

CTM 1X2- 24DC - Surge protection plug

2838513

<https://www.phoenixcontact.com/us/products/2838513>

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LSA-PLUS plug (COMTRAB CTM) with protection for conductor pairs in floating signal circuits.
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	2838513
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	CL03
Product key	CL3211
Catalog page	Page 126 (C-4-2019)
GTIN	4017918819545
Weight per piece (including packing)	10.17 g
Weight per piece (excluding packing)	10 g
Customs tariff number	85363010
Country of origin	DE

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Technical data

Product properties

IEC test classification	B2
	C1
	C2
	C3
	D1
VDE requirement class	B2
	C1
	C2
	C3
	D1
Type	LSA-PLUS module
Product type	Surge protection for MCR technology
Product family	COMTRAB
Number of positions	2
Surge protection fault message	none
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 1.10
Wire pairs per module	1

Insulation characteristics

Overvoltage category	II
Pollution degree	2

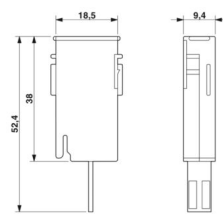
Electrical properties

Nominal voltage U_N	24 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	9.5 mm
Height	21 mm
Depth	53.5 mm

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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
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Protective circuit

Direction of action	Line-Line & Line-Earth Ground
Maximum continuous 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 μ A
Residual current I_{PE}	≤ 2 μ A
Nominal discharge current I_n (8/20) μ s (line-line)	5 kA
Nominal discharge current I_n (8/20) μ s (line-ground)	5 kA
Pulse discharge current I_{imp} (10/350) μ s (line-earth)	1 kA
Total discharge current I_{total} (8/20) μ s	10 kA
Total discharge current I_{total} (10/350) μ s	2.5 kA
Max. discharge current I_{max} (8/20) μ s maximum (line-earth)	10 kA (in total)
Nominal pulse current I_{an} (10/1000) μ s (line-line)	100 A
Nominal pulse current I_{an} (10/1000) μ s (line-earth)	100 A
Output voltage limitation at 1 kV/ μ s (line-line) spike	≤ 70 V
Output voltage limitation at 1 kV/ μ s (line-earth) spike	≤ 700 V
Output voltage limitation at 1 kV/ μ s (line-line) static	≤ 70 V
Output voltage limitation at 1 kV/ μ s (line-earth) static	≤ 700 V
Residual voltage at I_n (conductor-conductor)	≤ 45 V
Residual voltage at I_n (conductor-ground)	≤ 60 V
Residual voltage with I_{an} (10/1000) μ s (line-line)	≤ 25 V
Residual voltage with I_{an} (10/1000) μ s (line-earth)	≤ 12 V
Voltage protection level U_p (line-line)	≤ 70 V (C2 - 10 kV / 5 kA)
	≤ 45 V (C3, 7.5 kV/100 A)
Voltage protection level U_p (line-earth)	≤ 700 V (C2 - 10 kV / 5 kA)
	≤ 700 V (C3, 7.5 kV/100 A)
Voltage protection level U_p static (line-line)	≤ 45 V (C2 - 10 kV / 5 kA)
	≤ 25 V (C3, 7.5 kV/100 A)
Voltage protection level U_p static (line-earth)	≤ 60 V (C2 - 10 kV / 5 kA)
	≤ 12 V (C3, 7.5 kV/100 A)
Response time t_A (line-line)	≤ 1 ns
Response time t_A (line-earth)	≤ 100 ns

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Input attenuation aE, sym.	0.3 dB (\leq 600 kHz)
Cut-off frequency f_g (3 dB), sym. in 100 Ω system	2.7 MHz
Capacity (Core-Core)	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-line)	C2 - 4 kV / 2 kA
	C3 - 100 A
	B2 - 4 kV / 100 A
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

Air clearances and creepage distances

Standards/regulations	DIN VDE 0110-1 / IEC 60664-1
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Standards Information technology specification

Standards/regulations	IEC 61643-21
	IEC 61643-21
Standards/specifications	IEC 61643-21
Note	2000

Mounting

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

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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