

## 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

### Product Features

- 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 pc
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
Flammability rating according to UL 94	V0
Color	black
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 $U_N$	110 V AC
Maximum continuous 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

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#### Protective circuit

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 $I_n$ (conductor-ground)	≤ 10 V
Residual voltage with $I_{an}$ (10/1000)μs (conductor-ground)	≤ 10 V
Voltage protection level $U_p$ (core-ground)	≤ 260 V (C2 - 10 kV/5 kA, spike) ≤ 10 V (C2 - 10 kV/5 kA, static) ≤ 260 V (C3, 7.5 kV/100 A, spike) ≤ 10 V (C3, 7.5 kV/100 A, static)
Response time $t_A$ (Core-Earth)	≤ 1 ns
Input attenuation $a_E$ , asym.	0.3 dB (≤ 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 Ω 10 % 3.3 Ω
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
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### Classifications

#### eCl@ss

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 / EAC / 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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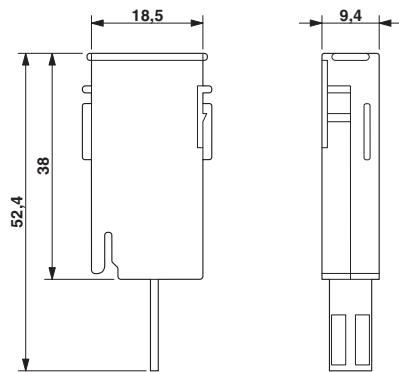
### Approvals

EAC

EAC

### Drawings

Dimensional drawing



Circuit diagram

