

Surge protection plug - CTM 1X2- 24DC - 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

- ✓ Can be used in LSA-PLUS disconnect and control strips or CT-TERMIBLOCK
- ✓ The CTM 10-MAG surge protection magazine can be freely fitted with various protective plugs
- ✓ Space-saving LSA-PLUS connection technology
- ✓ Typical installation locations include marshalling distributors
- ✓ Modular compact protection for high-density networks



Key Commercial Data

Packing unit	10 pc
GTIN	 4 017918 819545
GTIN	4017918819545

Technical data

Dimensions

Height	21 mm
Width	9.5 mm
Depth	53.5 mm

Ambient conditions

Ambient temperature (operation)	-25 °C ... 75 °C
Degree of protection	IP20

General

Housing material	PA
Flammability rating according to UL 94	V-0
Color	black
Standards for clearances and creepage distances	DIN VDE 0110-1

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Technical data

General

	IEC 60664-1
Overvoltage category	II
Degree of pollution	2
Mounting type	On CT-TERMIBLOCK and LSA-PLUS disconnect strip
Type	LSA-PLUS module
Number of positions	2
Direction of action	Line-Line & Line-Earth Ground
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 1.10

Protective circuit

IEC test classification	B2
	C1
	C2
	C3
	D1
VDE requirement class	B2
	C1
	C2
	C3
	D1
Nominal voltage U_N	24 V DC
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-earth)	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 (line-line)	≤ 45 V
Residual voltage at I_n (line-earth)	≤ 60 V
Residual voltage with I_{an} (10/1000) μ s (line-line)	≤ 25 V

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Technical data

Protective circuit

Residual voltage with I _{an} (10/1000) μs (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
Input attenuation aE, sym.	0.3 dB (≤ 600 kHz)
Cut-off frequency f _g (3 dB), sym. in 100 Ohm system	2.7 MHz
Capacity (line-line)	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

Connection data

Connection method	can be plugged into COMTRAB-TERMIBLOCK and LSA-PLUS disconnect and switching strips
Connection method IN	COMTRAB plug-in system
Connection method OUT	COMTRAB plug-in system
Connection technology	LSA-PLUS

Connection, equipotential bonding

Connection method	Spring contact
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Standards and Regulations

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

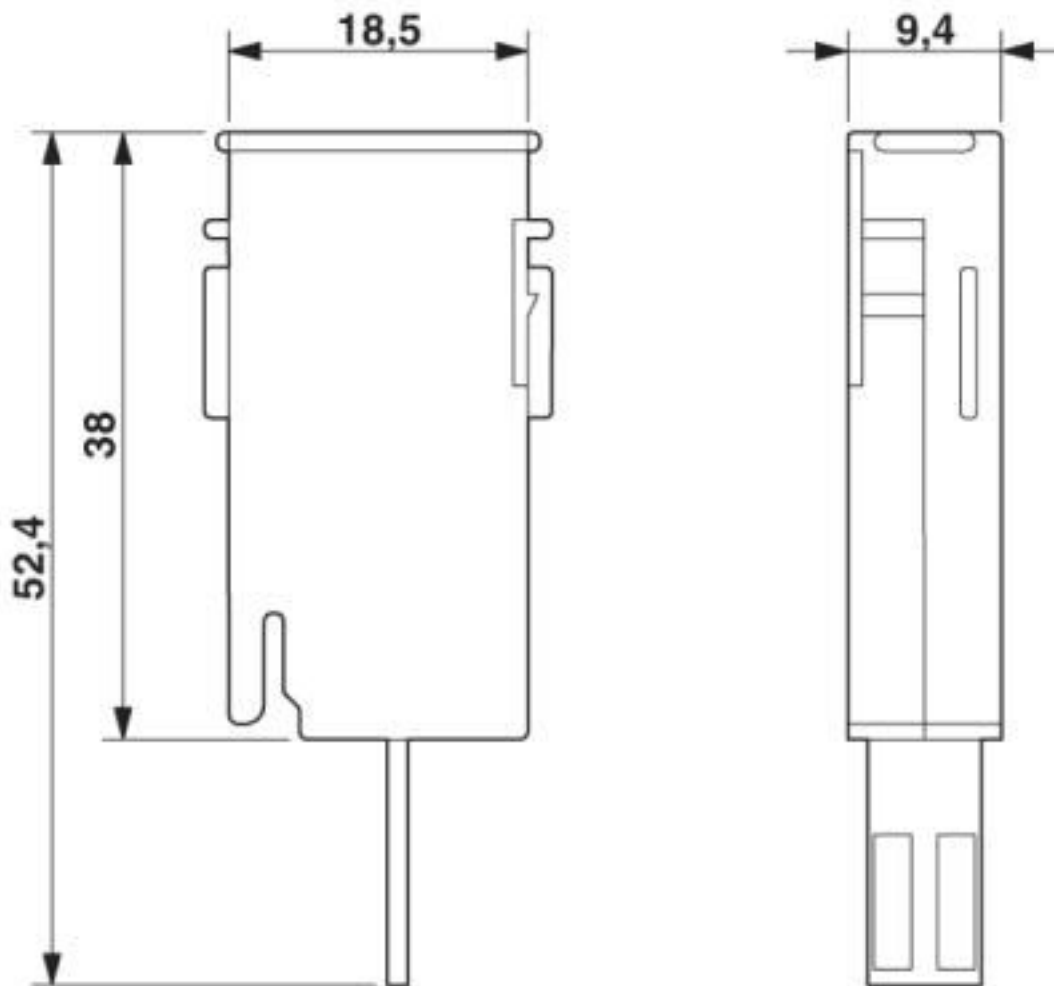
Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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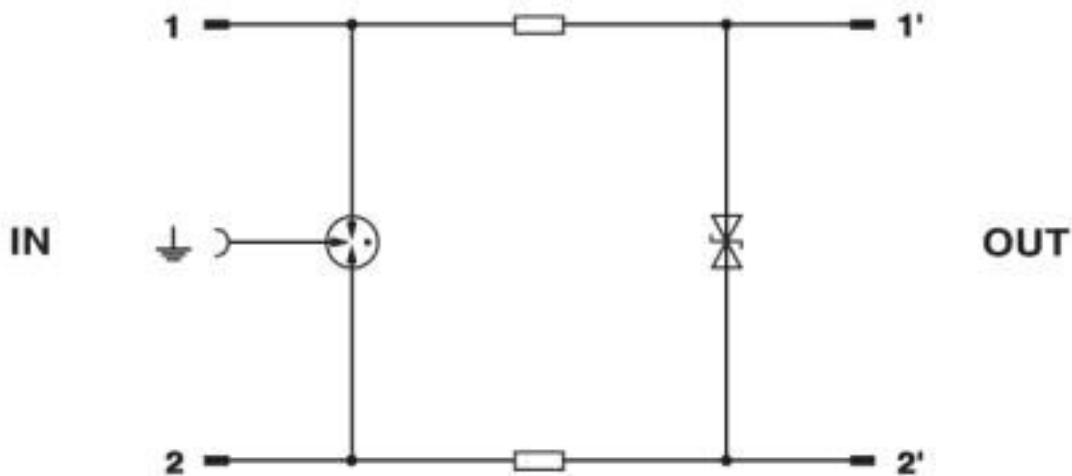
Drawings

