

# TTC-6-3-HF-F-24AC-PT-I - Surge protection device



1088786

<https://www.phoenixcontact.com/us/products/1088786>

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Surge protection with integrated status indicator for three signal wires with common reference potential. For HF applications and telecommunications interfaces without supply voltage (up to 90 Mbps). Indirect grounding via gas discharge tube.

## 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

## Commercial data

Item number	1088786
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL23
Product key	CL2262
GTIN	4055626891712
Weight per piece (including packing)	38.2 g
Weight per piece (excluding packing)	37 g
Customs tariff number	85363010
Country of origin	DE

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## Technical data

### Product properties

IEC test classification	C1
	C2
	C3
	D1
Type	DIN rail module, one-piece
Product type	Surge protection for information technology
Product family	TERMITRAB complete

### Insulation characteristics

Overvoltage category	III
Pollution degree	2

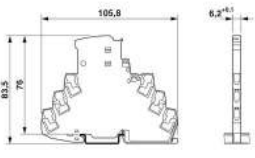
### Electrical properties

Nominal voltage $U_N$	24 V AC
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### Connection data

Connection method	Push-in connection
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section rigid	0.2 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Conductor cross section AWG	24 ... 12

### Dimensions

Dimensional drawing	
Width	6.2 mm +0.1 mm
Height	105.8 mm
Depth	83.5 mm (incl. DIN rail 7.5 mm)

### Material specifications

Flammability rating according to UL 94	V-0
Insulating material	PBT
Housing material	PBT

### Mechanical properties

#### Mechanical data

Open side panel	No
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## Protective circuit

Direction of action	Line-Line & Line-Signal Ground/Shield & optional Signal Ground/Shield-Earth Ground
Maximum continuous voltage $U_C$	43 V DC
	30 V AC
Rated current	600 mA (40 °C)
Residual current $I_{PE}$	$\leq 1 \mu\text{A}$
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$	10 kA
Pulse discharge current $I_{imp}$ (10/350) $\mu\text{s}$	2.5 kA
Total discharge current $I_{total}$ (8/20) $\mu\text{s}$	10 kA
Voltage protection level $U_p$ (line-line)	$\leq 80 \text{ V}$ (C1 - 1 kV / 500 A)
	$\leq 80 \text{ V}$ (C1 - 1 kV / 500 A, $>1 \mu\text{s}$ )
	$\leq 150 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 70 \text{ V}$ (C2 - 10 kV / 5 kA, $>1 \mu\text{s}$ )
	$\leq 75 \text{ V}$ (C3 - 100 A)
	$\leq 75 \text{ V}$ (C3 - 100 A, $>1 \mu\text{s}$ )
Voltage protection level $U_p$ (line-earth)	$\leq 900 \text{ V}$ (C1 - 1 kV / 500 A)
	$\leq 100 \text{ V}$ (C1 - 1 kV / 500 A, $>1 \mu\text{s}$ )
	$\leq 1 \text{ kV}$ (C2 - 10 kV / 5 kA)
	$\leq 70 \text{ V}$ (C2 - 10 kV / 5 kA, $>1 \mu\text{s}$ )
	$\leq 1200 \text{ V}$ (C3 - 100 A)
	$\leq 70 \text{ V}$ (C3 - 100 A, $>1 \mu\text{s}$ )
Voltage protection level $U_p$ (line-signalground)	$\leq 90 \text{ V}$ (C1 - 1 kV / 500 A)
	$\leq 90 \text{ V}$ (C1 - 1 kV / 500 A, $>1 \mu\text{s}$ )
	$\leq 170 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 70 \text{ V}$ (C2 - 10 kV / 5 kA, $>1 \mu\text{s}$ )
	$\leq 75 \text{ V}$ (C3 - 70 A)
	$\leq 75 \text{ V}$ (C3 - 70 A, $>1 \mu\text{s}$ )
Response time $t_A$ (line-line)	$\leq 1 \text{ ms}$
Response time $t_A$ (line-earth)	$\leq 55 \text{ ms}$
Response time $t_A$ (line-signalground)	$\leq 1 \text{ ms}$
Input attenuation aE, sym.	typ. 0.3 dB ( $\leq 10 \text{ MHz}/150 \Omega$ )
Cut-off frequency $f_g$ (3 dB), sym. in 150 $\Omega$ system	typ. 60 MHz
Capacity (Core-Core)	typ. 25 pF
Capacity (Core-Earth)	typ. 50 pF
Capacity (line-signalground)	typ. 25 pF
Resistance per path	1.65 $\Omega \pm 20 \%$
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
	C2 - 10 kA
	C3 - 100 A

