

# Surge protection device - TTC-6P-3-HF-F-M-12DC-PT-I - 2906796

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Surge protection, consisting of protective plug and base element, with integrated status indicator and knife disconnection for three signal wires with common reference potential. For HF applications and telecommunications interfaces without supply voltage. Indirect grounding via gas-filled surge arrester.

The figure shows the version with 24 V DC



## Key Commercial Data

Packing unit	1
GTIN	 4 055626 135519
GTIN	4055626135519

## Technical data

### Dimensions

Height	105.8 mm
	105.8 mm
Width	6.2 mm
Depth	100 mm

### Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Degree of protection	IP20

### General

Housing material	PBT
Flammability rating according to UL 94	V-0
Color	traffic grey A RAL 7042
	light gray RAL 7035
Mounting type	DIN rail: 35 mm

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## Technical data

### General

Design	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 $U_N$	12 V DC
Maximum continuous voltage $U_C$	15 V DC
Rated current	600 mA (56 °C)
Operating effective current $I_C$ at $U_C$	$\leq 100 \mu A$
Residual current $I_{PE}$	$\leq 1 \mu A$
Nominal discharge current $I_n$ (8/20) $\mu s$ (Core-Core)	5 kA
Nominal discharge current $I_n$ (8/20) $\mu s$ (core-earth)	5 kA
Nominal discharge current $I_n$ (8/20) $\mu s$ (core-GND)	5 kA
Pulse discharge current $I_{imp}$ (10/350) $\mu s$ (core-core)	0.5 kA
Pulse discharge current $I_{imp}$ (10/350) $\mu s$ (core-ground)	0.5 kA
Pulse discharge current $I_{imp}$ (10/350) $\mu s$ (core-GND)	0.5 kA
Total discharge current $I_{total}$ (8/20) $\mu s$	10 kA
Voltage protection level $U_p$ (core-core)	$\leq 145 V$ (C1 - 1 kV/500 A)
	$\leq 260 V$ (C2 - 10 kV / 5 kA)
	$\leq 25 V$ (C3 - 25 A)
	$\leq 30 V$ (C3 - 100 A)
Voltage protection level $U_p$ (core-ground)	$\leq 750 V$ (C1 - 1 kV/500 A)
	$\leq 750 V$ (C2 - 10 kV / 5 kA)
	$\leq 1.1 kV$ (C3 - 25 A)
	$\leq 1.2 kV$ (C3 - 100 A)
Voltage protection level $U_p$ (core-GND)	$\leq 80 V$ (C1 - 1 kV/500 A)
	$\leq 95 V$ (C2 - 10 kV / 5 kA)
	$\leq 25 V$ (C3 - 25 A)
	$\leq 30 V$ (C3 - 100 A)
Voltage protection level $U_p$ static (core-core)	$\leq 40 V$ (C1 - 1 kV/500 A)
	$\leq 95 V$ (C2 - 10 kV / 5 kA)
Voltage protection level $U_p$ static (core-ground)	$\leq 40 V$ (C1 - 1 kV/500 A)
	$\leq 95 V$ (C2 - 10 kV / 5 kA)
Voltage protection level $U_p$ static (core-GND)	$\leq 750 V$ (C1 - 1 kV/500 A)
	$\leq 750 V$ (C2 - 10 kV / 5 kA)
Response time $t_A$ (core-core)	$\leq 1 ns$
Response time $t_A$ (core-earth)	$\leq 1 ns$

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## Technical data

### Protective circuit

	≤ 100 ns
Input attenuation aE, sym.	typ. 0.3 dB (≤ 8.7 MHz / 150 Ω)
Input attenuation aE, asym.	typ. 0.3 dB (≤ 10.5 MHz / 150 Ω)
Cut-off frequency fg (3 dB), sym. in 150 Ohm system	typ. 60 MHz
Cut-off frequency fg (3 dB), asym. (GND) in 150 Ohm system	typ. 60 MHz
Capacity (core-core)	typ. 32 pF
Capacity (Core-GND)	typ. 32 pF
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
Impulse durability (conductor-GND)	C1 - 1 kV/500 A C2 - 10 kV/5 kA C3 - 100 A D1 - 500 A
Pulse reset time (conductor-conductor)	≤ 30 ms
Pulse reset time (conductor-ground)	≤ 30 ms
Pulse reset time (conductor-GND)	≤ 30 ms

### Connection data

Connection method	Push-in connection
Connection method IN	Push-in connection
Connection method OUT	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

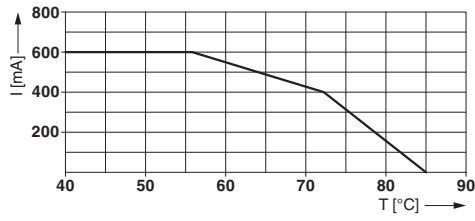
### Standards and Regulations

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

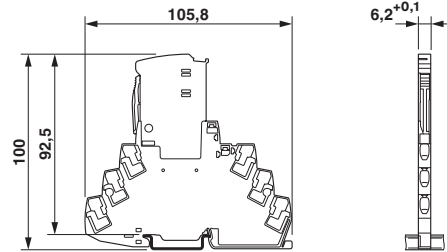
## Drawings

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Diagram



Dimensional drawing



Circuit diagram

