

CTM 2X1- 60DC - Surge protection plug



2838542

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

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 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-TERMIBLOCK via adapted connection technology

Commercial data

Item number	2838542
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL33
Product key	CL3211
Catalog page	Page 142 (C-4-2019)
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

CTM 2X1- 60DC - Surge protection plug



2838542

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

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

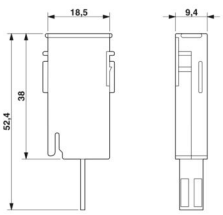
Electrical properties

Nominal voltage U_N	60 V DC
-----------------------	---------

Connection data

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

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

CTM 2X1- 60DC - Surge protection plug



2838542

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

Mechanical data

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

Protective circuit

Direction of action	Line-Line & Line-Earth Ground
Maximum continuous 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	$\leq 70 \mu A$
Residual current I_{PE}	$\leq 2 \mu A$
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	$\leq 160 V$
Output voltage limitation at 1 kV/ μs (line-earth) static	$\leq 160 V$
Residual voltage at I_n (conductor-ground)	$\leq 95 V$
Residual voltage with I_{an} (10/1000) μs (line-earth)	$\leq 16 V$
Voltage protection level U_p (line-earth)	$\leq 240 V$ (C2 - 10 kV / 5 kA)
	$\leq 150 V$ (C3 - 100 A)
Voltage protection level U_p static (line-earth)	$\leq 85 V$ (C2 - 10 kV / 5 kA)
	$\leq 16 V$ (C3 - 100 A)
Response time t_A (line-earth)	$\leq 1 ns$
Input attenuation aE, asym.	typ. 0.3 dB ($\leq 500 kHz / 100 \Omega$)
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	$\leq 2000 m$ (amsl)

Standards and regulations

CTM 2X1- 60DC - Surge protection plug



2838542

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

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 2X1- 60DC - Surge protection plug

