

## Surge protection device - LIT 2X1-24 - 2804636

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Surge protection in one-piece 6.2 mm wide DIN rail module for two conductors with common reference potential.

### Your advantages

- ✔ Can be used in binary, analog, and intrinsically safe circuits
- ✔ Protection of up to four signal wires over a design width of 6.2 mm



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 428316
GTIN	4046356428316
Weight per Piece (excluding packing)	54.000 g
Custom tariff number	85363010
Country of origin	Germany

### Technical data

#### Dimensions

Height	93.1 mm
Width	6.2 mm
Depth	102.5 mm (incl. DIN rail 7.5 mm)

#### Ambient conditions

Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 2000 m (amsl (above mean sea level))

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## Technical data

### Ambient conditions

Degree of protection	IP20
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### General

Housing material	PBT
Flammability rating according to UL 94	V-0
Color	anthracite grey RAL 7016
Mounting type	DIN rail: 35 mm
Type	DIN rail module, one-piece
Direction of action	Line-Earth Ground

### Protective circuit

IEC test classification	C1
	C2
	C3
	D1
Nominal voltage $U_N$	24 V DC
Maximum continuous voltage $U_C$	36 V DC
	25 V AC
Rated current	350 mA (40 °C)
Operating effective current $I_C$ at $U_C$	$\leq 2 \mu\text{A}$
Residual current $I_{PE}$	$\leq 4 \mu\text{A}$
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (line-earth)	5 kA
Pulse discharge current $I_{imp}$ (10/350) $\mu\text{s}$ (line-earth)	500 A
	1 kA (in total)
Total discharge current $I_{total}$ (8/20) $\mu\text{s}$	10 kA
	20 kA (1x)
Max. discharge current $I_{max}$ (8/20) $\mu\text{s}$ maximum (line-line)	10 kA
Max. discharge current $I_{max}$ (8/20) $\mu\text{s}$ maximum (line-earth)	20 kA (in total)
Nominal pulse current $I_{an}$ (10/1000) $\mu\text{s}$ (line-earth)	50 A
	100 A (in total)
Output voltage limitation at 1 kV/ $\mu\text{s}$ (line-earth) spike	$\leq 60 \text{ V}$
Residual voltage at $I_n$ (line-earth)	$\leq 50 \text{ V}$
Residual voltage with $I_{an}$ (10/1000) $\mu\text{s}$ (line-earth)	$\leq 60 \text{ V}$
Voltage protection level $U_p$ (line-earth)	$\leq 60 \text{ V}$ (C1 - 500 V / 250 A)
	$\leq 95 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 55 \text{ V}$ (C3 - 10 A)
	$\leq 55 \text{ V}$ (C3 - 50 A)
	$\leq 250 \text{ V}$ (D1 - 500 A)

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## Technical data

### Protective circuit

Response time $t_A$ (line-earth)	$\leq 1$ ns
Input attenuation aE, asym.	typ. 0.3 dB (1 MHz / 50 $\Omega$ )
	typ. 0.2 dB (350 kHz / 150 $\Omega$ )
Cut-off frequency $f_g$ (3 dB), asym. (PE) in 50 Ohm system	typ. 6 MHz
Cut-off frequency $f_g$ (3 dB), asym. (PE) in 150 Ohm system	typ. 2 MHz
Capacity	$\leq 1.3$ nF (per channel)
Resistance per path	3.3 $\Omega$ 20 %
Surge protection fault message	none
Max. required back-up fuse	315 mA (T)
Impulse durability (line-earth)	C1 - 500 V / 250 A
	C2 - 10 kV / 5 kA
	C3 - 50 A
	D1 - 500 A
Alternating current carrying capacity (line-earth)	5 A - 1 s

### Connection data

Connection method	Screw connection
Screw thread	M3
Tightening torque	0.8 Nm
Stripping length	8 mm
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section solid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG	24 ... 14

### Connection, equipotential bonding

Connection method	DIN rail NS35
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### Standards and Regulations

Standards/specifications	IEC 61643-21 A2:2012
	EN 61643-21 2001 + A1:2009 + A2:2013