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Impulse durability (line-earth)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C2 - 10 kA
	C3 - 100 A
	D1 - 2.5 kA
Impulse durability (line-signalground)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C2 - 10 kA
	C3 - 70 A

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 4000 m (amsl)
Permissible humidity (operation)	5 % ... 95 % (non-condensing)

## Standards and regulations

Standards/specifications	IEC 61643-21
Note	2000 + A1:2008 + A2:2012

### EN 61643-21

Standards/specifications	EN 61643-21
Note	2001 + A1:2009 + A2:2013

## Mounting

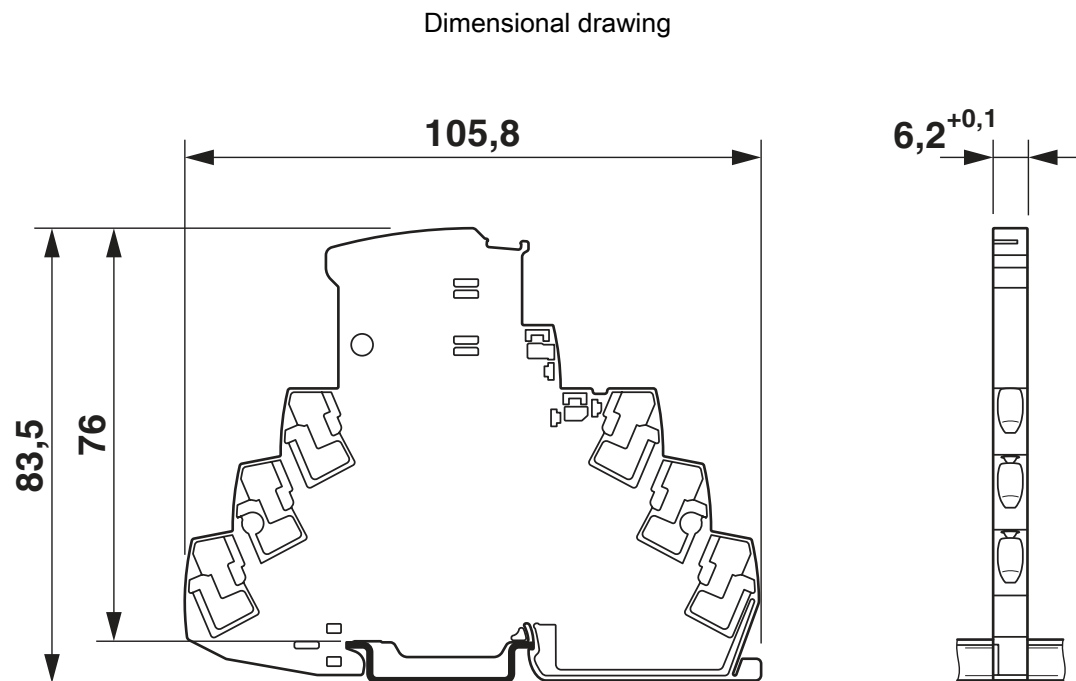
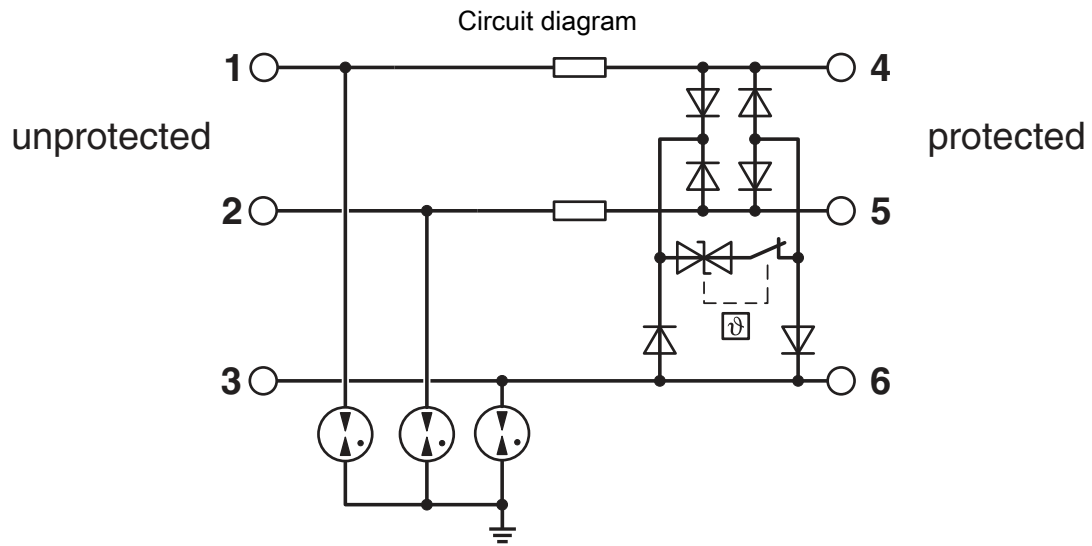
Mounting type	DIN rail: TH 35 - 7.5 mm
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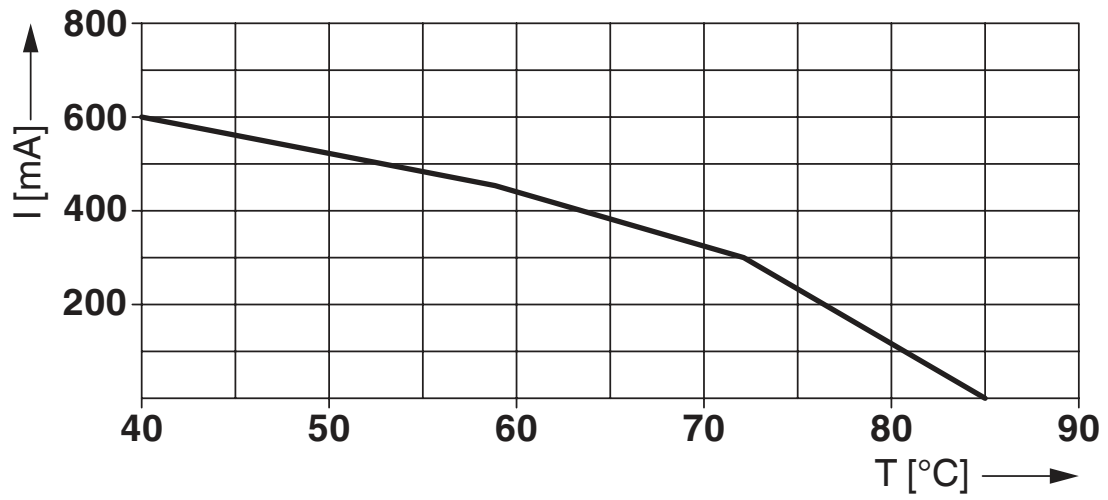
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## Drawings



