

## Surge protection device - LIT 2-24 - 2804665

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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)	64.0 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 $U_N$	24 V DC
Maximum continuous operating voltage $U_C$	25 V AC
	36 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) $\mu\text{s}$ (Core-Core)	250 A
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (Core-Earth)	5 kA
	10 kA (Total)
Total surge current (8/20) $\mu\text{s}$	20 kA
Total surge current (10/350) $\mu\text{s}$	1 kA
Max. discharge current $I_{max}$ (8/20) $\mu\text{s}$ maximum (Core-Core)	250 A
Max. discharge current $I_{max}$ (8/20) $\mu\text{s}$ maximum (Core-Earth)	10 kA
	20 kA (Total)
Nominal pulse current $I_{an}$ (10/1000) $\mu\text{s}$ (Core-Core)	50 A
Nominal pulse current $I_{an}$ (10/1000) $\mu\text{s}$ (Core-Earth)	50 A
	100 A (Total)
Impulse discharge current (10/350) $\mu\text{s}$ , peak value $I_{imp}$	500 A
Output voltage limitation at 1 kV/ $\mu\text{s}$ (Core-Core) spike	$\leq 60 \text{ V}$
Output voltage limitation at 1 kV/ $\mu\text{s}$ (Core-Earth) spike	$\leq 650 \text{ V}$
Residual voltage at $I_n$ , (conductor-conductor)	$\leq 60 \text{ V}$
Residual voltage with $I_{an}$ (10/1000) $\mu\text{s}$ (conductor-conductor)	$\leq 60 \text{ V}$
Voltage protection level $U_p$ (Core-Core)	$\leq 60 \text{ V}$ (C1 - 500 V / 250 A)
	$\leq 60 \text{ V}$ (C3 - 10 A)

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### Technical data

#### Protective circuit

Voltage protection level $U_p$ (Core-Earth)	$\leq 650$ V (C1 - 500 V / 250 A)
	$\leq 650$ V (C2 - 10 kV / 5 kA)
	$\leq 700$ V (D1 - 500 A)
Response time $t_A$ (Core-Core)	$\leq 1$ ns
Response time $t_A$ (Core-Earth)	$\leq 100$ ns
Input attenuation $a_E$ , sym.	typ. 0.1 dB (1 MHz / 50 $\Omega$ )
	typ. 0.1 dB (450 kHz / 150 $\Omega$ )
Cut-off frequency $f_g$ (3 dB), asym. (GND) in 50 Ohm system	typ. 7.5 MHz
Cut-off frequency $f_g$ (3 dB), asym. (GND) in 100 Ohm system	typ. 2.5 MHz
Capacity	$\leq 1.3$ nF (per path)
Resistance in series	0 $\Omega$
Max. required back-up fuse	500 mA
Surge carrying capacity in acc. with IEC 61643-21 (Core-Core)	C1 (500 V / 250 A)
	C1 (500 V / 250 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 <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
Conductor cross section solid min.	0.14 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
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

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Approvals

UL Listed / GL

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Ex Approvals

IEGEx / ATEX / INMETRO

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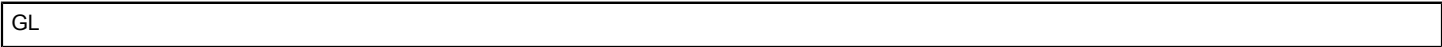
Approvals submitted

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Approval details

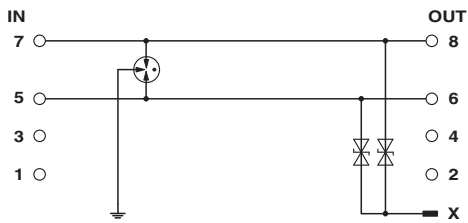
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## Approvals



## Drawings

Circuit diagram



Dimensioned drawing

