

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.

Product Features

- ✓ 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	1 pc
Weight per Piece (excluding packing)	60.0 GRM
Custom tariff number	85363010
Country of origin	Germany

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
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Technical data

General

Inflammability class according to UL 94	V-0
Color	black
Standards for air and creepage distances	IEC 60664-1
	EN 60079-11
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 operating 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	$\leq 2 \mu\text{A}$ (per path)
Residual current I_{PE}	$\leq 2 \mu\text{A}$
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 I_{an} (10/1000) μs (Core-Core)	70 A
Nominal pulse current I_{an} (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	$\leq 50 \text{ V}$
Output voltage limitation at 1 kV/ μs (Core-Earth) spike	$\leq 650 \text{ V}$
Residual voltage at I_n , (conductor-conductor)	$\leq 50 \text{ V}$
Residual voltage with I_{an} (10/1000) μs (conductor-conductor)	$\leq 50 \text{ V}$
Voltage protection level U_p (Core-Core)	$\leq 50 \text{ V}$ (C1 - 500 V / 250 A)
	$\leq 50 \text{ V}$ (C3 - 10 A)

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Protective circuit

Voltage protection level U_p (Core-Earth)	≤ 650 V (C1 - 500 V / 250 A)
	≤ 650 V (C2 - 10 kV / 5 kA)
	≤ 700 V (D1 - 500 A)
Response time t_A (Core-Core)	≤ 1 ns
Response time t_A (Core-Earth)	≤ 100 ns
Input attenuation a_E , sym.	typ. 0.1 dB (1 MHz / 50 Ω)
	typ. 0.1 dB (300 kHz / 150 Ω)
Cut-off frequency f_g (3 dB), asym. (GND) in 50 Ohm system	typ. 5 MHz
Cut-off frequency f_g (3 dB), asym. (GND) in 100 Ohm system	typ. 1.5 MHz
Capacity	≤ 1.5 nF (per path)
Resistance in series	0 Ω
Max. required back-up fuse	500 mA
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C1 (500 V / 250 A)
	C3 (25 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (10 kV/5 kA)
	C3 (25 A)
	D1 (500 A)
Alternating current carrying capacity in acc. with IEC 61643-21 (Core-Earth)	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 stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²
Conductor cross section solid min.	0.14 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section AWG/kcmil min.	26
Conductor cross section AWG/kcmil max	12

Connection, equipotential bonding

Connection method	DIN rail NS35
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Standards and Regulations

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

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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

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

Ex Approvals

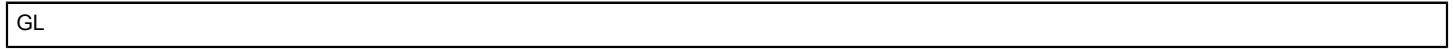
IEGEx / ATEX / INMETRO

Approvals submitted

Approval details

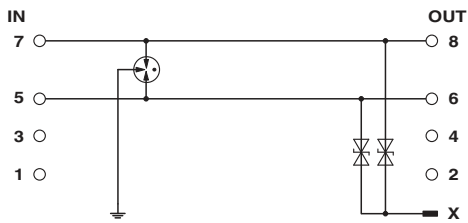
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Approvals



Drawings

Circuit diagram



Dimensioned drawing