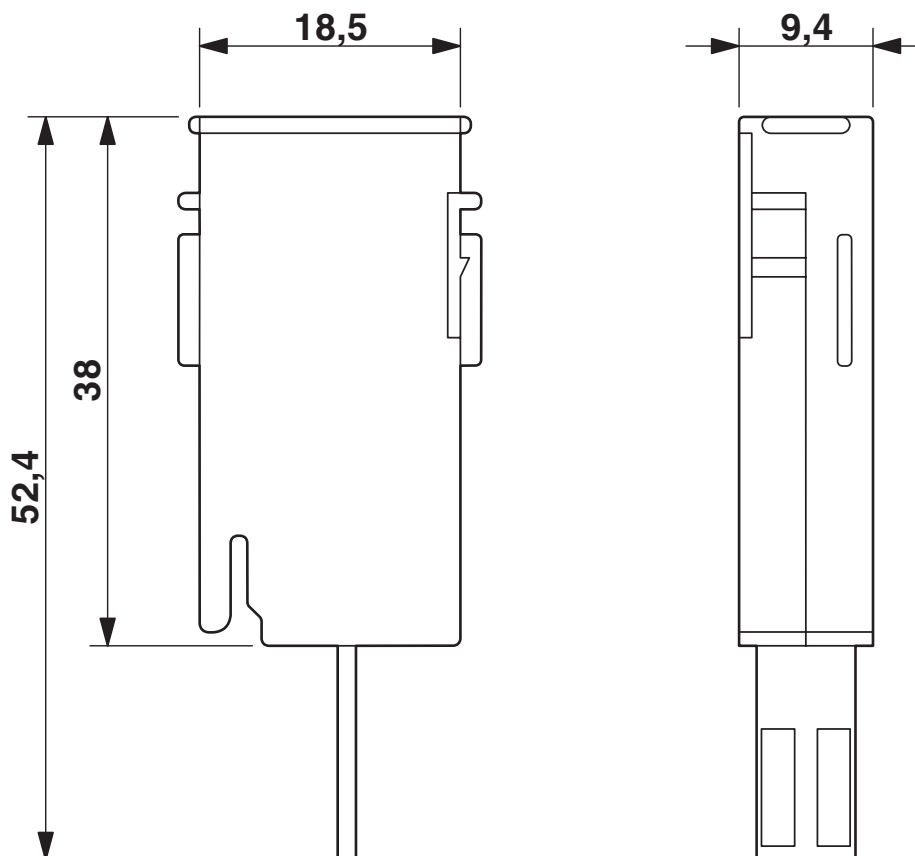
2838542

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

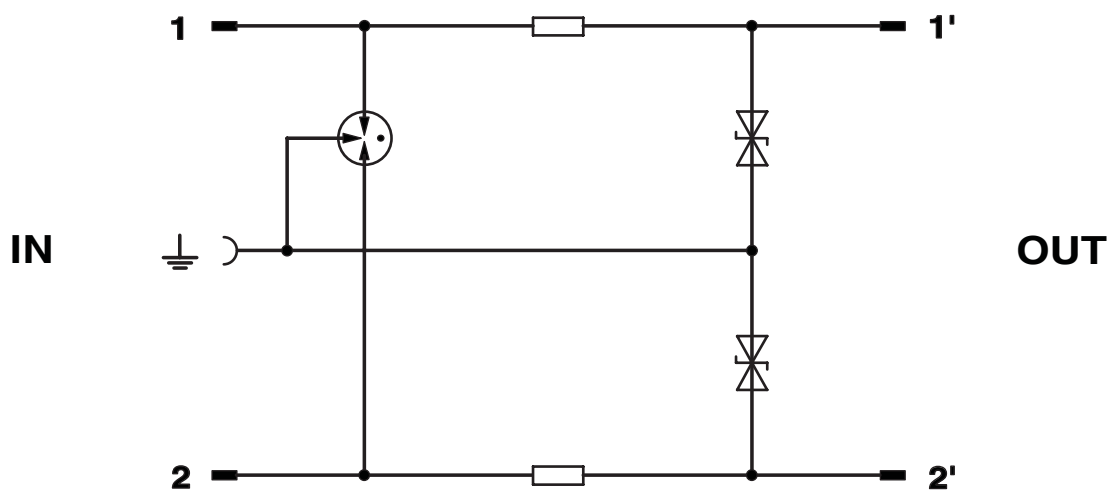


Drawings

Dimensional drawing



Circuit diagram



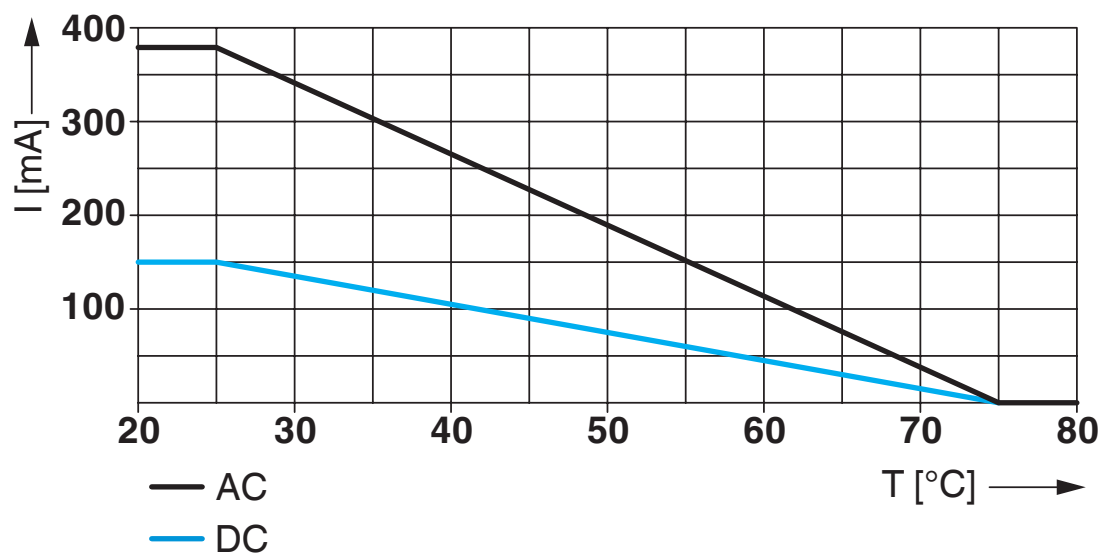
CTM 2X1- 60DC - Surge protection plug

2838542

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



Diagram



CTM 2X1- 60DC - Surge protection plug



2838542

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

Approvals

 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/ca/products/2838542>



EAC

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



UL Listed

Approval ID: FILE E 138168

CTM 2X1- 60DC - Surge protection plug



2838542

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

Classifications

ECLASS

ECLASS-11.0	27130807
ECLASS-13.0	27171501

ETIM

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

UNSPSC

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

CTM 2X1- 60DC - Surge protection plug



2838542

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

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%

CTM 2X1- 60DC - Surge protection plug



2838542

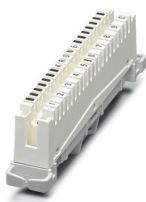
<https://www.phoenixcontact.com/ca/products/2838542>

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

<https://www.phoenixcontact.com/ca/products/2765547>



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

CTM 2X1- 60DC - Surge protection plug

2838542

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



CT-TERMIBLOCK 10 DA - Screw termination block

0441711

<https://www.phoenixcontact.com/ca/products/0441711>



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

<https://www.phoenixcontact.com/ca/products/2838610>



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

CTM 2X1- 60DC - Surge protection plug

2838542

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



CTM EST - Short-circuit connector

2838649

<https://www.phoenixcontact.com/ca/products/2838649>



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

SSA 3-6 - Shield connection

2839295

<https://www.phoenixcontact.com/ca/products/2839295>



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

CTM 2X1- 60DC - Surge protection plug

2838542

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



SSA 5-10 - Shield connection

2839512

<https://www.phoenixcontact.com/ca/products/2839512>



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

Phoenix Contact 2024 © - all rights reserved

<https://www.phoenixcontact.com>

PHOENIX CONTACT Ltd

8240 Parkhill Drive

Milton, Ontario L9T 5V7

1-800-890-2820

cdinfo@phoenixcontact.ca