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## Surge protection connector - 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	1
Minimum order quantity	1
Catalog page	Page 117 (TT-2011)
GTIN	 4 017918 819552
Custom tariff number	85363010
Country of origin	GERMANY

### Technical data

#### General

Housing material	PA
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	DIN VDE 0110-1
Standards for air and creepage distances	IEC 60664-1
Surge voltage category	II
Pollution degree	2
Total surge current (8/20) $\mu$ s	10 kA
Total surge current (10/350) $\mu$ s	2.5 kA

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### Technical data

#### General

Ambient temperature (operation)	-25 °C ... 75 °C
Mounting type	On CT-TERMIBLOCK and LSA-PLUS disconnect strip
Design	LSA-PLUS module
Number of positions	2
Degree of protection	IP20
Direction of action	Line-Line & Line-Earth Ground
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 1.10
Width	9.5 mm
Height	21 mm
Depth	53.5 mm

#### Protective circuit

IEC category	B2
IEC category	C1
IEC category	C2
IEC category	C3
IEC category	D1
VDE requirement class	B2
VDE requirement class	C1
VDE requirement class	C2
VDE requirement class	C3
VDE requirement class	D1
Nominal voltage UN	110 V AC
Maximum continuous operating voltage UC	± 180 V DC
Maximum continuous voltage UC (wire-ground)	± 180 V DC
Nominal current IN	380 mA (25°C)
Operating effective current IC at UC	≤ 5 µA
Ground conductor current IPE	≤ 2 µA
Nominal discharge surge current In (8/20) µs (Core-Earth)	5 kA
Total surge current (8/20) µs	10 kA
Max. discharge surge current I <sub>max</sub> (8/20) µs maximum (Core-Earth)	10 kA (in total)
Nominal pulse current I <sub>an</sub> (10/1000) µs (Core-Earth)	100 A
Lightning test current (10/350) µs, peak value I <sub>imp</sub>	1 kA
Output voltage limitation at 1 kV/µs (Core-Earth) spike	≤ 260 V
Output voltage limitation at 1 kV/µs (Core-Earth) static	≤ 15 V
Residual voltage at I <sub>n</sub> , (conductor-ground)	≤ 10 V
Residual voltage with I <sub>an</sub> (10/1000)µs (conductor-ground)	≤ 10 V
Protection level UP (Core-Earth)	≤ 260 V (C2, 10 kV/5 kA, spike)
Protection level UP (Core-Earth)	≤ 10 V (C2, 10 kV/5 kA, static)
Protection level UP (Core-Earth)	≤ 260 V (C3, 7.5 kV/100 A, spike)
Protection level UP (Core-Earth)	≤ 10 V (C3, 7.5 kV/100 A, static)
Response time t <sub>A</sub> (Core-Earth)	≤ 1 ns



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## Technical data

### Protective circuit

Input attenuation aE, 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 %
Resistance in series	3.3 $\Omega$
Message: Surge protection fault	None
Max. required back-up fuse	150 mA
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (4 kV / 2 kA)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C3 (100 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	B2 (4 kV / 100 A)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	D1 (1 kA)
Alternating current carrying capacity in acc. with IEC 61643-21 (Core-Earth)	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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### Connection, protective circuit

Standards/regulations	IEC 61643-21
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## Classifications

### eclass

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

### etim

ETIM 2.0	EC000943
ETIM 3.0	EC000943
ETIM 4.0	EC000943

### unspsc

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610

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

## Classifications

unspsc

UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

## Approvals

### Approvals

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Approvals

UL Recognized / GOST / UL Listed

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Ex Approvals

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Approvals submitted

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### Approval details



## Accessories

### Necessary add-on products

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.

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

### Accessories

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

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

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

### 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.

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

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

## Accessories

Cable feed-through sleeve - CT-KDT - 2765518



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

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...

Shield connection - SSA 3-6 - 2839295



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

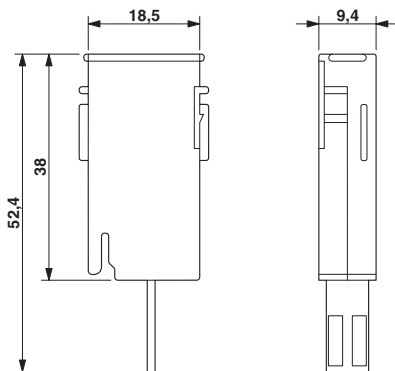
Shield connection - SSA 5-10 - 2839512



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

## Drawings

Dimensioned drawing



Circuit diagram

