

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

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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, 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

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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	≤ 140 mVA
Max. discharge current I_{max} (8/20) μ s	50 kA
Nominal discharge current I_n (8/20) μ s	12.5 kA
Impulse discharge current (10/350) μ s charge	6.25 As
Impulse discharge current (10/350) μ s, specific energy	39 kJ/ Ω
Impulse discharge current (10/350) μ s, peak value I_{imp}	12.5 kA
Voltage protection level U_p	≤ 0.7 kV
Voltage protection level U_p (L+) - (L-)	≤ 0.7 kV
Voltage protection level U_p (L+/L-) - PE	≤ 0.7 kV
Residual voltage	≤ 0.7 kV
	≤ 0.65 kV (at 10 kA)
	≤ 0.6 kV (at 5 kA)
	≤ 0.55 kV (at 3 kA)
Residual voltage (L+) - (L-)	≤ 0.7 kV
Residual voltage (L+/L-) - PE	≤ 0.7 kV
Response time	≤ 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

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Technical data

Connection, protective circuit

Screw thread	M5
Tightening torque	4.5 Nm
	30 lb _F -in. (UL)
Stripping length	16 mm
Conductor cross section stranded min.	1.5 mm ²
Conductor cross section stranded max.	25 mm ²
Conductor cross section solid min.	1.5 mm ²
Conductor cross section solid max.	35 mm ²
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 _F -in. ... 4 lb _F -in. (UL)
Stripping length	7 mm
Conductor cross section stranded min.	0.14 mm ²
Conductor cross section stranded max.	1.5 mm ²
Conductor cross section solid min.	0.14 mm ²
Conductor cross section solid max.	1.5 mm ²
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 _{max} AC	250 V AC
Max. operating current I _{max}	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

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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

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UL Recognized / cUL Recognized / cULus Recognized

Ex Approvals

Approvals submitted

Approval details

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Approvals

