

## Lightning/surge arrester type 1/2 - VAL-MS-T1/T2 75/12.5/1+1V - 2801150

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Universal varistor-based plug-in lightning/surge arrester for 48 V DC applications with grounded return conductor (positive pole), without risk assessment for Lightning Protection Levels III and IV.

### Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	320.0 GRM
Custom tariff number	85363030
Country of origin	Germany

### Technical data

#### Dimensions

Height	90 mm
Width	35.6 mm
Depth	77.5 mm
Horizontal pitch	2 Div.

#### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 80 °C
Altitude	≤ 2000 m (NN)

#### General

Housing material	PBT / PA
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	DIN EN 60664-1 EN 61643-11
Mounting type	DIN rail: 35 mm
Type	DIN rail module, two-section, divisible
Number of positions	1

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## Technical data

### General

Surge protection fault message	Optical
Direction of action	L-L / L-PE

### Protective circuit

IEC test classification	I / II
	T1 / T2
EN type	T1 / T2
Nominal voltage $U_N$	60 V DC
Maximum continuous operating voltage $U_C$	75 V DC
$U_T$ (TOV-proof)	100 V DC (5 s)
Standby power consumption $P_C$	$\leq 140$ mVA
Max. discharge current $I_{max}$ (8/20) $\mu$ s	50 kA
Nominal discharge current $I_n$ (8/20) $\mu$ s	12.5 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
Voltage protection level $U_p$	$\leq 0.7$ kV
Voltage protection level $U_p$ (L+) - (L-)	$\leq 0.7$ kV
Voltage protection level $U_p$ (L+/L-) - PE	$\leq 0.7$ kV
Residual voltage	$\leq 0.7$ kV
	$\leq 0.65$ kV (at 10 kA)
	$\leq 0.6$ kV (at 5 kA)
	$\leq 0.55$ kV (at 3 kA)
Residual voltage (L+) - (L-)	$\leq 0.7$ kV
Residual voltage (L+/L-) - PE	$\leq 0.7$ kV
Response time	$\leq 25$ ns
Max. backup fuse with branch wiring	160 A
Max. backup fuse with V-type through wiring	80 A
Short-circuit resistance $I_p$ with max. backup fuse (effective)	500 A

### Connection, protective circuit

Connection method	Screw connection
Connection type IN	Biconnect screw terminal block
Connection type OUT	Biconnect screw terminal block
Connection method	Biconnect terminal block
Screw thread	M5
Tightening torque	4.5 Nm
	30 lb <sub>f</sub> -in. (UL)

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### Connection, protective circuit

Stripping length	16 mm
Conductor cross section stranded min.	1.5 mm <sup>2</sup>
Conductor cross section stranded max.	25 mm <sup>2</sup>
Conductor cross section solid min.	1.5 mm <sup>2</sup>
Conductor cross section solid max.	35 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	15
Conductor cross section AWG/kcmil max	2
AWG conductor cross section	10 ... 2 (UL)

### Standards and Regulations

Standards/regulations	IEC 61643-1 2005
	EN 61643-11/A11 2007
	UL 1449 ed. 3

## 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	27130802
eCl@ss 7.0	27130802
eCl@ss 8.0	27130802

### ETIM

ETIM 3.0	EC000941
ETIM 4.0	EC000381
ETIM 5.0	EC000381

### UNSPSC

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

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## Approvals

Approvals

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Approvals

UL Recognized / cUL Recognized / cULus Recognized

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Ex Approvals

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Approvals submitted

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## Approval details

UL Recognized 

cUL Recognized 

cULus Recognized 

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