

## Surge protection plug - CTM 2X1-110AC - 2838526

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LSA-PLUS plug (COMTRAB CTM) with protective circuit for 2-conductor signal circuits grounded on one side.  
Nominal voltage: 110 V AC


The illustration shows version CTM  
2x1- 24 DC

### Why buy this product

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



### Key commercial data

Packing unit	10 pc
GTIN	 4 017918 819552
Weight per Piece (excluding packing)	10.3 g
Custom tariff number	85363010
Country of origin	Germany

### 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

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## Technical data

### General

Housing material	PA
Inflammability class according to UL 94	V0
Color	black
Standards for clearances and creepage distances	DIN VDE 0110-1
	IEC 60664-1
Surge voltage category	II
Pollution degree	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 $U_N$	110 V AC
Maximum continuous operating voltage $U_C$	$\pm 180$ V DC
	125 V AC
Maximum continuous voltage $U_C$ (wire-ground)	$\pm 180$ V DC
Nominal current $I_N$	380 mA (25 °C)
Operating effective current $I_C$ at $U_C$	$\leq 5$ $\mu$ A
Residual current $I_{PE}$	$\leq 5$ $\mu$ A
Nominal discharge current $I_n$ (8/20) $\mu$ s (Core-Earth)	5 kA
Total surge current (8/20) $\mu$ s	10 kA
Total surge current (10/350) $\mu$ s	2.5 kA
Max. discharge current $I_{max}$ (8/20) $\mu$ s maximum (Core-Earth)	10 kA (in total)
Nominal pulse current $I_{an}$ (10/1000) $\mu$ s (Core-Earth)	100 A
Impulse discharge current (10/350) $\mu$ s, peak value $I_{imp}$	1 kA
Output voltage limitation at 1 kV/ $\mu$ s (Core-Earth) spike	$\leq 260$ V
Output voltage limitation at 1 kV/ $\mu$ s (Core-Earth) static	$\leq 15$ V
Residual voltage at $I_n$ , (conductor-ground)	$\leq 10$ V
Residual voltage with $I_{an}$ (10/1000) $\mu$ s (conductor-ground)	$\leq 10$ V

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### Technical data

#### Protective circuit

Voltage protection level $U_p$ (core-ground)	$\leq 260$ V (C2 - 10 kV/5 kA, spike)
	$\leq 10$ V (C2 - 10 kV/5 kA, static)
	$\leq 260$ V (C3, 7.5 kV/100 A, spike)
	$\leq 10$ V (C3, 7.5 kV/100 A, static)
Response time $t_A$ (Core-Earth)	$\leq 1$ ns
Input attenuation $a_E$ , asym.	0.3 dB ( $\leq 3$ MHz)
Cut-off frequency $f_g$ (3 dB), asym. (PE) in 100 Ohm system	typ. 20 MHz
Capacity (Core-Earth)	100 pF ( $f=1$ MHz / $V_R=0$ V)
Resistance in series	3.3 $\Omega$ 10 %
	3.3 $\Omega$
Surge protection fault message	None
Max. required back-up fuse	150 mA
Impulse durability (conductor-ground)	C2 (4 kV / 2 kA)
	C3 - 100 A
	B2 - 4 kV/100 A
	D1 - 1 kA
Alternating current carrying capacity (conductor-ground)	5 A - 1 s

#### Connection data

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

#### Connection, equipotential bonding

Connection method	Spring contact
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#### Standards and Regulations

Standards/regulations	IEC 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

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## Classifications

### 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 / EAC

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Ex Approvals

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Approvals submitted

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### Approval details

UL Listed
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EAC
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## Accessories

Necessary add-on products

## Surge protection plug - CTM 2X1-110AC - 2838526

### Accessories

Disconnect strip - CT 10-TL - 2765356



LSA-PLUS disconnect strip to hold the CTM and CT 10 protection modules. Version: 10 double conductors, dimension A: 124 mm.

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Grounding rail - CT 1-10-ES - 2765547



Ground rail for CTM protective plug when used in combination with LSA-PLUS disconnect strip. Version: 10 double conductors

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Screw termination block - CT-TERMIBLOCK 10 DA - 0441711



Screw termination block with disconnect contacts for accommodating protective plugs CT and CTM. Use in MCR and telecommunications systems. Design: 10 double wires

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Magazine - CTM 10-MAG - 2838610



Magazine with a grounding rail to accommodate up to 10 LSA-PLUS protective plugs (COMTRAB CTM), to insert in CT-TERMIBLOCK or LSA-PLUS disconnect strip

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### Additional products

Mounting clip - CT 10-MB/ 3 - 2765372



Mounting clip, for holding 3 disconnect or ground wire strips. Version: 10 double conductors, dimensions: A 104.5 mm, B 65 mm.

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## Surge protection plug - CTM 2X1-110AC - 2838526

### Accessories

Mounting clip - CT 10-MB/10 - 2765385



Mounting clip, for holding 10 disconnect or ground wire strips. Version: 10 double conductors, dimensions: A 104.5 mm, dimensions B 245.5 mm

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Cable feed-through sleeve - CT-KDT - 2765518



Cable bush for assembly troughs, for protection of the lines guided through the laminated frame

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Short-circuit connector - CTM EST - 2838649



LSA-PLUS grounding plug (COMTRAB CTM) to short-circuit and ground potentials in CT-TERMIBLOCK... and disconnect strip CT 10...

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Shield connection - SSA 3-6 - 2839295



shield fast connections for conductor diameter 3 - 6 mm. Potential connection cable: 200 mm, black

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Shield connection - SSA 5-10 - 2839512



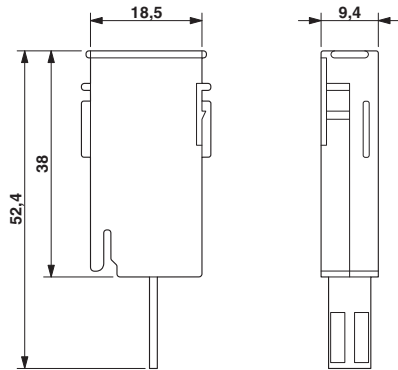
Shield fast connection for conductor diameters 5 - 10 mm. Potential connection cable: 200 mm, black

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### Drawings

## Surge protection plug - CTM 2X1-110AC - 2838526

Dimensioned drawing



Circuit diagram

