

CTM 2X1-110AC - Surge protection plug



2838526

<https://www.phoenixcontact.com/ca/products/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

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	2838526
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL33
Product key	CL3211
Catalog page	Page 190 (C-4-2019)
GTIN	4017918819552
Weight per piece (including packing)	10.3 g
Weight per piece (excluding packing)	10.3 g
Customs tariff number	85363010
Country of origin	DE

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Technical data

Product properties

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

Insulation characteristics

Overvoltage category	II
Pollution degree	2

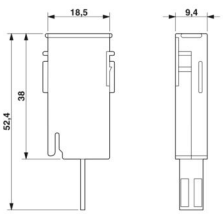
Electrical properties

Nominal voltage U_N	110 V AC
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Connection data

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

Dimensional drawing	
Width	9.4 mm
Height	21 mm
Depth	52.4 mm

Material specifications

Color	black (RAL 9005)
	Copper
Flammability rating according to UL 94	V-0
Housing material	PA 6.6

Mechanical properties

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Mechanical data

Open side panel	No
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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	$\leq 5 \mu A$ (per path)
Residual current I_{PE}	$\leq 5 \mu A$ (per path)
Nominal discharge current I_n (8/20) μs (line-ground)	5 kA
Pulse discharge current I_{imp} (10/350) μs (line-earth)	1 kA
Total discharge current I_{total} (8/20) μs	10 kA
Total discharge current I_{total} (10/350) μs	2.5 kA
Nominal pulse current I_{an} (10/1000) μs (line-earth)	100 A
Output voltage limitation at 1 kV/ μs (line-earth) spike	$\leq 260 V$
Output voltage limitation at 1 kV/ μs (line-earth) static	$\leq 15 V$
Residual voltage at I_n (conductor-ground)	$\leq 10 V$
Residual voltage with I_{an} (10/1000) μs (line-earth)	$\leq 10 V$
Voltage protection level U_p (line-earth)	$\leq 260 V$ (C2 - 10 kV / 5 kA)
	$\leq 260 V$ (C3 - 100 A)
Voltage protection level U_p static (line-earth)	$\leq 10 V$ (C2 - 10 kV / 5 kA)
	$\leq 10 V$ (C3 - 100 A)
Response time t_A (line-earth)	$\leq 1 ns$
Input attenuation aE, asym.	typ. 0.3 dB ($\leq 3 MHz$ / 100 Ω)
Cut-off frequency f_g (3 dB), asym. (PE) in 100 Ω system	typ. 20 MHz
Capacity (Core-Earth)	typ. 100 pF
Resistance per path	3.3 Ω 20 %
Surge protection fault message	none
Max. required back-up fuse	150 mA (T/IEC 60127-2/3)
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	$\leq 2000 m$ (amsl)

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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
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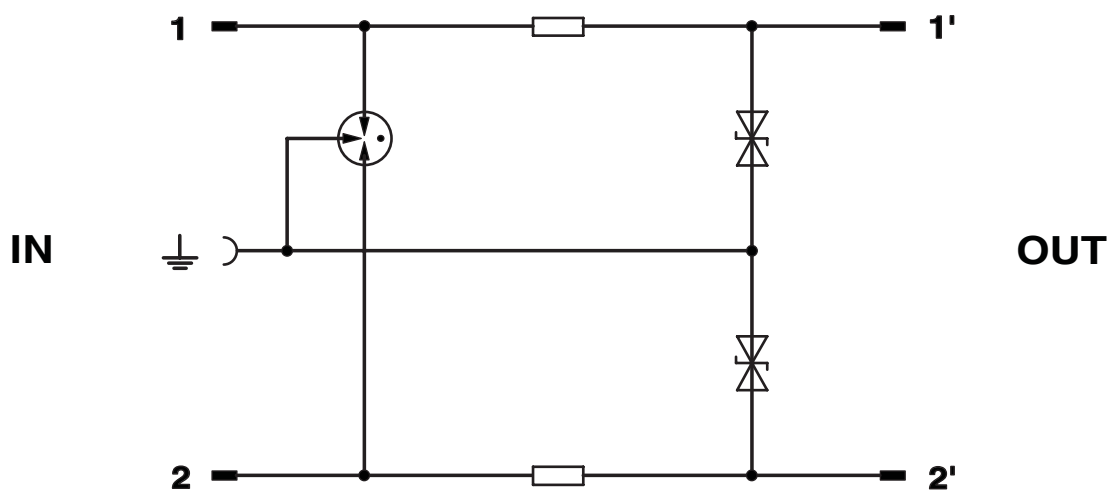
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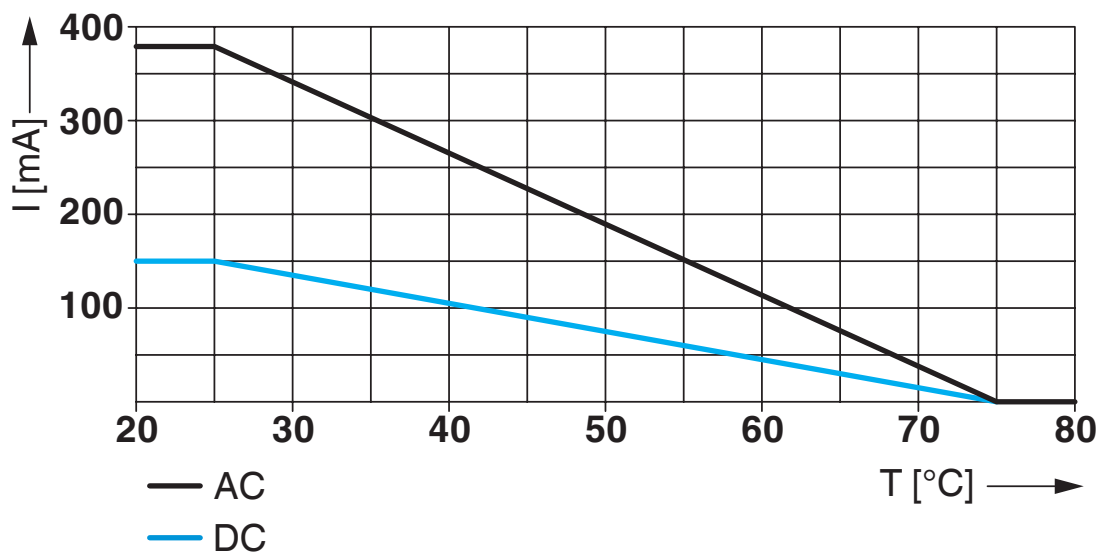


