CTM 2X1- 24DC - Surge protection plug

2838500

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24 V

IEC



LSA-PLUS plug (COMTRAB CTM) with protective circuit for 2-conductor signal circuits grounded on one side. Nominal voltage: 24 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	2838500
Packing unit	10 pc
Minimum order quantity	1 pc
Sales key	CL03
Product key	CL3211
GTIN	4017918819538
Weight per piece (including packing)	10.58 g
Weight per piece (excluding packing)	10.384 g
Customs tariff number	85363010
Country of origin	DE

Technical data

Product properties

Product type	Surge protection for MCR technology
Product family	COMTRAB
IEC test classification	B2
	C1
	C2
	C3
	D1
VDE requirement class	B2
	C1
	C2
	C3
	D1
Type	LSA-PLUS module
Number of positions	2
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

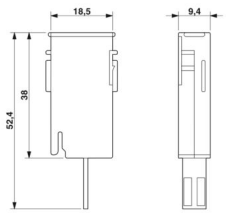
Electrical properties

Nominal voltage U_N	24 V DC

Connection data

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

Dimensions

Dimensional drawing	
Width	9.5 mm
Height	21 mm
Depth	53.5 mm

Material specifications

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

Mechanical properties

Mechanical data

Open side panel	No

Protective circuit

Direction of action	Line-Line & Line-Earth Ground
Nominal voltage U_N	24 V DC
Maximum continuous operating voltage U_C	± 30 V DC
	21 V AC
Rated current	380 mA AC (25 °C)
Operating effective current I_C at U_C	≤ 5 µA
Protective conductor current I_{PE}	≤ 2 µA
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
Max. discharge current I_{max} (8/20) µs maximum (line-earth)	10 kA (in total)
Nominal pulse current Ian (10/1000) µs (line-earth)	100 A
Output voltage limitation at 1 kV/µs (line-earth) spike	55 V
Output voltage limitation at 1 kV/µs (line-earth) static	≤ 45 V
Residual voltage at I_n (conductor-ground)	≤ 50 V
Residual voltage with Ian (10/1000) µs (line-earth)	≤ 15 V
Voltage protection level U_p (line-earth)	≤ 100 V (C2 - 10 kV/5 kA, spike)
	≤ 45 V (C2 - 10 kV/5 kA, static)
	≤ 45 V (C3 - 7.5 kV / 100 A, spike)
	≤ 15 V (C3 - 7.5 kV / 100 A, static)
Response time t_A (line-earth)	≤ 1 ns
Input attenuation aE, asym.	0.3 dB (≤ 700 kHz)
Cut-off frequency fg (3 dB), asym. (PE) in 100 Ω system	2.7 MHz
Capacity (Core-Earth)	1.2 nF (f=1 MHz / V_R= 0 V)
Resistance per path	3.3 Ω 10 %
Surge protection fault message	none
Impulse durability (line-earth)	C2 - 4 kV / 2 kA
	C3 - 100 A
	B2 - 4 kV / 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

