TTC-6-3-HF-F-12DC-PT - Surge protection device

1109712

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Surge protection for three signal wires with common reference potential. For HF applications and telecommunications interfaces without supply voltage (up to 90 Mbps).

ELEKTROGERÄTE RÜCKNAHME

Commercial data

Item number	1109712
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL23
Product key	CL2262
GTIN	4063151022624
Weight per piece (including packing)	36.1 g
Weight per piece (excluding packing)	35.9 g
Customs tariff number	85363010
Country of origin	CN

Technical data

Product properties

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

Insulation characteristics

Overvoltage category	III
Pollution degree	2

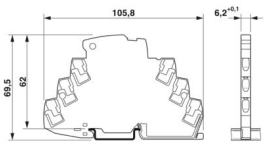
Electrical properties

Nominal voltage U_N	12 V DC

Connection data

Connection method	Push-in connection
Conductor cross-section flexible	0.2 mm² ... 2.5 mm²
Conductor cross-section rigid	0.2 mm² ... 4 mm²
Conductor cross-section AWG	24 ... 12

Dimensions

Dimensional drawing	
Width	6.2 mm +0.1 mm
Height	105.8 mm
Depth	69.5 mm (incl. DIN rail 7.5 mm)

Material specifications

Color	gray (RAL 7042)
Flammability rating according to UL 94	V-0
Insulating material	PBT
Housing material	PBT

Mechanical properties

Mechanical data

Open side panel	No

Protective circuit

Direction of action	Line-Line & Line-Signal Ground/Shield & optional Signal Ground/Shield-Earth Ground
Nominal voltage U_N	12 V DC
Maximum continuous operating voltage U_C	15 V DC
Rated current	600 mA (40 °C)
Operating effective current I_C at U_C	≤ 100 µA
Protective conductor 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-ground)	5 kA
Pulse discharge current I_{imp} (10/350) µs (line-earth)	0.5 kA
Total discharge current I_{Total} (8/20) µs	10 kA
Voltage protection level U_p (line-line)	≤ 45 V (C1 - 1 kV / 500 A)
	≤ 85 V (C2 - 10 kV / 5 kA)
	≤ 30 V (C3 - 100 A)
Voltage protection level U_p (line-earth)	≤ 800 V (C1 - 1 kV / 500 A)
	≤ 800 V (C2 - 10 kV / 5 kA)
	≤ 800 V (C3 - 100 A)
Response time t_A (line-line)	≤ 1 ns
Response time t_A (line-earth)	≤ 100 ns
Input attenuation aE, sym.	typ. 0.3 dB (≤ 12 MHz / 150 Ω)
Input attenuation aE, asym.	typ. 0.3 dB (≤ 20 MHz / 150 Ω)
Cut-off frequency fg (3 dB), sym. in 150 Ω system	typ. 60 MHz
Cut-off frequency fg (3 dB), asym. (PE) in 150 Ω system	typ. 60 MHz
Capacity (Core-Core)	typ. 32 pF
Capacity (Core-Earth)	typ. 32 pF
Resistance per path	1.65 Ω ±20 %
Surge protection fault message	none
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
Pulse reset time (line-line)	≤ 30 ms
Pulse reset time (line-earth)	≤ 30 ms

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	≤ 6000 m (amsl)
Permissible humidity (operation)	5 % ... 95 %

Standards and regulations

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

EN 61643-21

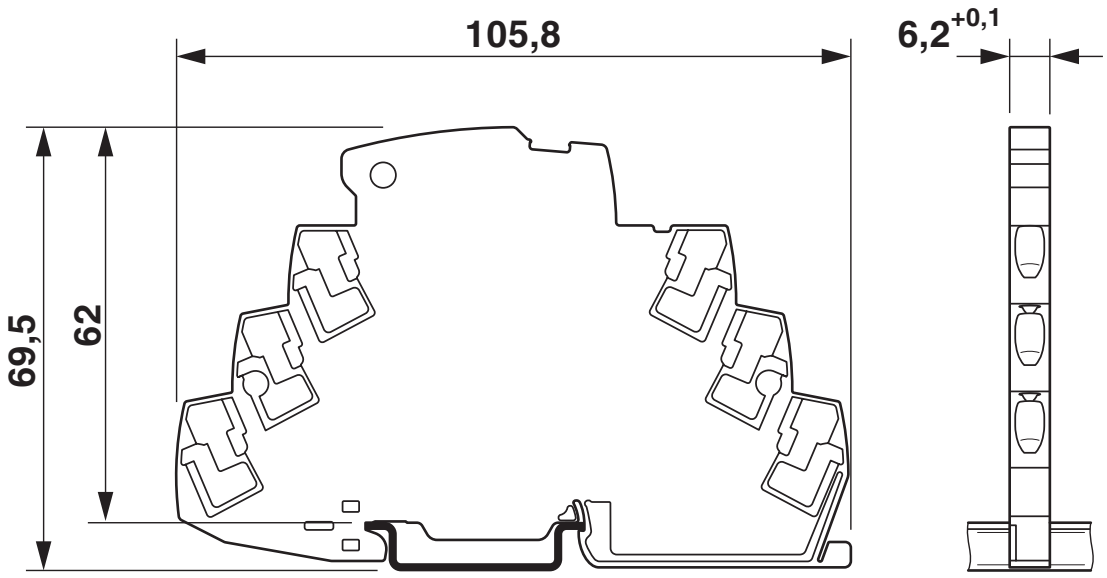
Standards/specifications	EN 61643-21
Note	2001 + A1:2009 + A2:2013

