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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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LSA-PLUS protective plug (COMTRAB CTM) with coarse surge protection for 2 signal wires from analog and digital telecommunications interfaces (up to 44 Mbps). Nominal voltage: 180 V DC

#### **Product Features**

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







### Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	7.79 GRM
Custom tariff number	85363010
Country of origin	Germany

#### Technical data

#### **Dimensions**

Height	21 mm
Width	9.5 mm
Depth	53.5 mm

#### Ambient conditions

Ambient temperature (operation)	-40 °C 85 °C
Degree of protection	IP20

#### General



## Technical data

#### General

Housing material	PA
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	DIN VDE 0110-1
	IEC 60664-1
Surge voltage category	II
Pollution degree	2
Mounting type	On CT-TERMIBLOCK and LSA-PLUS disconnect strip
Туре	LSA-PLUS module
Direction of action	Line-Line & Line-Earth Ground
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 2.12
Near-end crosstalk attenuation aN between adjacent articles	70 dB (up to 1 MHz 100 Ω system)
	50 dB (up to 10 MHz 100 $\Omega$ system)
	30 dB (up to 100 MHz, 100 Ω system)
Transmission speed	44 MBit/s

#### Protective circuit

IEC test classification	A2
	B1
	B2
	B3
	C1
	C2
	C3
	D1
	D2
VDE requirement class	A2
	B1
	B2
	B3
	C1
	C2
	C3
	D1
	D2
Nominal voltage U <sub>N</sub>	180 V DC
Maximum continuous operating voltage U <sub>C</sub>	± 180 V DC
Maximum continuous voltage U <sub>C</sub> (wire-ground)	± 180 V DC

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## Technical data

#### Protective circuit

Nominal current I <sub>N</sub>	1.5 A (25 °C)
Operating effective current I <sub>C</sub> at U <sub>C</sub>	≤ 2 μA
Residual current I <sub>PE</sub>	≤ 2 µA
Nominal discharge current I <sub>n</sub> (8/20) µs (Core-Earth)	5 kA
Total surge current (8/20) μs	10 kA
Total surge current (10/350) μs	2.5 kA
Max. discharge current I <sub>max</sub> (8/20) μs maximum (Core-Earth)	10 kA (in total)
Nominal pulse current lan (10/1000) µs (Core-Earth)	200 A
Impulse discharge current (10/350)#µs, peak value I <sub>imp</sub>	1 kA
Output voltage limitation at 1 kV/µs (Core-Earth) spike	≤ 800 V
Output voltage limitation at 1 kV/µs (Core-Earth) static	≤ 800 V
Residual voltage at I <sub>n</sub> , (conductor-ground)	≤ 70 V
Residual voltage with Ian (10/1000)µs (conductor-ground)	≤ 28 V
Voltage protection level U <sub>P</sub> (Core-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 tA (Core-Earth)	≤ 100 ns
Input attenuation aE, asym.	0.1 dB (≤ 10 MHz)
	0.2 dB (≤ 60 MHz)
	0.5 dB (≤ 100 MHz)
Cut-off frequency fg (3 dB), asym. (PE) in 100 Ohm system	> 100 MHz
Capacity (Core-Earth)	5 pF (f=1 MHz / V <sub>R</sub> = 0 V)
Surge current resistance (conductor-ground)	C2 (4 kV / 2 kA)
	C3 - 100 A
	B2 - 4 kV/100 A
	D1 - 1 kA
Alternating current carrying capacity (conductor-ground)	5 A - 1 s

#### Connection data

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

### Connection, equipotential bonding

Connection method	Spring contact



## Technical data

Standards and Regulations

Standards/regulations	IEC 61643-21

## Classifications

#### eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130807
eCl@ss 7.0	27130807
eCl@ss 8.0	27130807

#### **ETIM**

ETIM 2.0	EC000943
ETIM 3.0	EC000943
ETIM 4.0	EC000943
ETIM 5.0	EC000943

#### UNSPSC

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

### Approvals

Approvals

Approvals

GOST / UL Listed

Ex Approvals

Approvals submitted



## Approvals

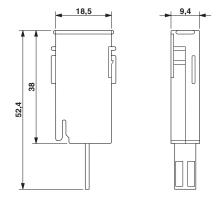
Approval details



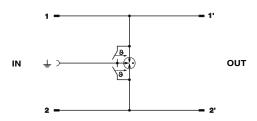


### Drawings

#### Dimensioned drawing



#### Circuit diagram



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