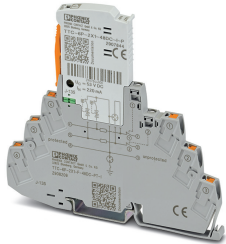


Surge protection device - TTC-6P-2X1-F-48DC-PT-I - 2908209

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Surge protection, consisting of protective plug and base element, with integrated status indicator for two signal wires with common reference potential, e.g., Digital IN/OUT. Indirect grounding via gas-filled surge arrester.

Your advantages

- ✓ Space-saving and cost-saving with a narrow overall width of just 6 mm
- ✓ Continuous monitoring of protective devices, plus mechanical status indicator with optional remote signaling
- ✓ Finding the right product for all possible requirements in MCR applications is easy, thanks to the complete range of products with customized features
- ✓ Easy testing and documentation with CHECKMASTER 2 with pluggable protective modules
- ✓ The signal is not influenced during maintenance work, thanks to the impedance-neutral insertion and removal of protective plugs



Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 282923
GTIN	4055626282923
Weight per Piece (excluding packing)	40.000 g
Custom tariff number	85363010
Country of origin	Germany

Technical data

Dimensions

Height	105.8 mm
Width	6.2 mm +0.1 mm
Depth	100 mm (incl. DIN rail 7.5 mm)

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Technical data

Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 %
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 grey 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	48 V DC
Maximum continuous voltage U_C	53 V DC 30 V AC
Rated current	220 mA DC (75 °C) 600 mA AC (56 °C)
Operating effective current I_C at U_C	≤ 5 μ A
Residual current I_{PE}	≤ 1 μ A
Nominal discharge current I_n (8/20) μ s (line-earth)	5 kA
Nominal discharge current I_n (8/20) μ s (line-signal ground)	5 kA
Pulse discharge current I_{imp} (10/350) μ s (line-earth)	0.5 kA
Pulse discharge current I_{imp} (10/350) μ s (line-signalground)	0.5 kA
Total discharge current I_{total} (8/20) μ s	10 kA
Voltage protection level U_p (line-earth)	≤ 750 V (C1 - 1 kV / 500 A) ≤ 750 V (C2 - 10 kV / 5 kA) ≤ 800 V (C3 - 25 A) ≤ 1.1 kV (C3 - 50 A)
Voltage protection level U_p (line-signalground)	≤ 110 V (C1 - 1 kV / 500 A)

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Technical data

Protective circuit

	≤ 150 V (C2 - 10 kV / 5 kA)
	≤ 80 V (C3 - 25 A)
	≤ 90 V (C3 - 50 A)
Voltage protection level U_p static (line-earth)	≤ 750 V (C1 - 1 kV / 500 A)
	≤ 750 V (C2 - 10 kV / 5 kA)
Voltage protection level U_p static (line-signalground)	≤ 105 V (C1 - 1 kV / 500 A)
	≤ 150 V (C2 - 10 kV / 5 kA)
Response time t_A (line-signalground)	≤ 1 ns
Response time t_A (line-earth)	≤ 100 ns
Input attenuation aE, asym.	typ. 0.3 dB (≤ 480 kHz / 150 Ω)
Cut-off frequency f_g (3 dB), asym. (signal ground) in 150 Ω system	typ. 1.7 MHz
Capacity (line-signalground)	typ. 5 pF
Capacity (line-earth)	typ. 1.2 nF
Resistance per path	1.65 Ω ±20 %
Surge protection fault message	optical
Max. required back-up fuse	160 mA DC (FF)
	630 mA AC (FF)
Impulse durability (line-earth)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C3 - 57 A
	D1 - 500 A
Impulse durability (line-signalground)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C3 - 57 A
	D1 - 500 A
Pulse reset time (line-earth)	≤ 30 ms
Pulse reset time (line-signalground)	≤ 600 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	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

Surge protection device - TTC-6P-2X1-F-48DC-PT-I - 2908209

Technical data

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

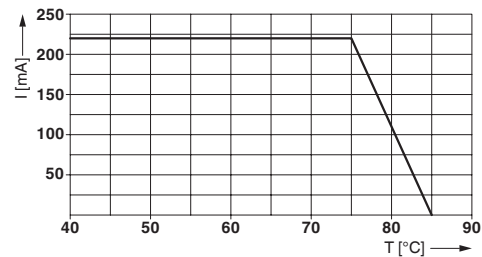
REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Pictogram

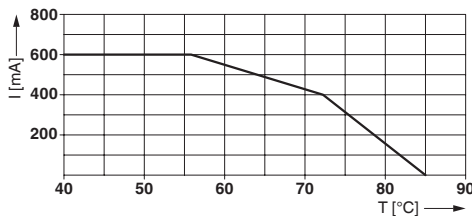


Diagram



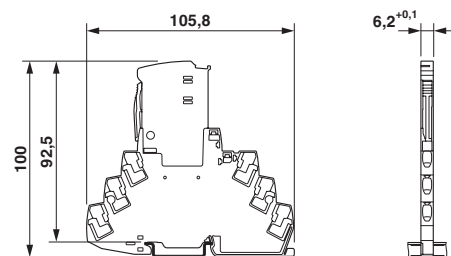
Derating curve at 55.2 V DC

Diagram

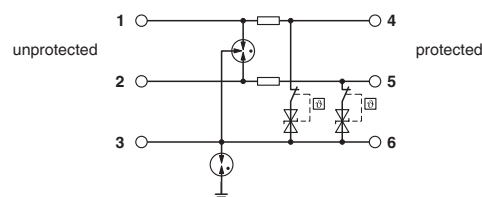


Derating curve at 30 V AC

Dimensional drawing



Circuit diagram



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Classifications

eCl@ss

eCl@ss 10.0.1	27130807
eCl@ss 11.0	27130807
eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130800
eCl@ss 7.0	27130807
eCl@ss 9.0	27130807

ETIM

ETIM 3.0	EC000943
ETIM 4.0	EC000943
ETIM 6.0	EC000943
ETIM 7.0	EC000943

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620
UNSPSC 18.0	39121620
UNSPSC 19.0	39121620
UNSPSC 20.0	39121620
UNSPSC 21.0	39121620

Approvals

Approvals

Approvals

DNV GL / CSA / UL Listed / CSAus / cCSAus

Ex Approvals

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Approvals

Approval details

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

Accessories

Accessories

End block

End clamp - CLIPFIX 35-5 - 3022276



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, with parking option for FBS...5, FBS...6, KSS 5, KSS 6, width: 5.15 mm, color: gray

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, Number of individual labels: 10

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, Number of individual labels: 10

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: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap in, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

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



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap in, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 1000

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Accessories

Additional products

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



Module set for the optical monitoring and floating remote signaling of adjacent surge protective devices in the TERMITRAB complete or CLIXTRAB product family. Suitable for directly grounded DIN rails.

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

Spare parts

Surge protection plug - TTC-6P-2X1-48DC-I-P - 2907844



Surge protection plug with integrated status indicator on the module for two signal wires with a common reference potential. Nominal voltage: 48 V DC
