

# Lightning/surge arrester type 1/2 - VAL-MS-T1/T2 175/12.5/1+0 - 2801043

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Universal varistor-based plug-in lightning/surge arrester for 1-phase power supply networks with common N and PE (2-conductor system: L1, PEN).

## Why buy this product

- Plugs can be checked with CHECKMASTER
- Secure hold of plugs in the event of high lightning current loads and strong vibrations thanks to new latching
- Thermal disconnect device for each individual plug
- Optical, mechanical status indication for the individual arresters
- Pluggable
- Mechanical coding of all slots

## Key Commercial Data

Packing unit	1 STK
GTIN	
GTIN	4046356698160

## Technical data

### Dimensions

Height	90 mm
Width	17.5 mm
Depth	77.5 mm
Horizontal pitch	1 Div.

### Ambient conditions

Degree of protection	IP20
	IP20 (only when all terminal points are used)
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C

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### Ambient conditions

Altitude	≤ 2000 m (amsl (above mean sea level))
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	30g
Vibration (operation)	7.5g

### General

IEC test classification	I / II
	T1 / T2
	T1
	I
EN type	T1 / T2
	T1
IEC power supply system	TN-S
	TN-C
	TT
Mode of protection	L-N
	L-PEN
Mounting type	DIN rail: 35 mm
Color	jet black RAL 9005
Housing material	PA 6.6
	PBT
Degree of pollution	2
Flammability rating according to UL 94	V-0
Design	DIN rail module, two-section, divisible
Surge protection fault message	optical

### Protective circuit

Nominal voltage $U_N$	120 V AC (TN-C, TN-S)
	120 V AC (TT)
Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous voltage $U_C$	175 V AC
Rated load current $I_L$	80 A
Residual current $I_{PE}$	≤ 800 $\mu$ A
Standby power consumption $P_C$	≤ 140 mVA
Nominal discharge current $I_n$ (8/20) $\mu$ s	12.5 kA
Maximum discharge current $I_{max}$ (8/20) $\mu$ s	50 kA
Impulse discharge current (10/350) $\mu$ s, charge	6.25 As
Impulse discharge current (10/350) $\mu$ s, specific energy	39 kJ/ $\Omega$
Impulse discharge current (10/350) $\mu$ s, peak value $I_{imp}$	12.5 kA
Total discharge current $I_{total}$ (8/20) $\mu$ s	12.5 kA

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### Protective circuit

Total discharge current $I_{total}$ (10/350) $\mu$ s	12.5 kA
Short-circuit current rating $I_{SCCR}$	25 kA
Voltage protection level $U_p$	$\leq 0.8$ kV
Residual voltage $U_{res}$	$\leq 0.8$ kV (at $I_n$ )
	$\leq 1.5$ kV (at 30 kA)
	$\leq 0.7$ kV (at 10 kA)
	$\leq 0.6$ kV (at 5 kA)
	$\leq 0.55$ kV (at 3 kA)
TOV behavior at $U_T$	208 V AC (5 s / withstand mode)
Response time $t_A$	$\leq 25$ ns
Max. backup fuse with branch wiring	160 A (gG)
Max. backup fuse with V-type through wiring	80 A (gG - 16 mm <sup>2</sup> )

### Connection data

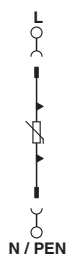
Connection method	Screw connection
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	16 mm
Conductor cross section flexible	1.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>
Conductor cross section solid	1.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Conductor cross section AWG	15 ... 2

### Standards and Regulations

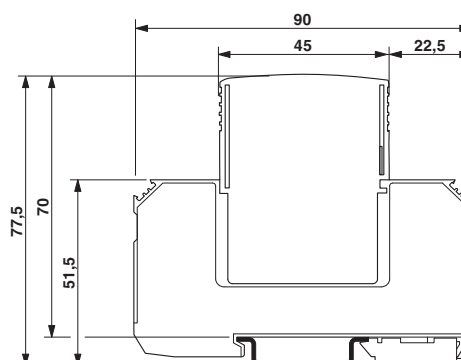
Standards/regulations	IEC 61643-11 2011
	EN 61643-11 2012

## Drawings

Circuit diagram



Dimensional drawing



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## Approvals

Approvals

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Approvals

EAC

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Ex Approvals

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## Approval details

EAC		RU C- DE.A*30.B01561
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