Mounting

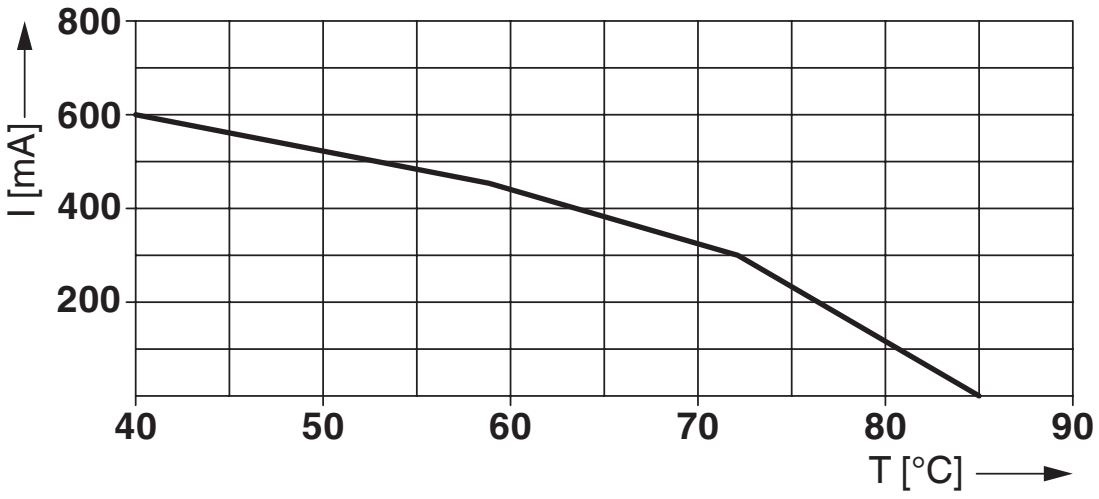
Mounting type	DIN rail: TH 35 - 7.5 mm

Drawings

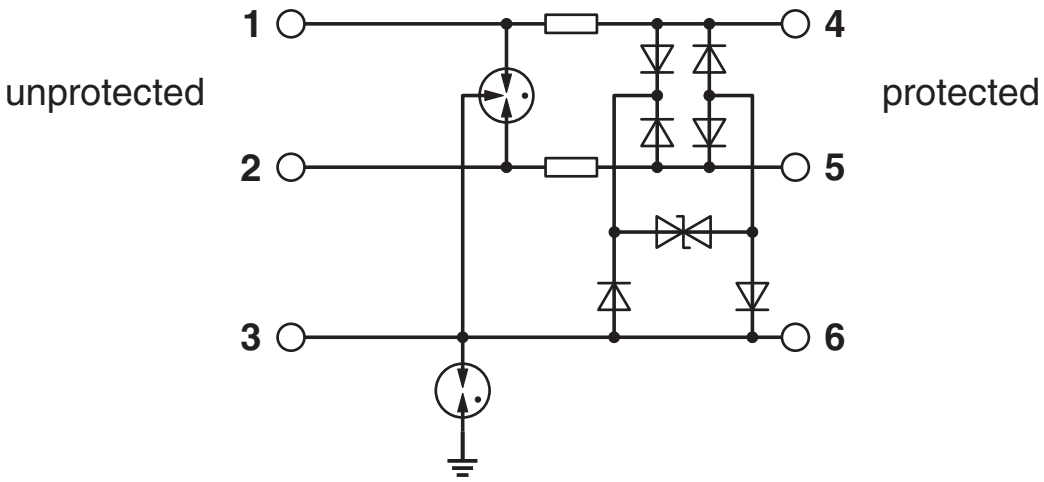
Dimensional drawing



Diagram



Circuit diagram



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1109712

DNV GL
Approval ID: TAE000027G

UL Listed
Approval ID: FILE E 138168

UAE-RoHS
Approval ID: 22-06-16191

UL Listed
Approval ID: FILE E 138168

Classifications

ECLASS

ECLASS-13.0	27171501
ECLASS-15.0	27171501

ETIM

ETIM 10.0	EC001466

UNSPSC

UNSPSC 21.0	39121600

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	093f240f-7e3c-4476-9b7a-97006b9c4333

EF3.1 Climate Change

CO2e kg	1.964 kg CO2e

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