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CTM 2X1-180DC-GS-P - Surge protection plug

2838623

https://www.phoenixcontact.com/gb/products/2838623

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LSA-PLUS protective plug (COMTRAB CTM) with power cross and coarse surge protection for 2 signal lines. Nominal voltage: 180 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	2838623
Packing unit	10 pc
Minimum order quantity	1 pc
Sales key	CL3211
Product key	CL3211
Catalog page	Page 191 (C-4-2019)
GTIN	4017918948375
Weight per piece (including packing)	8.38 g
Weight per piece (excluding packing)	8.34 g
Customs tariff number	85363010
Country of origin	DE

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Technical data

Product properties

Product type	Surge protection for information technology
Product family	COMTRAB
IEC test classification	A2
	B1
	B2
	B3
	C1
	C2
	C3
	D1
	D2
VDE requirement class	A2
	B1
	B2
	B3
	C1
	C2
	C3
	D1
	D2
Type	LSA-PLUS module
Surge protection fault message	none
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 2.20
Wire pairs per module	1

Insulation characteristics

Overvoltage category	II
Pollution degree	2

Electrical properties

Near-end crosstalk attenuation aN between adjacent articles	70 dB (up to 1 MHz 100 Ω system)
	50 dB (up to 10 MHz 100 Ω system)
	30 dB (up to 100 MHz, 100 Ω system)
Nominal voltage U_N	180 V DC

Connection data

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

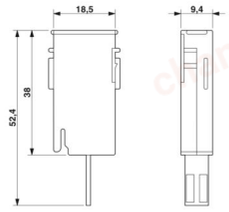
Dimensions

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Dimensional drawing	
Width	9.5 mm
Height	21 mm
Depth	53.5 mm

Material specifications

Color	black (RAL 9005)
	Copper
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
Maximum continuous voltage U_C	± 180 V DC
Rated current	120 mA (25 °C)
Operating effective current I_C at U_C	≤ 2 µA
Residual 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	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)	200 A
Output voltage limitation at 1 kV/µs (line-earth) spike	≤ 800 V
Output voltage limitation at 1 kV/µs (line-earth) static	≤ 800 V
Residual voltage at I_n (conductor-ground)	≤ 70 V
Residual voltage with Ian (10/1000) µs (line-earth)	≤ 28 V
Voltage protection level U_p (line-earth)	≤ 900 V (C2 - 10 kV/5 kA, spike)
	≤ 70 V (C2 - 10 kV/5 kA, static)
	≤ 1 kV (C3 - 7.5 kV / 100 A, spike)
	≤ 30 V (C3 - 7.5 kV / 100 A, static)
Response time t_A (line-earth)	≤ 100 ns
Input attenuation aE, asym.	0.5 dB (≤ 10 MHz)
	0.6 dB (up to 60 MHz in 100 Ω system)

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	1 dB (up to 100 MHz, 100 Ω)
Cut-off frequency fg (3 dB), asym. (PE) in 100 Ω system	> 100 MHz
Capacity (Core-Earth)	5 pF (f=1 MHz / V_R= 0 V)
Resistance per path	5.5 Ω ±1.5 Ω (Symmetry:±0.5 Ω)
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)	-40 °C ... 85 °C

Standards and regulations

VDE requirement class	A2
	B1
	B2
	B3
	C1
	C2
	C3
	D1
	D2

Air clearances and creepage distances

Standards/regulations	DIN VDE 0110-1 / IEC 60664-1

Standards Information technology specification

Standards/regulations	IEC 61643-21
	IEC 61643-21
Standards/specifications	IEC 61643-21
Note	2002

