

# Surge protection device - TTC-6-2-HC-24DC-PT-I - 2908439


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Surge protection with integrated status indicator for a 2-wire floating signal circuit with high nominal current.



## Key Commercial Data

Packing unit	1
GTIN	 4 055626 300436
GTIN	4055626300436

## Technical data

### Dimensions

Height	105.8 mm
	105.8 mm
Width	6.2 mm
Depth	83.5 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
Mounting type	DIN rail: 35 mm
Design	Rail-mountable module, one-piece
Direction of action	Line-Line & Line-Signal Ground/Shield & optional Signal Ground/Shield-Earth Ground

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### 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	6 A (55 °C)
Operating effective current $I_C$ at $U_C$	$\leq 5 \mu\text{A}$
Residual current $I_{PE}$	$\leq 1 \mu\text{A}$
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (Core-Core)	0.5 kA
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (core-earth)	5 kA
Pulse discharge current $I_{imp}$ (10/350) $\mu\text{s}$ (core-ground)	0.5 kA
Total discharge current $I_{total}$ (8/20) $\mu\text{s}$	5 kA
Voltage protection level $U_p$ (core-core)	$\leq 50 \text{ V}$ (C1 - 1 kV/500 A)
	$\leq 45 \text{ V}$ (C3 - 25 A)
	$\leq 50 \text{ V}$ (C3 - 100 A)
Voltage protection level $U_p$ (core-ground)	$\leq 1.35 \text{ kV}$ (C1 - 1 kV/500 A)
	$\leq 1.45 \text{ kV}$ (C2 - 10 kV / 5 kA)
	$\leq 850 \text{ V}$ (C3 - 25 A)
	$\leq 1.1 \text{ kV}$ (C3 - 100 A)
Response time $t_A$ (core-core)	$\leq 1 \text{ ns}$
Response time $t_A$ (core-earth)	$\leq 100 \text{ ns}$
Input attenuation $a_E$ , sym.	typ. 0.3 dB ( $\leq 300 \text{ kHz} / 150 \Omega$ )
Cut-off frequency $f_g$ (3 dB), sym. in 150 Ohm system	typ. 1 MHz
Capacity (core-earth)	typ. 2.2 nF
Resistance in series	$\leq 100 \text{ m}\Omega$
Surge protection fault message	optical
Max. required back-up fuse	6.3 A (FF)
Impulse durability (conductor-conductor)	C1 - 1 kV/500 A
	C3 - 100 A
Impulse durability (conductor-ground)	C1 - 1 kV/500 A
	C2 - 10 kV/5 kA
	C3 - 100 A
	D1 - 500 A
Pulse reset time (conductor-ground)	$\leq 40 \text{ ms}$

### Connection data

Connection method	Push-in connection
Connection method IN	Push-in connection
Connection method OUT	Push-in connection
Stripping length	8 mm

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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

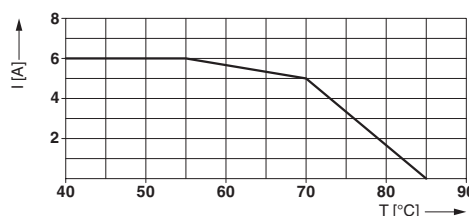
Standards/specifications	IEC 61643-21 2000 + corrigendum 2001 + A1:2008, modified + A2:2012
	EN 61643-21 2001 + A1:2009 + A2:2013

## Drawings

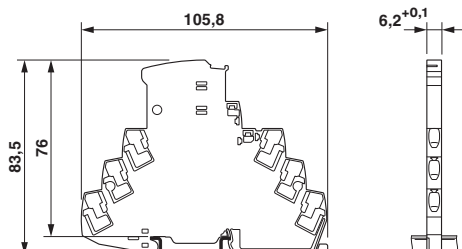
Pictogram



Diagram



Dimensional drawing



Circuit diagram

