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## Surge protection plug - CTM 2X1- 12DC - 2838584

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LSA-PLUS plug (COMTRAB CTM) with protective circuit for 2-conductor signal circuits grounded on one side. Nominal voltage: 12 V DC

### Why buy this product

- Can be used in LSA-PLUS disconnect and control strips or CT-TERMIBLOCK
- The CTM 10-MAG surge protection magazine can be freely fitted with various protective plugs
- Space-saving LSA-PLUS connection technology
- Typical installation locations include marshalling distributors
- Modular compact protection for high-density networks



### Key Commercial Data

Packing unit	10 STK
GTIN	 4 017918 819606
GTIN	4017918819606

### Technical data

#### Dimensions

Height	21 mm
Width	9.5 mm
Depth	53.5 mm

#### Ambient conditions

Ambient temperature (operation)	-25 °C ... 75 °C
Degree of protection	IP20

#### General

Housing material	PA
Flammability rating according to UL 94	V-0
Color	black

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## Technical data

### General

Standards for clearances and creepage distances	DIN VDE 0110-1
	IEC 60664-1
Overvoltage category	II
Degree of pollution	2
Mounting type	On CT-TERMIBLOCK and LSA-PLUS disconnect strip
Type	LSA-PLUS module
Number of positions	2
Direction of action	Line-Line & Line-Earth Ground
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 1.10

### Protective circuit

IEC test classification	B2
	C1
	C2
	C3
	D1
VDE requirement class	B2
	C1
	C2
	C3
	D1
Nominal voltage $U_N$	12 V DC
Maximum continuous voltage $U_C$	$\pm 15$ V DC
	10 V AC
Rated current	380 mA AC (25 °C)
Operating effective current $I_C$ at $U_C$	$\leq 5$ $\mu$ A
Residual current $I_{PE}$	$\leq 2$ $\mu$ A
Nominal discharge current $I_n$ (8/20) $\mu$ s (line-earth)	5 kA
Pulse discharge current $I_{imp}$ (10/350) $\mu$ s (line-earth)	1 kA
Total discharge current $I_{total}$ (8/20) $\mu$ s	10 kA
Total discharge current $I_{total}$ (10/350) $\mu$ s	2.5 kA
Max. discharge current $I_{max}$ (8/20) $\mu$ s maximum (line-earth)	10 kA (in total)
Nominal pulse current $I_{an}$ (10/1000) $\mu$ s (line-earth)	100 A
Output voltage limitation at 1 kV/ $\mu$ s (line-earth) spike	$\leq 28$ V
Output voltage limitation at 1 kV/ $\mu$ s (line-earth) static	$\leq 22$ V
Residual voltage at $I_n$ (line-earth)	$\leq 32$ V
Residual voltage with $I_{an}$ (10/1000) $\mu$ s (line-earth)	$\leq 18$ V
Voltage protection level $U_p$ (line-earth)	$\leq 60$ V (C2 - 10 kV/5 kA, spike)
	$\leq 30$ V (C3 - 7.5 kV / 100 A, spike)
Response time $t_A$ (line-earth)	$\leq 1$ ns
Input attenuation aE, asym.	0.3 dB ( $\leq 400$ kHz)

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## Technical data

### Protective circuit

Cut-off frequency $f_g$ (3 dB), asym. (PE) in 100 Ohm system	1.5 MHz
Capacity (line-earth)	1.5 nF ( $f=1$ MHz / $V_R=0$ V)
Resistance in series	3.3 $\Omega$ 10 %
Surge protection fault message	none
Impulse durability (line-earth)	C2 - 4 kV/2 kA
	C3 - 100 A
	B2 - 4 kV/100 A
	D1 - 1 kA
Alternating current carrying capacity (line-earth)	5 A - 1 s

### Connection data

Connection method	can be plugged into COMTRAB-TERMIBLOCK and LSA-PLUS disconnect and switching strips
Connection method IN	COMTRAB plug-in system
Connection method OUT	COMTRAB plug-in system
Connection technology	LSA-PLUS

### Connection, equipotential bonding

Connection method	Spring contact
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### Standards and Regulations

Standards/regulations	IEC 61643-21
Standards/specifications	IEC 61643-21 2000

### Environmental Product Compliance

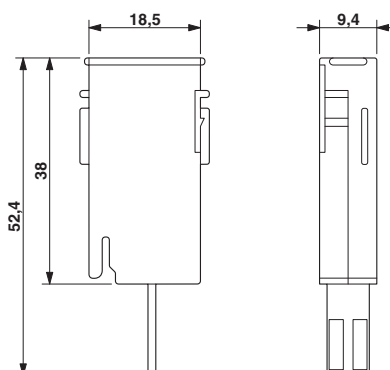
REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Drawings

### Pictogram



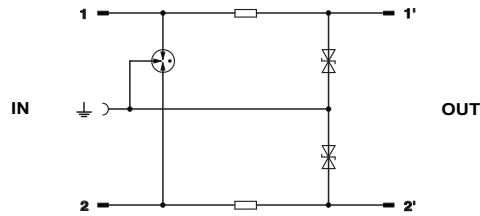
### Dimensional drawing





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Circuit diagram



## Approvals

### Approvals

Approvals

UL Listed / EAC

Ex Approvals

### Approval details

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		RU C- DE.A*30.B01561
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