

## Surge protection device - TTC-6P-2X1-F-M-24DC-PT-I - 2906794

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Surge protection, consisting of protective plug and base element, with integrated status indicator and disconnect knife 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	
GTIN	4055626135496
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)

# Surge protection device - TTC-6P-2X1-F-M-24DC-PT-I - 2906794

## 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 $U_N$	24 V DC
Maximum continuous voltage $U_C$	30 V DC 21 V AC
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 (line-earth)	5 kA
Nominal discharge current $I_n$ (8/20) μs (line-signal ground)	5 kA
Pulse discharge current $I_{imp}$ (10/350) μs (line-earth)	0.5 kA
Pulse discharge current $I_{imp}$ (10/350) μs (line-signalground)	0.5 kA
Total discharge current $I_{total}$ (8/20) μs	10 kA
Voltage protection level $U_p$ (line-earth)	≤ 750 V (C1 - 1 kV/500 A) ≤ 800 V (C2 - 10 kV / 5 kA) ≤ 1.1 kV (C3 - 25 A) ≤ 1.15 kV (C3 - 100 A)
Voltage protection level $U_p$ (line-signalground)	≤ 140 V (C1 - 1 kV/500 A) ≤ 190 V (C2 - 10 kV / 5 kA)

## Surge protection device - TTC-6P-2X1-F-M-24DC-PT-I - 2906794

### Technical data

#### Protective circuit

	≤ 45 V (C3 - 25 A)
	≤ 50 V (C3 - 100 A)
Voltage protection level $U_p$ static (line-earth)	≤ 750 V (C1 - 1 kV/500 A)
	≤ 800 V (C2 - 10 kV / 5 kA)
Voltage protection level $U_p$ static (line-signalground)	≤ 55 V (C1 - 1 kV/500 A)
	≤ 120 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 (≤ 270 kHz/150 Ω)
Cut-off frequency $f_g$ (3 dB), asym. (signal ground) in 150 Ω system	typ. 960 kHz
Capacity (line-signalground)	typ. 2.2 nF
Resistance per path	1.65 Ω ±20 %
Surge protection fault message	optical
Max. required back-up fuse	630 mA (FF)
Impulse durability (line-earth)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C3 - 100 A
	D1 - 500 A
Impulse durability (line-signalground)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C3 - 100 A
	D1 - 500 A
Pulse reset time (line-earth)	≤ 30 ms
Pulse reset time (line-signalground)	≤ 300 ms

#### Additional technical data

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

#### Connection data

Connection method	Push-in connection
Stripping length	8 mm
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section solid	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
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

# Surge protection device - TTC-6P-2X1-F-M-24DC-PT-I - 2906794

## Technical data

### Environmental Product Compliance

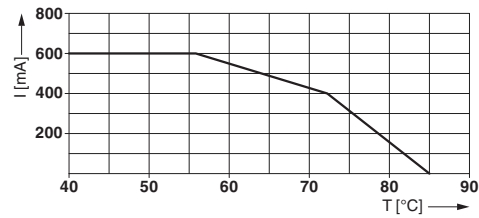
REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

