earth)	$\leq$ 750 V (C1 - 1 kV/500 A)
	$\leq$ 750 V (C2 - 10 kV / 5 kA)
Response time t_A (line-line)	$\leq$ 1 ns
Response time t_A (line-earth)	$\leq$ 100 ns
Input attenuation aE, sym.	typ. 0.3 dB ($\leq$ 250 kHz / 150 Ω)
Cut-off frequency fg (3 dB), sym. in 150 Ohm system	typ. 940 kHz
Capacity (line-line)	typ. 2.2 nF
Resistance in series	1.65 Ω ±20 %

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Technical data

Protective circuit

Surge protection fault message	optical
Max. required back-up fuse	630 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 - 500 A
Pulse reset time (line-line)	≤ 700 ms
Pulse reset time (line-earth)	≤ 1500 ms

Additional technical data

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

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 mm² ... 2.5 mm²
Conductor cross section solid	0.2 mm² ... 4 mm²
Conductor cross section AWG	24 ... 12

Standards and Regulations

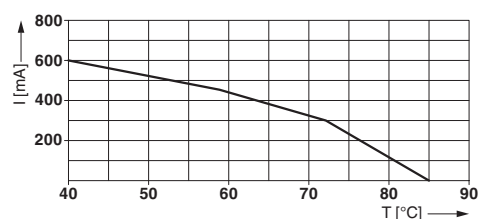|	
Standards/specifications	IEC 61643-21 2000 + corrigendum 2001 + A1:2008, modified + A2:2012
	EN 61643-21 2001 + A1:2009 + A2:2013

Environmental Product Compliance

REACh SVHC	Lead 7439-92-1

Drawings

Pictogram

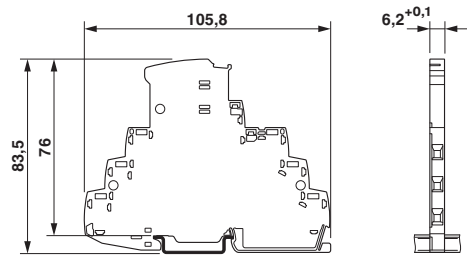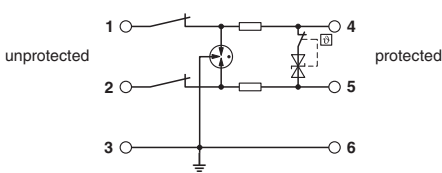Diagram

Surge protection device - TTC-6-1X2-M-24DC-UT-I - 2906713

Dimensional drawing

Circuit diagram

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
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/	

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