Drawings

Circuit diagram



Diagram



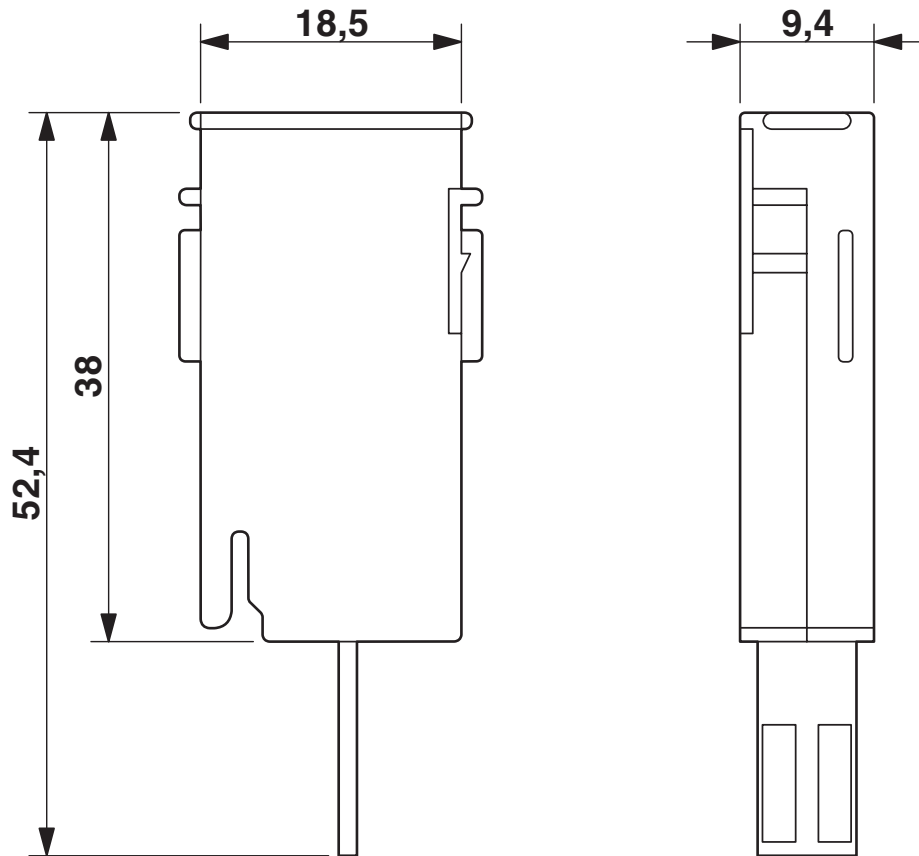
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Dimensional drawing



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Approvals

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EAC

Approval ID: EAC-Zulassung



EAC

Approval ID: RU C-DE.*09.B.00169



UL Listed

Approval ID: FILE E 138168

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Classifications

ECLASS

ECLASS-11.0	27130807
ECLASS-13.0	27171501

ETIM

ETIM 9.0	EC001625
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UNSPSC

UNSPSC 21.0	39121600
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I
China RoHS	
Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
EU REACH SVHC	
REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	9529ceaf-f541-4bb0-ab91-7e819aa8a20c

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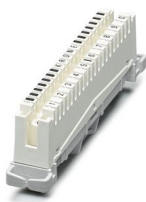
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Mandatory accessories

CT 10-TL - Disconnect strip

2765356

<https://www.phoenixcontact.com/ca/products/2765356>



LSA-PLUS disconnect strip to hold the CTM and CT 10 protection modules.
Version: 10 double conductors, dimension A: 124 mm.

CT 1-10-ES - Grounding busbar

2765547

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Ground rail for CTM protective plug when used in combination with LSA-PLUS disconnect strip. Version: 10 double conductors

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CT-TERMIBLOCK 10 DA - Screw termination block

0441711

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Screw termination block with disconnect contacts for accommodating protective plugs CT and CTM. Use in MCR and telecommunications systems. Design: 10 double wires

CTM 10-MAG - Magazine

2838610

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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

Accessories

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CTM EST - Short-circuit connector

2838649

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LSA-PLUS grounding plug (COMTRAB CTM) to short-circuit and ground potentials in CT-TERMIBLOCK... and disconnect strip CT 10...

SSA 3-6 - Shield connection

2839295

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Shield fast connection for 3 ... 6 mm cable diameter. Potential connecting cable: 200 mm, 1 mm², color: black

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SSA 5-10 - Shield connection

2839512

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Shield fast connection for 5 ... 10 mm cable diameter. Potential connecting cable:
200 mm, 1 mm², color: black

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