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Surge protection device - LIT 2-12 - 2804694

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Surge protection in one-piece 6.2 mm wide DIN rail module for two floating signal wires. Tested in acc. with the protection types in Ex areas: Ex ia IIC / Ex iaD.

Why buy this product

- Complete normal mode voltage protection between all wires
- Cross-arrester bridging of the reference potential with ME 6,2 TBUS

Key Commercial Data

Packing unit	10 STK
GTIN	4 046356 462198

Technical data

Dimensions

Height	93 mm
Width	6.2 mm
Depth	102.5 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Degree of protection	IP20

General

Housing material	PBT
Flammability rating according to UL 94	V-0
Color	black
Standards for cearances and creepage distances	IEC 60664-1
	EN 60079-11

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Technical data

General

Mounting type	DIN rail: 35 mm
Type	Rail-mountable module, one-piece
Direction of action	Line-Line & Line-Earth Ground

Protective circuit

IEC test classification	C1
	C2
	C3
	D1
Nominal voltage U_N	12 V DC
Maximum continuous voltage U_C	13 V AC
	18 V DC
Nominal current I_N	500 mA (40°C)
Operating effective current I_C at U_C	≤ 2 µA (per path)
Residual current I_{PE}	≤ 2 µA
Nominal discharge current I_n (8/20) µs (Core-Core)	350 A
Nominal discharge current I_n (8/20) µs (Core-Earth)	5 kA
	10 kA (Total)
Total surge current (8/20) µs	20 kA
Total surge current (10/350) µs	1 kA
Max. discharge current I_{max} (8/20) µs maximum (Core-Core)	350 A
Max. discharge current I_{max} (8/20) µs maximum (Core-Earth)	10 kA
	20 kA ((Total))
Nominal pulse current Ian (10/1000) µs (Core-Core)	70 A
Nominal pulse current Ian (10/1000) µs (Core-Earth)	50 A
	100 A (Total)
Impulse discharge current (10/350)#µs, peak value I_{imp}	500 A
Output voltage limitation at 1 kV/µs (Core-Core) spike	≤ 50 V
Output voltage limitation at 1 kV/µs (Core-Earth) spike	≤ 650 V
Residual voltage at I_n (conductor-conductor)	≤ 50 V
Residual voltage with Ian (10/1000)µs (conductor-conductor)	≤ 50 V
Voltage protection level U_p (core-core)	≤ 50 V (C1 - 500 V / 250 A)
	≤ 50 V (C3 - 10 A)
Voltage protection level U_p (core-ground)	≤ 650 V (C1 - 500 V / 250 A)
	≤ 650 V (C2 - 10 kV / 5 kA)
	≤ 700 V (D1 - 500 A)
Response time tA (Core-Core)	≤ 1 ns
Response time tA (Core-Earth)	≤ 100 ns
Input attenuation aE, sym.	typ. 0.3 dB (1.5 MHz/50 Ω)
	typ. 0.3 dB (500 kHz / 150 Ω)

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Technical data

Protective circuit

Cut-off frequency fg (3 dB), sym. in 50 Ohm system	typ. 5 MHz
Cut-off frequency fg (3 dB), sym. in 150 Ohm system	typ. 1.7 MHz
Capacity	≤ 1.5 nF (per path)
Resistance in series	0 Ω
Max. required back-up fuse	500 mA
Impulse durability (conductor-conductor)	C1 - 500 V / 250 A
	C3 - 25 A
Impulse durability (conductor-ground)	C2 - 10 kV/5 kA
	C3 (25 A)
	D1 (500 A)
Alternating current carrying capacity (conductor-ground)	5 A - 1 s

Connection data

Connection method	Screw connection
Connection type IN	Screw terminal blocks
Connection type OUT	Screw terminal blocks
Screw thread	M3
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section solid min.	0.14 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section AWG min.	26
Conductor cross section AWG max.	12

Connection, equipotential bonding

Connection method	DIN rail NS35

Standards and Regulations

Standards/regulations	IEC 61643-21
	DIN EN 61643-21

General

Maximum inner capacitance C_i	3 nF
Maximum inner inductance L_i	< 1 µH
Maximum inner time factor (R_i/L_i)	10 µs
Max. input current I_i	500 mA (T4 / -40...+80°C)
	500 mA (T5 / -40...+50 °C)
	500 mA (T6 / -40...+40 °C)
Max. input voltage U_i	18 V DC
Maximum input power Pi	635 mW

Conformity / approvals

ATEX	# II 1 G Ex ia IIC T4...T6

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Technical data

Conformity / approvals

	# II 1 D Ex iaD 20 T85°C...135°C
IECEx	Ga Ex ia IIC T4...T6
	Ex iaD 20 T85 °C...T135 °C

Classifications

eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130807
eCl@ss 7.0	27130807
eCl@ss 8.0	27130807
eCl@ss 9.0	27130807

ETIM

ETIM 2.0	EC000943
ETIM 3.0	EC000943
ETIM 4.0	EC000943
ETIM 5.0	EC000943

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

Approvals

Approvals

Approvals

UL Listed / GL / EAC

Ex Approvals

IECEx / ATEX / INMETRO

Approvals submitted

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Approvals

Approval details

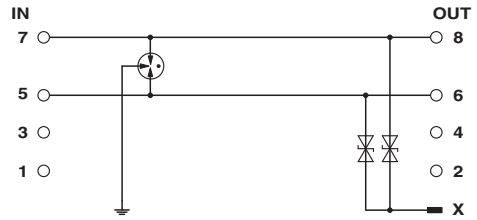
UL Listed

GL

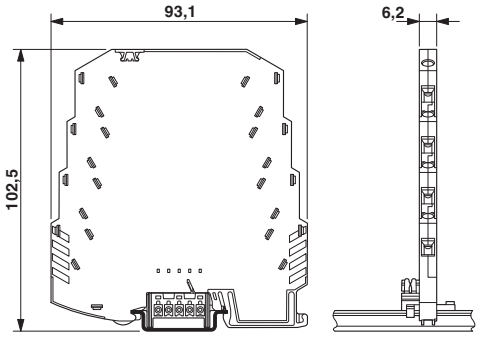
EAC

Drawings

Circuit diagram



Dimensional drawing



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