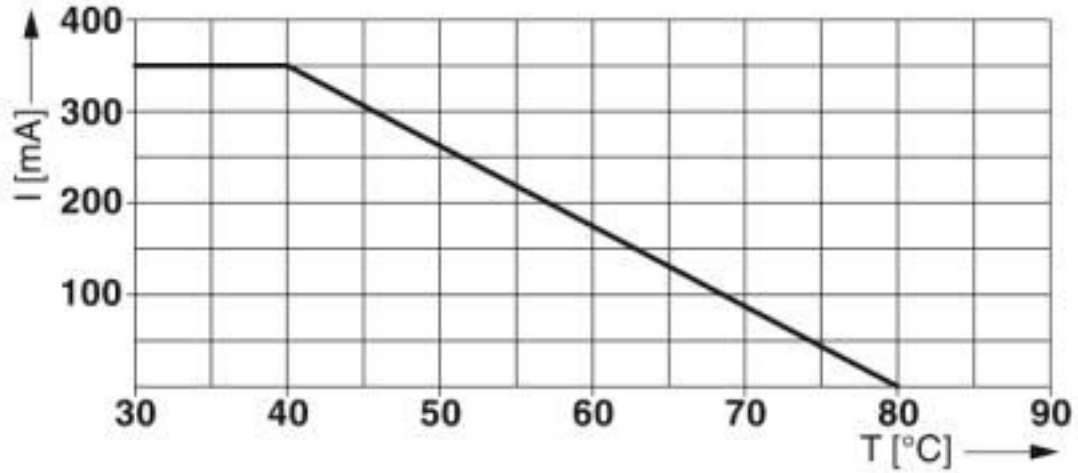
### Environmental Product Compliance

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

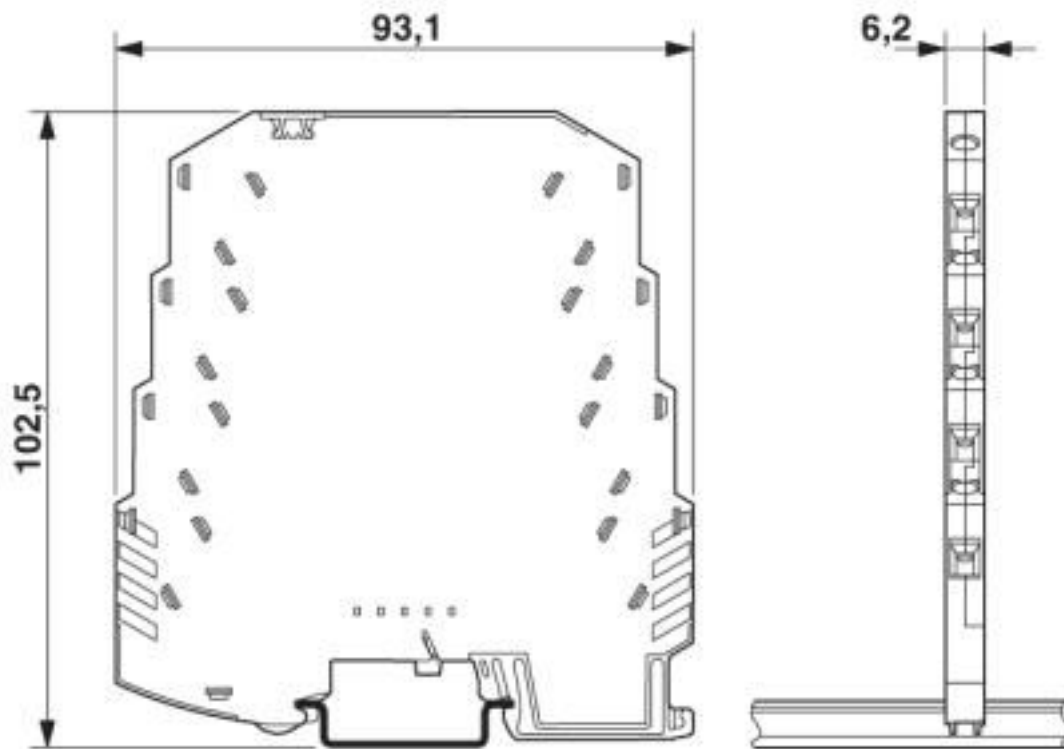
## Drawings

# Surge protection device - LIT 2X1-24 - 2804636

Diagram

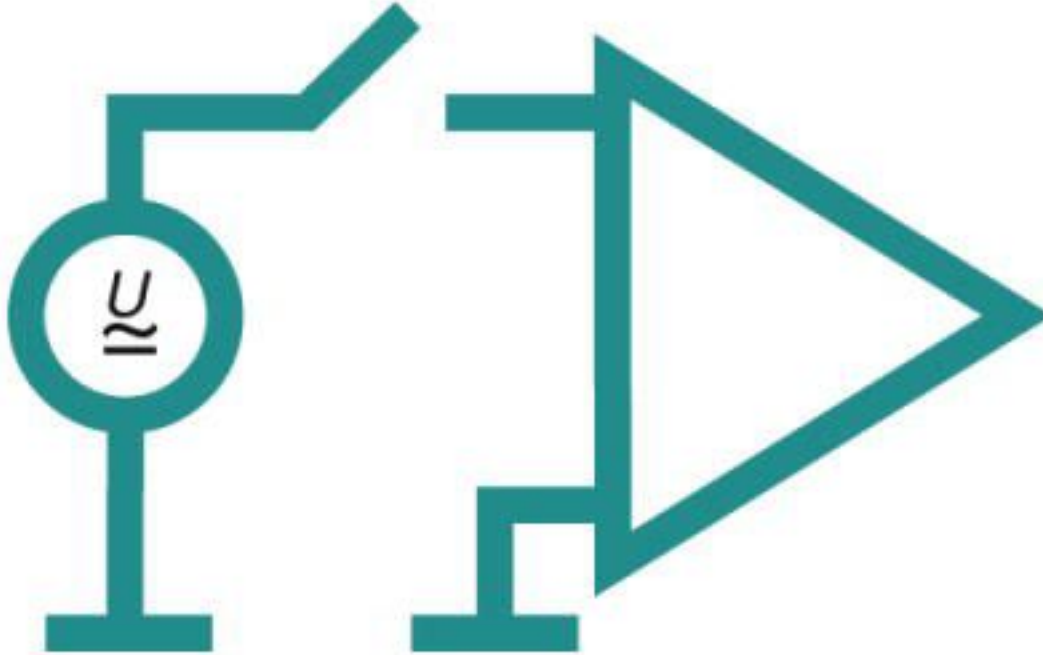


Dimensional drawing

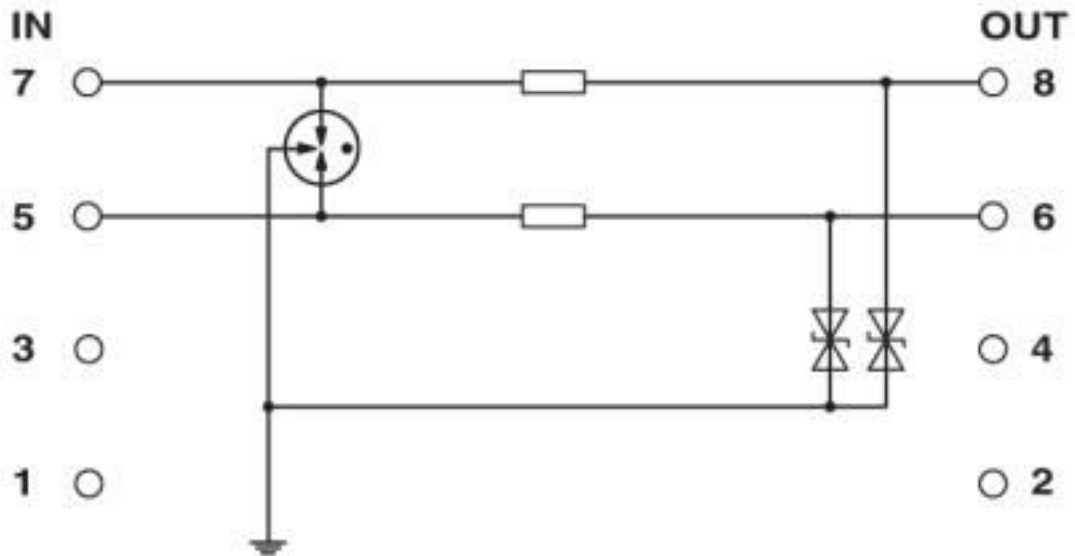


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Pictogram



Circuit diagram



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## Classifications

### eCl@ss

eCl@ss 10.0.1	27130807
eCl@ss 4.0	27130800
eCl@ss 4.1	27130800
eCl@ss 5.0	27130800
eCl@ss 5.1	27130800
eCl@ss 6.0	27130800
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
ETIM 6.0	EC000943
ETIM 7.0	EC000943

### UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620
UNSPSC 18.0	39121620
UNSPSC 19.0	39121620
UNSPSC 20.0	39121620
UNSPSC 21.0	39121620

## Approvals

### Approvals

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Approvals

DNV GL / UL Listed / EAC / EAC

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Ex Approvals

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## Approvals

### Approval details

DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAE00001N8
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UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 138168
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EAC			EAC-Zulassung
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EAC			RU C- DE.A*30.B01561
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## Accessories

### Accessories

#### Terminal marking

##### Marker for terminal blocks - UC-TM 6 - 0818085



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

##### Marker for terminal blocks - UC-TM 6 OG - 0818328



Marker for terminal blocks, Sheet, orange, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

## Surge protection device - LIT 2X1-24 - 2804636

### Accessories

#### Marker for terminal blocks - UC-TM 6 YE - 0818331



Marker for terminal blocks, Sheet, yellow, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

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#### Marker for terminal blocks - UC-TM 6 BU - 0818344



Marker for terminal blocks, Sheet, blue, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

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#### Marker for terminal blocks - UC-TM 6 RD - 0818357



Marker for terminal blocks, Sheet, red, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

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#### Marker for terminal blocks - UC-TM 6 GN - 0818360



Marker for terminal blocks, Sheet, green, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

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