Diagram



# TTC-6-3-HF-F-24AC-PT-I - Surge protection device



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## Classifications

### ECLASS

ECLASS-11.0	27130807
ECLASS-13.0	27171503

### ETIM

ETIM 8.0	EC000943
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### UNSPSC

UNSPSC 21.0	39121600
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## Environmental product compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"



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## Accessories

### ZBF 6 CUS - Zack Marker strip, flat

0825027

<https://www.phoenixcontact.com/us/products/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

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

0808710

<https://www.phoenixcontact.com/us/products/0808710>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

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

0808736

<https://www.phoenixcontact.com/us/products/0808736>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, 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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## ZBF 6,QR:FORTL.ZAHLEN - Zack Marker strip, flat

0808765

<https://www.phoenixcontact.com/us/products/0808765>



Zack Marker strip, flat, Strip, white, labeled, Printed vertically: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: snapped, for terminal block width: 6.2 mm, lettering field size: 5.15 x 6.15 mm, Number of individual labels: 10

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## CLIPFIX 35-5 - End clamp

3022276

<https://www.phoenixcontact.com/us/products/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

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

2907811

<https://www.phoenixcontact.com/us/products/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.

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## SSA 3-6 - Shield connection

2839295

<https://www.phoenixcontact.com/us/products/2839295>

Shield fast connection for 3 ... 6 mm cable diameter. Potential connecting cable:  
200 mm, 1 mm<sup>2</sup>, color: black



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## SSA 5-10 - Shield connection

2839512

<https://www.phoenixcontact.com/us/products/2839512>

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



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## X-PEN 0,35 - Marker pen

0811228

<https://www.phoenixcontact.com/us/products/0811228>



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

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