

CTM 2X1- 60DC - Surge protection plug

2838542

<https://www.phoenixcontact.com/us/products/2838542>

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LSA-PLUS plug with protective circuit for 2-conductor signal circuits grounded on one side.
Nominal voltage: 60 V DC

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-TERMILOCK via adapted connection technology

Commercial data

Item number	2838542
Packing unit	10 pc
Minimum order quantity	1 pc
Sales key	CL03
Product key	CL3211
GTIN	4017918819576
Weight per piece (including packing)	10.61 g
Weight per piece (excluding packing)	10.58 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

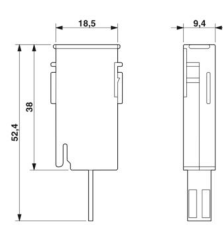
Electrical properties

Nominal voltage U_N	60 V DC
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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 color
Flammability rating according to UL 94	V-0
Housing material	PA 6.6

Mechanical properties

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2838542

<https://www.phoenixcontact.com/us/products/2838542>

Mechanical data

Open side panel	No
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Protective circuit

Direction of action	Line-Line & Line-Earth Ground
Nominal voltage U_N	60 V DC
Maximum continuous operating voltage U_C	60 V DC 50 V AC
Rated current	380 mA AC (25 °C) 150 mA DC (25 °C)
Operating effective current I_C at U_C	$\leq 70 \mu\text{A}$
Protective conductor current I_{PE}	$\leq 2 \mu\text{A}$
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	$\leq 160 \text{ V}$
Output voltage limitation at 1 kV/ μs (line-earth) static	$\leq 160 \text{ V}$
Residual voltage at I_n (conductor-ground)	$\leq 95 \text{ V}$
Residual voltage with I_{an} (10/1000) μs (line-earth)	$\leq 16 \text{ V}$
Voltage protection level U_p (line-earth)	$\leq 240 \text{ V}$ (C2 - 10 kV / 5 kA) $\leq 150 \text{ V}$ (C3 - 100 A)
Voltage protection level U_p static (line-earth)	$\leq 85 \text{ V}$ (C2 - 10 kV / 5 kA) $\leq 16 \text{ V}$ (C3 - 100 A)
Response time t_A (line-earth)	$\leq 1 \text{ ns}$
Input attenuation aE, asym.	typ. 0.3 dB ($\leq 500 \text{ kHz} / 100 \Omega$)
Cut-off frequency f_g (3 dB), asym. (PE) in 100 Ω system	typ. 2 MHz
Capacity (Core-Earth)	typ. 1 nF
Resistance per path	3.3 Ω 20 %
Surge protection fault message	none
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	$\leq 2000 \text{ m}$ (amsl)