Standards and regulations

VDE requirement class	B2
	C1
	C2
	C3
	D1

Standards Information technology specification

Standards/regulations	IEC 61643-21
	IEC 61643-21

Air clearances and creepage distances

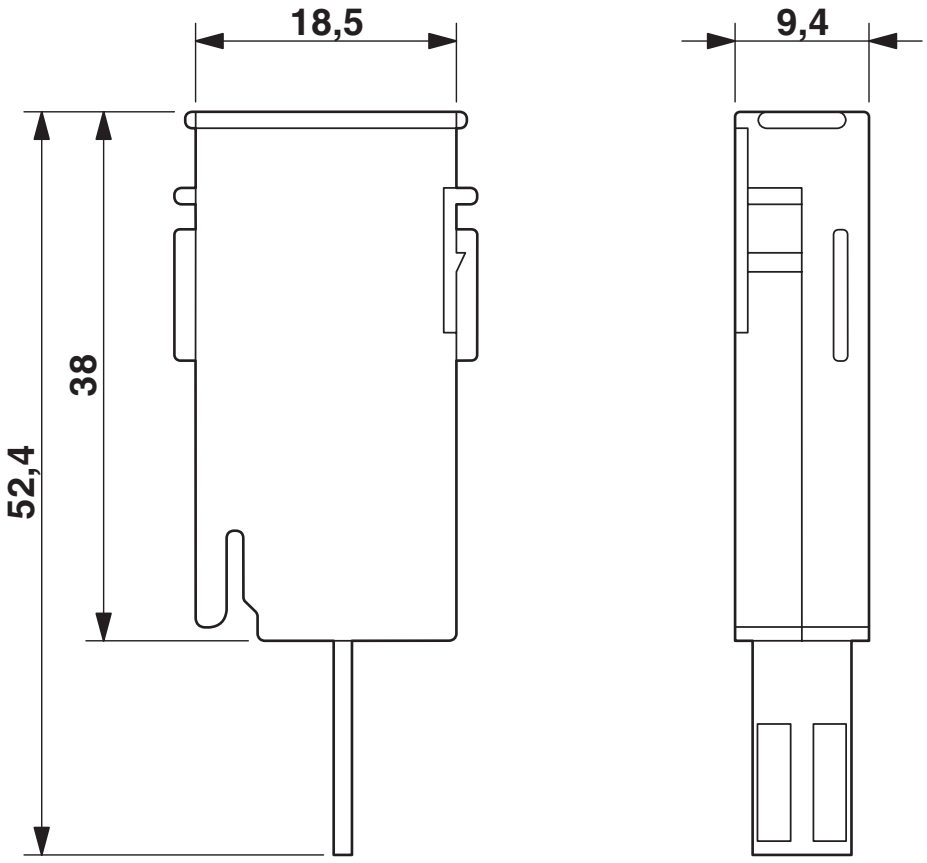
Standards/regulations	DIN VDE 0110-1 / IEC 60664-1
Standards/specifications	IEC 61643-21
Note	2000

Mounting

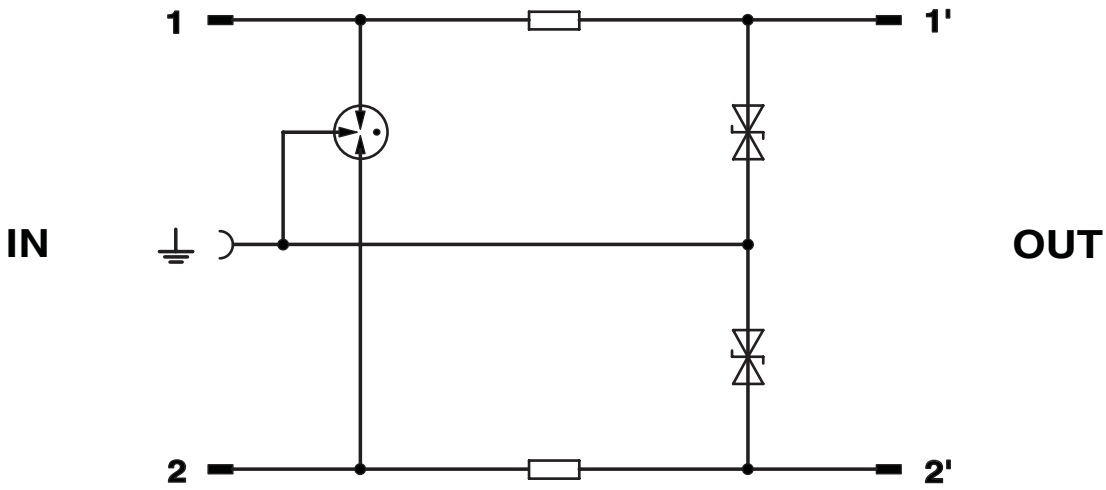
Mounting type	On CT-TERMIBLOCK and LSA-PLUS disconnect strip

Drawings

Dimensional drawing



Circuit diagram



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2838500

UL Listed
Approval ID: FILE E 138168

Classifications

ECLASS

ECLASS-13.0	27171501
ECLASS-15.0	27171501

ETIM

ETIM 10.0	EC001466

UNSPSC

UNSPSC 21.0	39121600

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	9d76fbce-22bc-4c7a-9386-deedc63127d1

EF3.1 Climate Change

CO2e kg	1.561 kg CO2e

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