

# Lightning/surge arrester type 1/2 - VAL-MS-T1/T2 75/12.5/1+1V-FM - 2801149

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



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, with remote indication contact.

## Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	333.8 GRM
Custom tariff number	85363030
Country of origin	Germany

## Technical data

### Dimensions

Height	99 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

# Lightning/surge arrester type 1/2 - VAL-MS-T1/T2 75/12.5/1+1V-FM - 2801149

## Technical data

### General

Number of positions	1
Surge protection fault message	Optical, remote indicator contact
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

# Lightning/surge arrester type 1/2 - VAL-MS-T1/T2 75/12.5/1+1V-FM - 2801149

## Technical data

### Connection, protective circuit

Screw thread	M5
Tightening torque	4.5 Nm
	30 lb <sub>F</sub> -in. (UL)
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)

### Remote indicator contact

Connection name	Remote fault indicator contact
Switching function	PDT, 1-pos.
Connection method	Screw connection
Screw thread	M2
Tightening torque	0.25 Nm
	2 lb <sub>F</sub> -in. ... 4 lb <sub>F</sub> -in. (UL)
Stripping length	7 mm
Conductor cross section stranded min.	0.14 mm <sup>2</sup>
Conductor cross section stranded max.	1.5 mm <sup>2</sup>
Conductor cross section solid min.	0.14 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	28
Conductor cross section AWG/kcmil max	16
AWG conductor cross section	30 ... 14 (UL)
Maximum operating voltage U <sub>max</sub> AC	250 V AC
Max. operating current I <sub>max</sub>	1.5 A AC (250 V AC)
	1.5 A DC (30 V DC)

### Standards and Regulations

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

# Lightning/surge arrester type 1/2 - VAL-MS-T1/T2 75/12.5/1+1V-FM - 2801149

## 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

## Approvals

### Approvals

---

#### Approvals

UL Recognized / cUL Recognized / cULus Recognized

---

#### Ex Approvals

---

#### Approvals submitted

---

#### Approval details

# Lightning/surge arrester type 1/2 - VAL-MS-T1/T2 75/12.5/1+1V-FM - 2801149

## Approvals

