

# CTM 2X1-180DC-GS-P


Order No.: 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



Commercial data	
GTIN (EAN)	
sales group	J460
Pack	10 pcs.
Customs tariff	85363010
Catalog page information	Page 115 (TT-2009)

### Product notes

WEEE/RoHS-compliant since:  
04/12/2006



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Technical data	
General	
Housing material	PA
Inflammability class acc. to UL 94	V0
Color	black

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Standards for air and creepage distances	DIN VDE 0110-1
	IEC 60664-1: 1992-10
Surge voltage category	II
Pollution degree	2
Total surge current (8/20) $\mu$ s	10 kA
Total surge current (10/350) $\mu$ s	2.5 kA
Ambient temperature (operation)	-40 °C ... 85 °C
Mounting type	On CT-TERMIBLOCK and LSA-PLUS disconnect strip
Design	LSA-PLUS module
Degree of protection	IP20
Direction of action	Line-Line & Line-Earth Ground
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 2.20
Near-end crosstalk attenuation aN between adjacent articles	70 dB (up to 1 MHz 100 $\Omega$ system)
	50 dB (up to 10 MHz 100 $\Omega$ system)
	30 dB (up to 100 MHz, 100 $\Omega$ system)
Width	9.50 mm
Height	53.50 mm
Length	21.00 mm

**Protective circuit**

IEC category	A2
	B1
	B2
	B3
	C1
	C2
	C3
	D1
	D2

VDE requirement class	A2
	B1
	B2
	B3
	C1
	C2
	C3
	D1
	D2
Nominal voltage $U_N$	180 V DC
Maximum continuous operating voltage $U_C$	$\pm 180$ V DC
Maximum continuous voltage $U_C$ (wire-ground)	$\pm 180$ V DC
Nominal current $I_N$	120 mA (25 °C)
Operating effective current $I_C$ at $U_C$	$\leq 2$ $\mu$ A
Ground conductor current $I_{PE}$	$\leq 2$ $\mu$ A
Nominal discharge surge current $I_n$ (8/20) $\mu$ s (Core-Earth)	5 kA
Total surge current (8/20) $\mu$ s	10 kA
Max. discharge surge current $I_{max}$ (8/20) $\mu$ s maximum (Core-Earth)	10 kA (in total)
Nominal pulse current $I_{an}$ (10/1000) $\mu$ s (Core-Earth)	200 A
Lightning test current (10/350) $\mu$ s, peak value $I_{imp}$	1 kA
Output voltage limitation at 1 kV/ $\mu$ s (Core-Earth) spike	$\leq 800$ V
Output voltage limitation at 1 kV/ $\mu$ s (Core-Earth) static	$\leq 800$ V
Residual voltage at $I_n$ , (conductor-ground)	$\leq 70$ V
Residual voltage with $I_{an}$ (10/1000) $\mu$ s (conductor-ground)	$\leq 28$ V
Protection level $U_p$ (Core-Earth)	$\leq 900$ V (C2, 10 kV/5 kA, spike)
	$\leq 70$ V (C2, 10 kV/5 kA, static)
	$\leq 1$ kV (C3, 7.5 kV/100 A, spike)
	$\leq 30$ V (C3, 7.5 kV/100 A, static)
Response time $t_A$ (Core-Earth)	$\leq 100$ ns
Input attenuation $a_E$ , asym.	0.5 dB ( $\leq 10$ MHz)
	0.6 dB (up to 60 MHz in 100 $\Omega$ system)
	1 dB (Up to 100 MHz, 100 $\Omega$ )

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)
Resistance in series	5.5 Ω; +/- 1.5 (symmetry: +/- 0.5 Ω;)
	5.5 Ω (+/- 1.5 Ω)
Surge carrying capacity in acc. with IEC 61643-21 (Core-Earth)	C2 (4 kV / 2 kA)
	C3 (100 A)
	B2 (4 kV / 100 A)
	D1 (1 kA)
Alternating current carrying capacity in acc. with IEC 61643-21 (Core-Earth)	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
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#### Connection, protective circuit

Standards/regulations	IEC 61643-21
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#### Certificates / Approvals



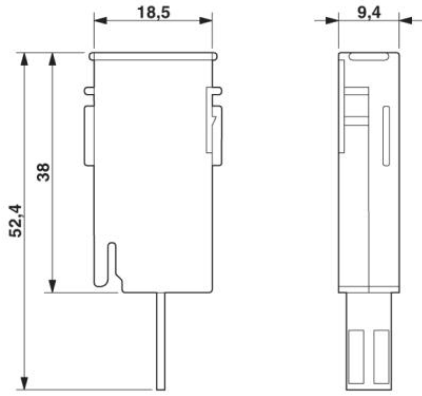
Certification GOST, UL

#### Additional products

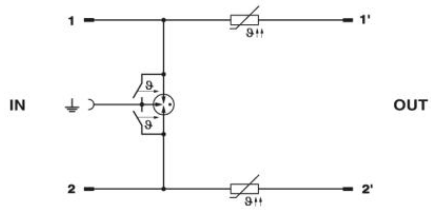
Item	Designation	Description
<b>Assembly</b>		
0441711	CT-TERMIBLOCK 10 DA	Screw termination block with disconnect contacts for accommodating protective plugs CT and CTM. Use in MCR and telecommunications systems. Design: 10 double wires
2839295	SSA 3-6	shield fast connections for conductor diameter 3 - 6 mm. Potential connection cable: 200 mm, black
2839512	SSA 5-10	Shield fast connection for conductor diameters 5 - 10 mm. Potential connection cable: 200 mm, black
<b>General</b>		
2765547	CT 1-10-ES	Ground rail for CTM protective plug when used in combination with LSA-PLUS disconnect strip. Version: 10 double conductors
2765372	CT 10-MB/ 3	Mounting clip, for holding 3 disconnect or ground wire strips. Version: 10 double conductors, dimensions: A 104.5 mm, B 65 mm.
2765385	CT 10-MB/10	Mounting clip, for holding 10 disconnect or ground wire strips. Version: 10 double conductors, dimensions: A 104.5 mm, dimensions B 245.5 mm
2765356	CT 10-TL	LSA-PLUS disconnect strip to hold the CTM and CT 10 protection modules. Version: 10 double conductors, dimension A: 124 mm.
2765518	CT-KDT	Cable bush for assembly troughs, for protection of the lines guided through the laminated frame
2838610	CTM 10-MAG	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
2838649	CTM EST	LSA-PLUS grounding plug (COMTRAB CTM) to short-circuit and ground potentials in CT-TERMIBLOCK... and disconnect strip CT 10...

## Diagrams/Drawings

### Dimensioned drawing



### Circuit diagram



**Address**

PHOENIX CONTACT Inc., USA  
586 Fulling Mill Road  
Middletown, PA 17057, USA  
Phone (800) 888-7388  
Fax (717) 944-1625  
<http://www.phoenixcon.com>



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