Dimensional drawing



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Circuit diagram



Classifications

eCl@ss

eCl@ss 10.0.1	27130807
eCl@ss 4.0	27130800
eCl@ss 4.1	27130800
eCl@ss 5.0	27130800
eCl@ss 5.1	27130800
eCl@ss 6.0	27130800
eCl@ss 7.0	27130807
eCl@ss 8.0	27130807
eCl@ss 9.0	27130807

ETIM

ETIM 2.0	EC000943
ETIM 3.0	EC000943
ETIM 4.0	EC000943
ETIM 5.0	EC000943
ETIM 6.0	EC000943
ETIM 7.0	EC000943

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620
UNSPSC 18.0	39121620
UNSPSC 19.0	39121620

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Classifications

UNSPSC

UNSPSC 20.0	39121620
UNSPSC 21.0	39121620

Approvals

Approvals

Approvals

UL Listed / EAC

Ex Approvals

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 138168
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EAC		RU C- DE.*09.B.00169
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Accessories

Necessary add-on products

Disconnect strip - CT 10-TL - 2765356



LSA-PLUS disconnect strip to hold the CTM and CT 10 protection modules. Version: 10 double conductors, dimension A: 124 mm.

Grounding rail - CT 1-10-ES - 2765547



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

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Accessories

Screw termination block - CT-TERMIBLOCK 10 DA - 0441711



Screw termination block with disconnect contacts for accommodating protective plugs CT and CTM. Use in MCR and telecommunications systems. Design: 10 double wires

Magazine - CTM 10-MAG - 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

Additional products

Mounting clip - CT 10-MB/ 3 - 2765372



Mounting clip, for holding 3 disconnect or ground wire strips. Version: 10 double conductors, dimensions: A 104.5 mm, B 65 mm.

Mounting clip - CT 10-MB/10 - 2765385



Mounting clip, for holding 10 disconnect or ground wire strips. Version: 10 double conductors, dimensions: A 104.5 mm, dimensions B 245.5 mm

Cable feed-through sleeve - CT-KDT - 2765518



Cable bush for assembly troughs, for protection of the lines guided through the laminated frame

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Accessories

Short-circuit connector - CTM EST - 2838649



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

Shield connection - SSA 3-6 - 2839295



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

Shield connection - SSA 5-10 - 2839512



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

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