


Surge protection device - TTC-6-1X2-24DC-PT - 2906804

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Surge protection for a 2-wire floating signal circuit, e.g., 0(4) ... 20 mA current loop.



Key Commercial Data

Packing unit	1
GTIN	 4 055626 135588
GTIN	4055626135588

Technical data

Dimensions

Height	105.8 mm
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Width	6.2 mm
Depth	69.5 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	600 mA (40 °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) μs (Core-Core)	5 kA
Nominal discharge current I_n (8/20) μs (core-earth)	5 kA
Pulse discharge current I_{imp} (10/350) μs (core-core)	0.5 kA
Pulse discharge current I_{imp} (10/350) μs (core-ground)	0.5 kA
Total discharge current I_{total} (8/20) μs	10 kA
Voltage protection level U_p (core-core)	$\leq 55 \text{ V}$ (C1 - 1 kV/500 A)
	$\leq 65 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 50 \text{ V}$ (C3 - 25 A)
	$\leq 55 \text{ V}$ (C3 - 100 A)
Voltage protection level U_p (core-ground)	$\leq 750 \text{ V}$ (C1 - 1 kV/500 A)
	$\leq 750 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 700 \text{ V}$ (C3 - 25 A)
	$\leq 750 \text{ V}$ (C3 - 100 A)
Voltage protection level U_p static (core-core)	$\leq 50 \text{ V}$ (C1 - 1 kV/500 A)
	$\leq 65 \text{ V}$ (C2 - 10 kV / 5 kA)
Voltage protection level U_p static (core-ground)	$\leq 750 \text{ V}$ (C1 - 1 kV/500 A)
	$\leq 750 \text{ V}$ (C2 - 10 kV / 5 kA)
Response time t_A (core-core)	$\leq 1 \text{ ns}$
Response time t_A (core-earth)	$\leq 100 \text{ ns}$
Input attenuation aE, sym.	typ. 0.3 dB ($\leq 250 \text{ kHz} / 150 \Omega$)
Cut-off frequency f_g (3 dB), sym. in 150 Ohm system	typ. 940 kHz
Capacity (core-core)	typ. 2.2 nF
Resistance in series	1.65 $\Omega \pm 20 \%$
Surge protection fault message	None
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

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Protective circuit

	D1 - 500 A
Pulse reset time (conductor-conductor)	≤ 700 ms
Pulse reset time (conductor-ground)	≤ 1500 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 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

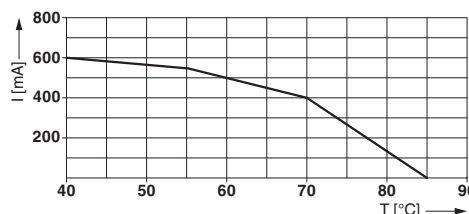
Standards/specifications	IEC 61643-21 2000 + corrigendum 2001 + A1:2008, modified + A2:2012
	EN 61643-21 2001 + A1:2009 + A2:2013

Drawings

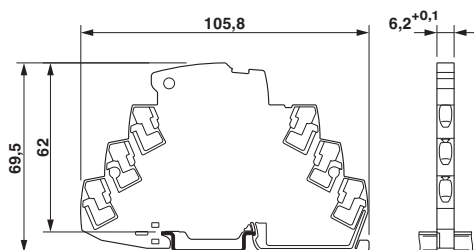
Pictogram



Diagram



Dimensional drawing



Circuit diagram

