

## Surge protection plug - CTM 1X2- 12DC - 2838597

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LSA-PLUS plug with protection for conductor pairs in floating signal circuits. Nominal voltage: 12 V DC

The illustration shows version CTM 1x2- 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
- Space-saving LSA-PLUS connection technology
- Typical installation locations include marshalling distributors
- Modular compact protection for high-density networks



### Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	10.03 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 $U_N$	12 V DC
Maximum continuous voltage $U_C$	$\pm 15$ V DC
	10 V AC
Maximum continuous voltage $U_C$ (wire-wire)	$\pm 15$ V DC
	10 V AC
Maximum continuous voltage $U_C$ (wire-ground)	72 V DC
Nominal current $I_N$	380 mA (25 °C)
Operating effective current $I_C$ at $U_C$	$\leq 5$ $\mu$ A
Residual current $I_{PE}$	$\leq 2$ $\mu$ A
Nominal discharge current $I_n$ (8/20) $\mu$ s (Core-Core)	5 kA
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

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### Protective circuit

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-Core)	100 A
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-Core) spike	$\leq$ 45 V
Output voltage limitation at 1 kV/ $\mu$ s (Core-Earth) spike	$\leq$ 700 V
Output voltage limitation at 1 kV/ $\mu$ s (Core-Core) static	$\leq$ 25 V
Output voltage limitation at 1 kV/ $\mu$ s (Core-Earth) static	$\leq$ 700 V
Residual voltage at $I_n$ (conductor-conductor)	$\leq$ 22 V
Residual voltage at $I_n$ (conductor-ground)	$\leq$ 45 V
Residual voltage with $I_{an}$ (10/1000) $\mu$ s (conductor-conductor)	$\leq$ 25 V
Residual voltage with $I_{an}$ (10/1000) $\mu$ s (conductor-ground)	$\leq$ 25 V
Voltage protection level $U_p$ (core-core)	$\leq$ 40 V (C2 - 10 kV/5 kA, spike)
	$\leq$ 25 V (C2 - 10 kV/5 kA, static)
	$\leq$ 25 V (C3, 7.5 kV/100 A)
Voltage protection level $U_p$ (core-ground)	$\leq$ 700 V (C2 - 10 kV/5 kA, spike)
	$\leq$ 45 V (C2 - 10 kV/5 kA, static)
	$\leq$ 700 V (C3, 7.5 kV/100 A, spike)
	$\leq$ 20 V (C3, 7.5 kV/100 A, static)
Response time $t_A$ (Core-Core)	$\leq$ 1 ns
Response time $t_A$ (Core-Earth)	$\leq$ 100 ns
Input attenuation $a_E$ , sym.	0.3 dB ( $\leq$ 400 kHz)
Cut-off frequency $f_g$ (3 dB), sym. in 100 Ohm system	1.2 MHz
Capacity (Core-Core)	1.5 nF ( $f=1$ MHz / $V_R=0$ V)
Resistance in series	3.3 $\Omega$ 10 %
	3.3 $\Omega$
Surge protection fault message	None
Impulse durability (conductor-conductor)	C2 (4 kV/2 kA)
	C3 - 100 A
	B2 - 4 kV/100 A
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

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#### 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
eCl@ss 9.0	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

## Surge protection plug - CTM 1X2- 12DC - 2838597

### Approvals

#### Approvals

UL Listed / EAC

#### Ex Approvals

#### Approvals submitted

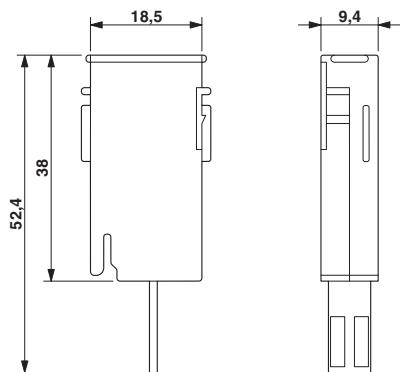
#### Approval details

UL Listed 

EAC

### Drawings

Dimensional drawing



Circuit diagram