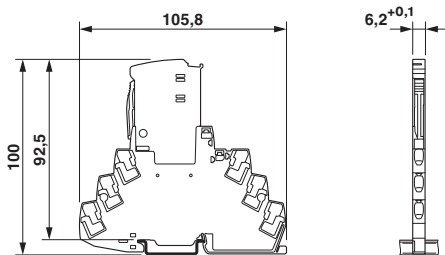
### Pictogram



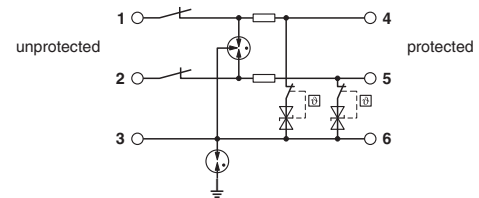
### Diagram



### Dimensional drawing

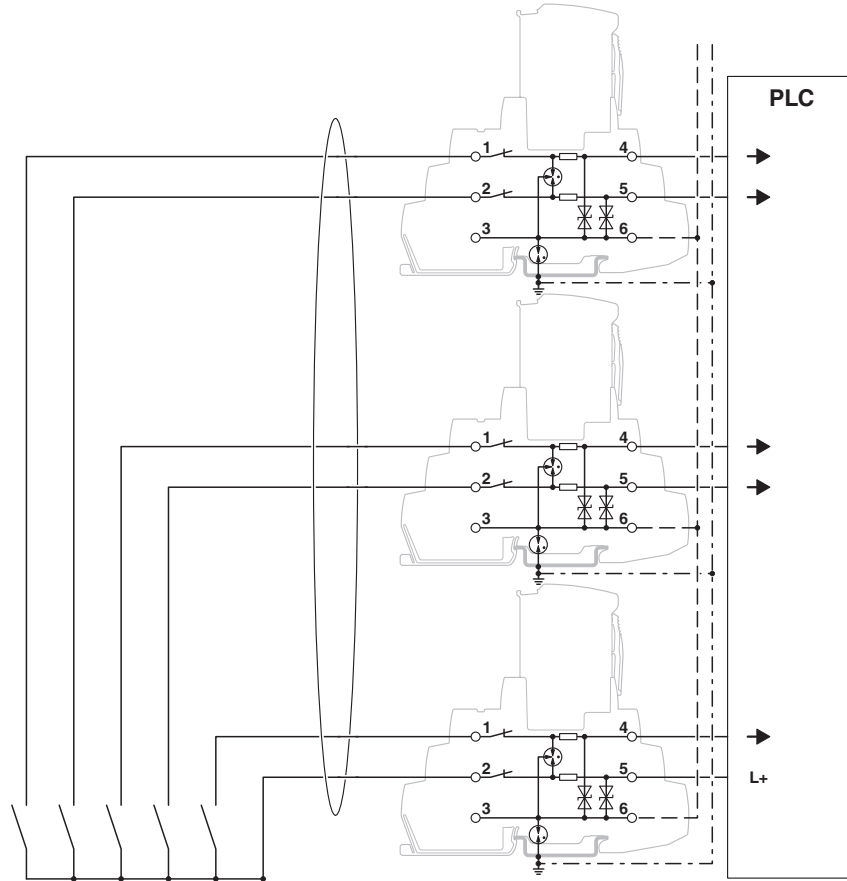


### Circuit diagram



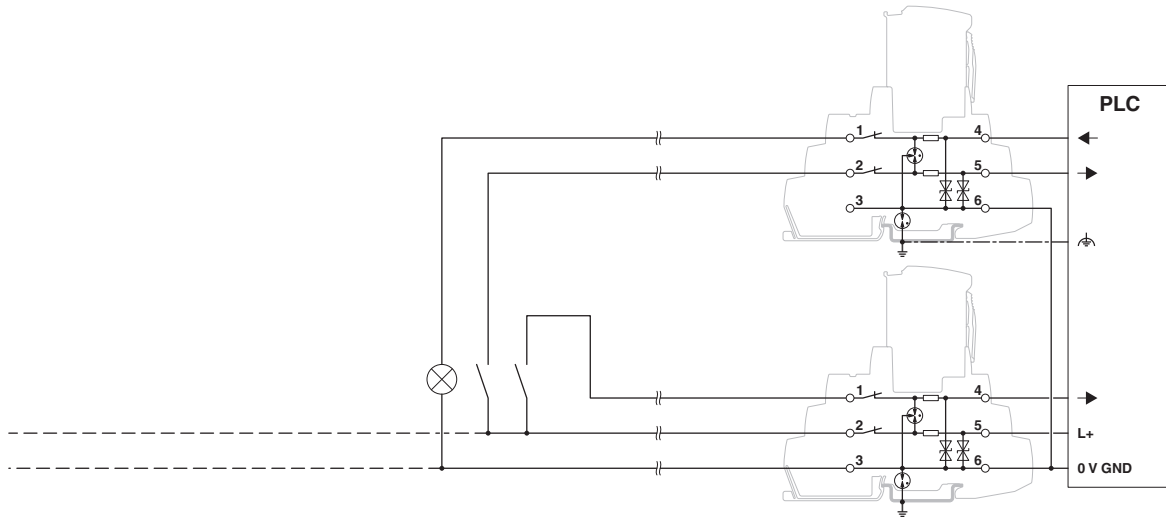
# Surge protection device - TTC-6P-2X1-F-M-24DC-PT-I - 2906794

Application drawing



# Surge protection device - TTC-6P-2X1-F-M-24DC-PT-I - 2906794

Application drawing



## 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 2.0	EC000943
ETIM 3.0	EC000943
ETIM 4.0	EC000943
ETIM 6.0	EC000943
ETIM 7.0	EC000943

### UNSPSC

UNSPSC 6.01	30212010
-------------	----------

# Surge protection device - TTC-6P-2X1-F-M-24DC-PT-I - 2906794

## Classifications

### UNSPSC

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

### Approval details

DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAE000027G
--------	--	---	------------

CSA		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	70136717
-----	--	---	----------

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 138168
-----------	--	---	---------------

CSAus		<a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>	70136717
-------	--	---	----------

## Surge protection device - TTC-6P-2X1-F-M-24DC-PT-I - 2906794

### Approvals

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

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

## Surge protection device - TTC-6P-2X1-F-M-24DC-PT-I - 2906794

### 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: PLOTMARK, CMS-P1-PLOTTER, 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/WH-100:UNBEDRUCKT - 0808736



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, 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

---

### 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 mm<sup>2</sup>, color: black

## Surge protection device - TTC-6P-2X1-F-M-24DC-PT-I - 2906794

### Accessories

---

Shield connection - SSA 5-10 - 2839512



Shield fast connection for 5 ... 10 mm cable diameter. Potential connecting cable: 200 mm, 1 mm<sup>2</sup>, color: black

---

### Spare parts

Surge protection plug - TTC-6P-2X1-24DC-I-P - 2907843



Surge protection plug with integrated status indicator on the module for two signal wires with a common reference potential. Nominal voltage: 24 V DC

---

---