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2838542

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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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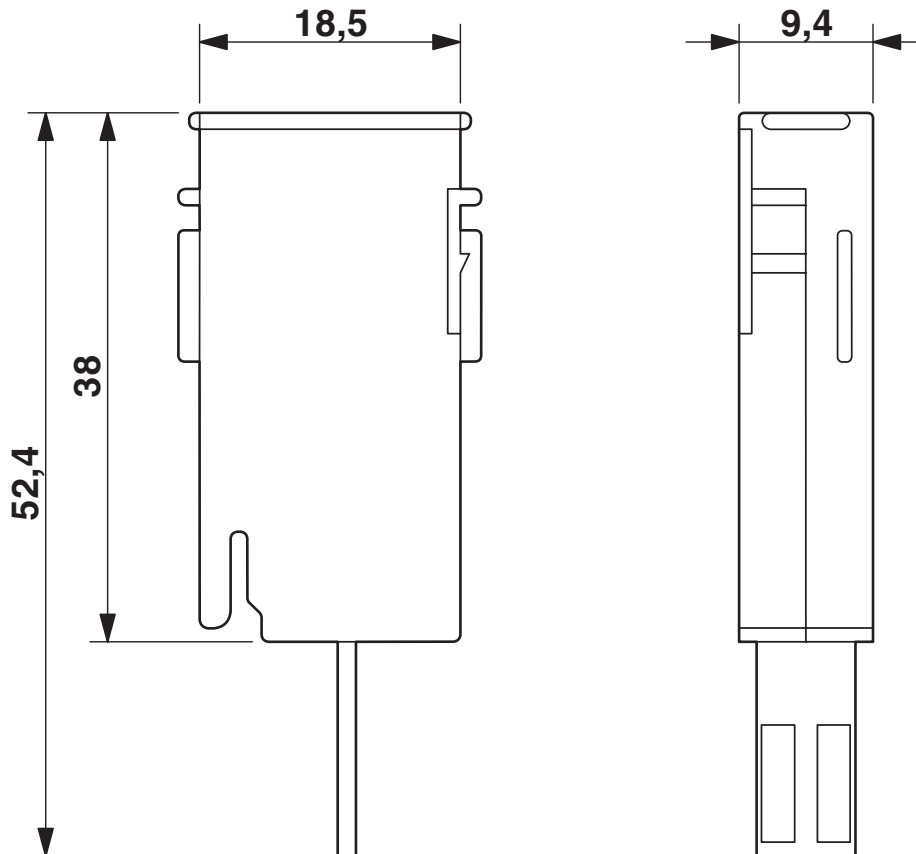
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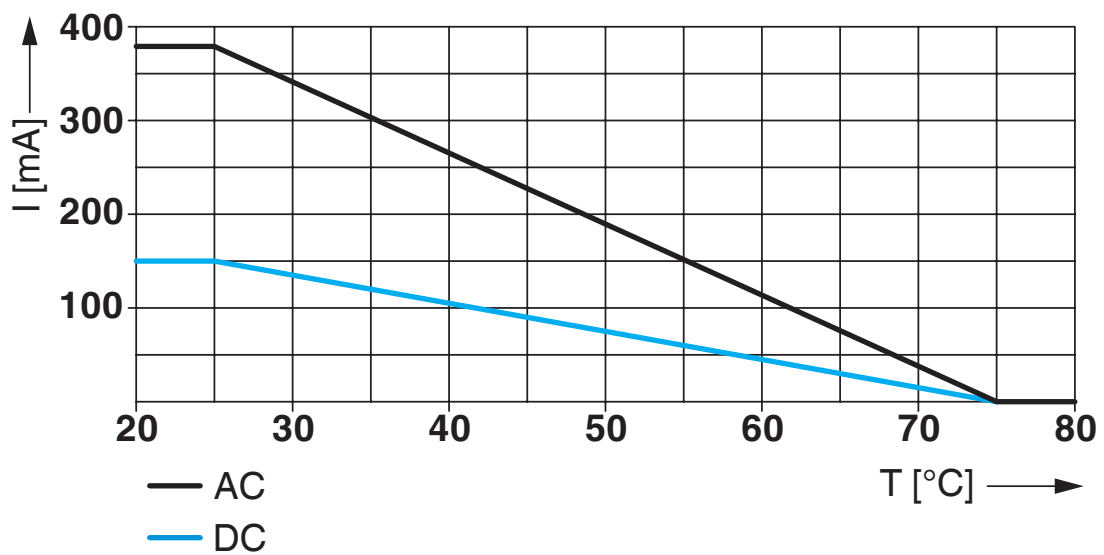
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Drawings

Dimensional drawing



Diagram



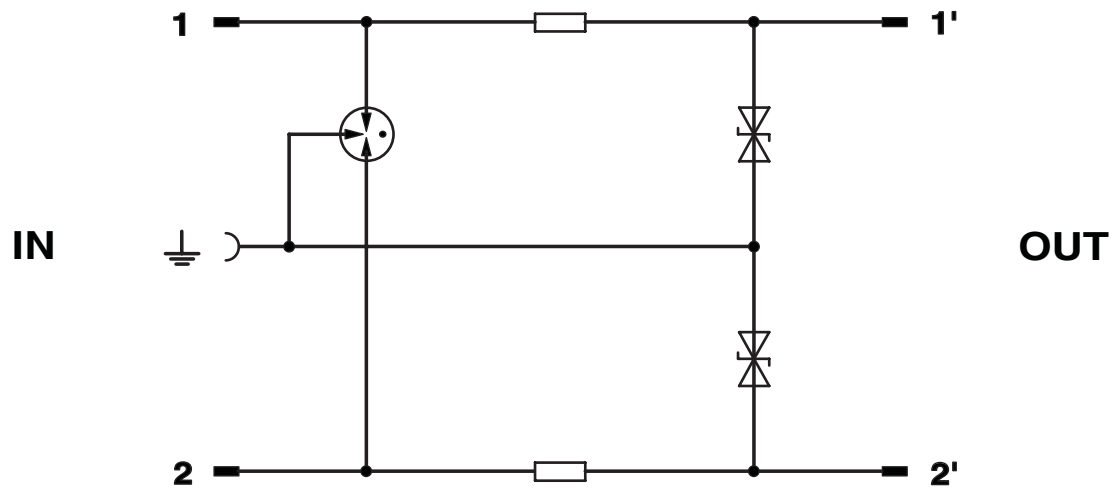
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Circuit diagram



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Approvals

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UL Listed

Approval ID: FILE E 138168

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Classifications

ECLASS

ECLASS-13.0	27171501
ECLASS-15.0	27171501

ETIM

ETIM 10.0	EC001466
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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(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.)	No substance above 0.1 wt%
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EF3.1 Climate Change

CO2e kg	1.832 kg CO2e
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