Mounting

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

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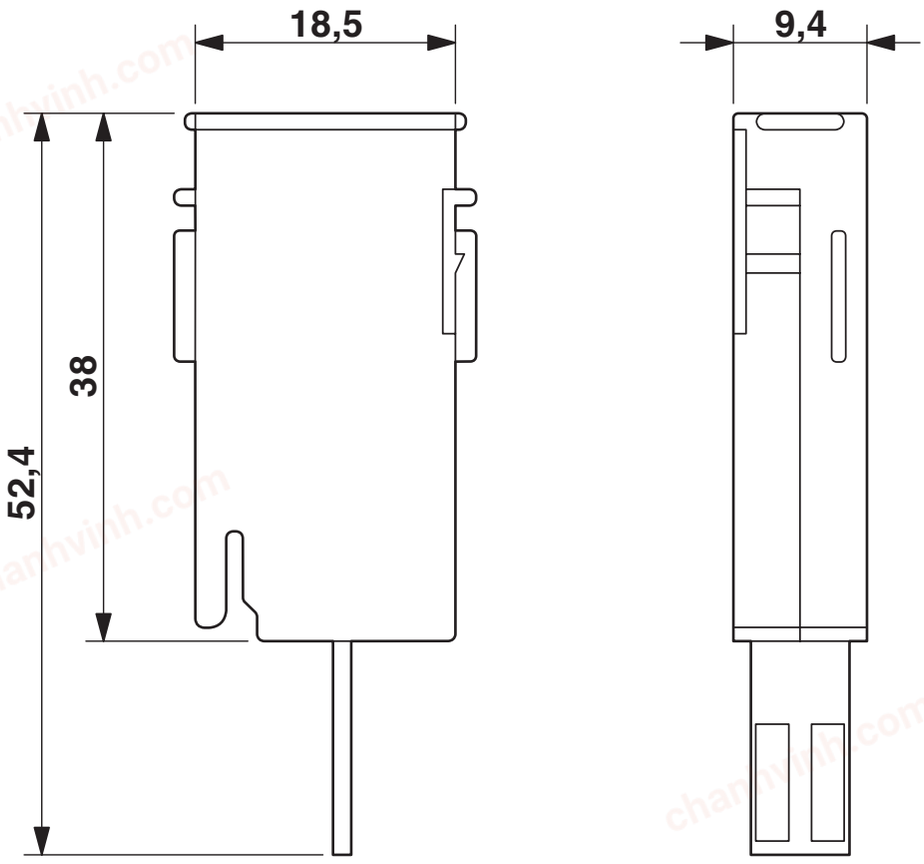
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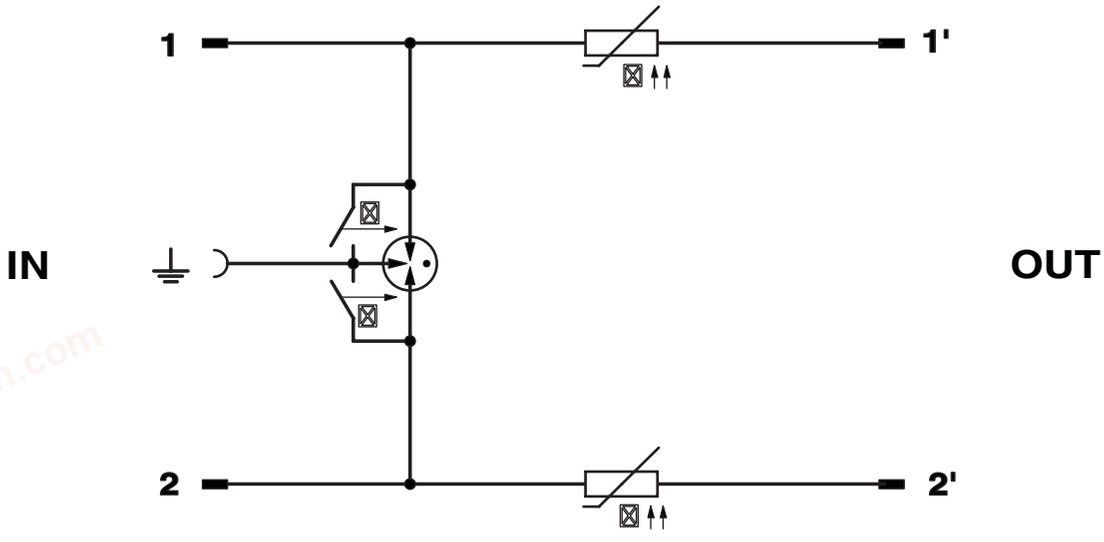
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Drawings

Dimensional drawing



Circuit diagram



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Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/gb/products/2838623

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	27171503

ETIM

ETIM 9.0	EC001466

UNSPSC

UNSPSC 21.0	39121600

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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions

China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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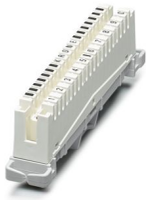
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Mandatory accessories

CT 10-TL - Disconnect strip

2765356

https://www.phoenixcontact.com/gb/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/gb/products/2765547



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

https://www.phoenixcontact.com/gb/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/gb/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

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CTM EST - Short-circuit connector

2838649

https://www.phoenixcontact.com/gb/products/2838649



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 mm^2, color: black

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SSA 5-10 - Shield connection

2839512

https://www.phoenixcontact.com/gb/products/2839512



Shield fast connection for 5 ... 10 mm cable diameter. Potential connecting cable: 200 mm, 1 mm^2, color: black

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