

## Surge protection plug - CTM 1X2-110AC - 2838539

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)




LSA-PLUS plug (COMTRAB CTM) for floating signal circuits, for protecting a double wire from analog and digital telecommunications interfaces (up to 42 Mbps). Nominal voltage: 110 V AC

### Your advantages

- ✓ 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 819569
GTIN	4017918819569

### Technical data

#### Dimensions

Height	21 mm
Width	9.4 mm
Depth	52.4 mm

#### Ambient conditions

Ambient temperature (operation)	-25 °C ... 75 °C
Altitude	≤ 2000 m (amsl (above mean sea level))
Degree of protection	IP20

#### General

Housing material	PA 6.6
Flammability rating according to UL 94	V-0

# Surge protection plug - CTM 1X2-110AC - 2838539

## Technical data

### General

Color	jet black RAL 9005
Overvoltage category	II
Degree of pollution	2
Mounting type	On CT-TERMIBLOCK and LSA-PLUS disconnect strip
Type	LSA-PLUS module
Direction of action	Line-Line & Line-Earth Ground
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 1.10
Transmission speed	42 Mbps

### Protective circuit

IEC test classification	B2
	C1
	C2
	C3
	D1
Nominal voltage $U_N$	110 V AC
Maximum continuous voltage $U_C$	60 V DC
	125 V AC
Rated current	380 mA AC (25 °C)
	150 mA DC (25 °C)
Operating effective current $I_C$ at $U_C$	$\leq 5 \mu\text{A}$ (in the signal circuit)
Residual current $I_{PE}$	$\leq 2 \mu\text{A}$ (per path)
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (line-line)	5 kA
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$ (line-earth)	5 kA
Pulse discharge current $I_{imp}$ (10/350) $\mu\text{s}$ (line-earth)	1 kA
Total discharge current $I_{total}$ (8/20) $\mu\text{s}$	10 kA
Total discharge current $I_{total}$ (10/350) $\mu\text{s}$	2.5 kA
Nominal pulse current $I_{an}$ (10/1000) $\mu\text{s}$ (line-line)	100 A
Nominal pulse current $I_{an}$ (10/1000) $\mu\text{s}$ (line-earth)	100 A
Output voltage limitation at 1 kV/ $\mu\text{s}$ (line-line) spike	$\leq 260 \text{ V}$
Output voltage limitation at 1 kV/ $\mu\text{s}$ (line-earth) spike	$\leq 800 \text{ V}$
Residual voltage at $I_n$ (line-line)	$\leq 10 \text{ V}$
Residual voltage at $I_n$ (line-earth)	$\leq 55 \text{ V}$
Residual voltage with $I_{an}$ (10/1000) $\mu\text{s}$ (line-line)	$\leq 10 \text{ V}$
Residual voltage with $I_{an}$ (10/1000) $\mu\text{s}$ (line-earth)	$\leq 12 \text{ V}$
Voltage protection level $U_p$ (line-line)	$\leq 260 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 260 \text{ V}$ (C3 - 100 A)
Voltage protection level $U_p$ (line-earth)	$\leq 800 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 800 \text{ V}$ (C3 - 100 A)
Voltage protection level $U_p$ static (line-line)	$\leq 10 \text{ V}$ (C2 - 10 kV / 5 kA)

## Surge protection plug - CTM 1X2-110AC - 2838539

### Technical data

#### Protective circuit

	≤ 10 V (C3 - 100 A)
Voltage protection level $U_p$ static (line-earth)	≤ 60 V (C2 - 10 kV / 5 kA)
	≤ 12 V (C3 - 100 A)
Response time $t_A$ (line-line)	≤ 1 ns
Response time $t_A$ (line-earth)	≤ 100 ns
Input attenuation aE, sym.	typ. 0.3 dB (≤ 1.8 MHz/100 Ω)
Cut-off frequency $f_g$ (3 dB), sym. in 100 Ohm system	typ. 20 MHz
Capacity (line-line)	typ. 100 pF
Resistance in series	3.3 Ω 20 %
Surge protection fault message	none
Max. required back-up fuse	150 mA (T/IEC 60127-2/3)
Impulse durability (line-line)	B2 - 4 kV/100 A C2 - 10 kV/5 kA C3 - 100 A
Impulse durability (line-earth)	B2 - 4 kV/100 A C2 - 10 kV/5 kA C3 - 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
-------------------	----------------

#### Standards and Regulations

Standards/specifications	IEC 61643-21 2000 + corrigendum 2001 + A1:2008, modified + A2:2012
	EN 61643-21 2001 + A1:2009 + A2:2013

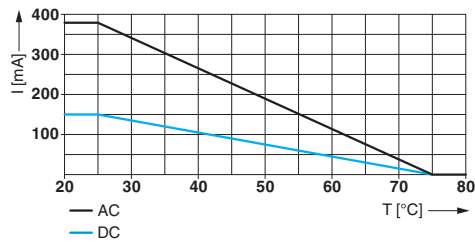
#### Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

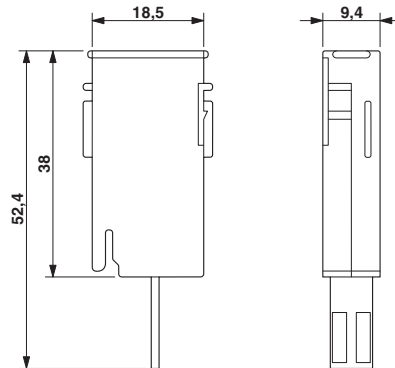
### Drawings

# Surge protection plug - CTM 1X2-110AC - 2838539

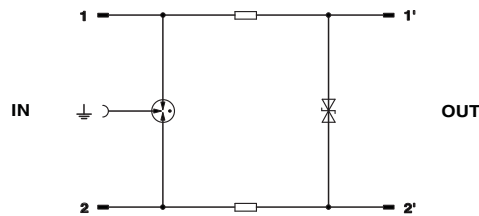
Diagram



Dimensional drawing



Circuit diagram



## Approvals

Approvals

Approvals

UL Listed / EAC

Ex Approvals

## Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYVV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYVV/template/LISEXT/1FRAME/index.htm</a>	FILE E 138168
-----------	--	---	---------------

EAC		RU C- DE.A*30.B01561
-----	--	-------------------------

Phoenix Contact 2018 © - all rights reserved  
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG  
Flachmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>