

Surge protection device - TTC-6P-1X2-F-M-24DC-UT-I - 2906781

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Surge protection, consisting of protective plug and base element, with integrated status indicator and disconnect knife for a 2-wire floating signal circuit, e.g., 0(4) ... 20 mA current loop. Indirect grounding via gas-filled surge arrester.

Your advantages

- ✔ Space-saving installation due to the narrow overall width of 6.2 mm
- ✔ Signaling without additional auxiliary power, thanks to the mechanical status indicator
- ✔ Optional remote signaling module monitors up to 40 items, without additional wiring
- ✔ The signal is not influenced during maintenance work, thanks to the impedance-neutral insertion and removal of protective plugs
- ✔ Error-free replacement of protective plugs, thanks to coding
- ✔ Signal circuits easily interrupted for maintenance work, thanks to vertical knife disconnection
- ✔ Safe behavior in the event of overload, thanks to the integrated disconnect device
- ✔ Grounded or insulated shield grounding, thanks to the third terminal point on the surge protective device
- ✔ Simple testing and documentation with CHECKMASTER 2, thanks to pluggable protective modules



Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4055626135380
Weight per Piece (excluding packing)	47.100 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)

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Technical data

Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
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-line)	5 kA
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-line)	0.5 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-line)	≤ 200 V (C1 - 1 kV/500 A)
	≤ 320 V (C2 - 10 kV / 5 kA)
	≤ 50 V (C3 - 25 A)
	≤ 55 V (C3 - 100 A)
Voltage protection level U_p (line-earth)	≤ 900 V (C1 - 1 kV/500 A)
	≤ 1.05 kV (C2 - 10 kV / 5 kA)
	≤ 1.3 kV (C3 - 25 A)
	≤ 1.4 kV (C3 - 100 A)

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Protective circuit

Voltage protection level U_p (line-signalground)	≤ 750 V (C1 - 1 kV/500 A)
	≤ 750 V (C2 - 10 kV / 5 kA)
	≤ 700 V (C3 - 25 A)
	≤ 750 V (C3 - 100 A)
Voltage protection level U_p static (line-line)	≤ 50 V (C1 - 1 kV/500 A)
	≤ 120 V (C2 - 10 kV / 5 kA)
Voltage protection level U_p static (line-earth)	≤ 900 V (C1 - 1 kV/500 A)
	≤ 1.05 kV (C2 - 10 kV / 5 kA)
Voltage protection level U_p static (line-signalground)	≤ 750 V (C1 - 1 kV/500 A)
	≤ 750 V (C2 - 10 kV / 5 kA)
Response time t_A (line-line)	≤ 1 ns
Response time t_A (line-signalground)	≤ 100 ns
Response time t_A (line-earth)	≤ 100 ns
Input attenuation aE, sym.	typ. 0.3 dB (≤ 250 kHz / 150 Ω)
Cut-off frequency f_g (3 dB), sym. in 150 Ohm system	typ. 940 kHz
Capacity (line-line)	typ. 2.2 nF
Resistance per path	1.65 $\Omega \pm 20$ %
Max. required back-up fuse	630 mA (FF)
Impulse durability (line-line)	C1 - 1 kV / 500 A
	C2 - 10 kV / 5 kA
	C3 - 100 A
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-line)	≤ 700 ms
Pulse reset time (line-earth)	≤ 30 ms
Pulse reset time (line-signalground)	≤ 1500 ms

Additional technical data

Max. total discharge current $I_{total\ max}$ (8/20) μ s	20 kA (1x)
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Connection data

Connection method	Screw connection
Screw thread	M3
Tightening torque	0.5 Nm ... 0.6 Nm
Stripping length	8 mm

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Connection data

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

Environmental Product Compliance

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