

# CTM 1X2-110AC - Surge protection plug



2838539

<https://www.phoenixcontact.com/us/products/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 documentation. Our general terms of use for downloads are valid.



LSA-PLUS plug (COMTRAB CTM) for floating signal circuits, for protecting a double wire from analog and digital telecommunications interfaces (up to 50 Mbps). Nominal voltage: 110 V AC

## Your advantages

- Space-saving due to compact design
- Flexible fields of application with modular protective plug
- Can be used in LSA-PLUS disconnect and control strips or CT-TERMIBLOCK via adapted connection technology

## Commercial data

Item number	2838539
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	CL03
Product key	CL3211
Catalog page	Page 190 (C-4-2019)
GTIN	4017918819569
Weight per piece (including packing)	9.9 g
Weight per piece (excluding packing)	9.9 g
Customs tariff number	85363010
Country of origin	DE

# CTM 1X2-110AC - Surge protection plug



2838539

<https://www.phoenixcontact.com/us/products/2838539>

## Technical data

### Product properties

IEC test classification	B2
	C1
	C2
	C3
	D1
Type	LSA-PLUS module
Product type	Surge protection for information technology
Product family	COMTRAB
Surge protection fault message	none
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 1.10
Wire pairs per module	1

### Insulation characteristics

Overvoltage category	II
Pollution degree	2

### Electrical properties

Nominal voltage $U_N$	110 V AC
-----------------------	----------

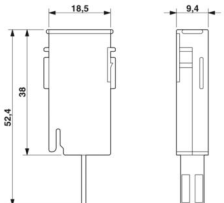
### Connection data

Connection method	can be plugged into COMTRAB-TERMIBLOCK and LSA-PLUS disconnect and switching strips
-------------------	---

### Interfaces

Transmission speed	42 Mbps
--------------------	---------

### Dimensions

Dimensional drawing	
Width	9.4 mm
Height	21 mm
Depth	52.4 mm

### Material specifications

Color	black (RAL 9005)
	Copper

# CTM 1X2-110AC - Surge protection plug



2838539

<https://www.phoenixcontact.com/us/products/2838539>

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

## Mechanical properties

### Mechanical data

Open side panel	No
-----------------	----

## Protective circuit

Direction of action	Line-Line & Line-Earth Ground
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-ground)	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 $I_n$ (conductor-conductor)	$\leq 10 \text{ V}$
Residual voltage at $I_n$ (conductor-ground)	$\leq 55 \text{ V}$
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)
	$\leq 10 \text{ V}$ (C3 - 100 A)
Voltage protection level $U_p$ static (line-earth)	$\leq 60 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 12 \text{ V}$ (C3 - 100 A)
Response time $t_A$ (line-line)	$\leq 1 \text{ ns}$
Response time $t_A$ (line-earth)	$\leq 100 \text{ ns}$
Input attenuation aE, sym.	typ. 0.3 dB ( $\leq 1.8 \text{ MHz}/100 \Omega$ )
Cut-off frequency $f_g$ (3 dB), sym. in 100 $\Omega$ system	typ. 20 MHz
Capacity (Core-Core)	typ. 100 pF
Resistance per path	3.3 $\Omega$ 20 %
Surge protection fault message	none
Max. required back-up fuse	150 mA (T/IEC 60127-2/3)

# CTM 1X2-110AC - Surge protection plug



2838539

<https://www.phoenixcontact.com/us/products/2838539>

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

## Environmental and real-life conditions

### Ambient conditions

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

## Standards and regulations

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

## Mounting

Mounting type	On CT-TERMIBLOCK and LSA-PLUS disconnect strip
---------------	--

# CTM 1X2-110AC - Surge protection plug



2838539

<https://www.phoenixcontact.com/us/products/2838539>

## Classifications

### ECLASS

ECLASS-11.0	27130807
ECLASS-13.0	27171501

### ETIM

ETIM 9.0	EC001625
----------	----------

### UNSPSC

UNSPSC 21.0	39121600
-------------	----------

# CTM 1X2-110AC - Surge protection plug



2838539

<https://www.phoenixcontact.com/us/products/2838539>

## Environmental product compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

Phoenix Contact 2024 © - all rights reserved

<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)