

Type 1 surge protection device - VAL-MS-T1/T2 175/12.5/3+0-FM - 2800672

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Universal varistor-based plug-in lightning arrester for 3-phase power supply networks with common N and PE (4-conductor system: L1, L2, L3, PEN), for Lightning Protection Levels III and IV, with remote indication contact.

Why buy this product

- ✓ With or without floating remote indication contact
- ✓ 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
- ✓ Optical, mechanical status indication for the individual arresters
- ✓ Mechanical keying of all slots
- ✓ Thermal disconnect device for each individual plug



Key commercial data

Packing unit	0
Minimum order quantity	1
Catalog page	Page 27 (TT-2011)
GTIN	 4 046356 624831
Custom tariff number	85363030
Country of origin	GERMANY

Technical data

Standards

IEC power supply system	TN-C
Housing material	PBT / PA
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	EN 60664-1
Standards for air and creepage distances	EN 61643-11
Degree of protection	IP20
Mounting type	DIN rail: 35 mm

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Design	DIN rail module, two-section, divisible
Number of positions	3
Ambient temperature (operation)	-40 °C ... 80 °C
Message: Surge protection fault	Optical, remote indicator contact
Direction of action	3L-PEN
Width	53.4 mm
Height	99 mm
Depth	77.5 mm
Pitch unit	3 Div.

Protective circuit

IEC category	I, II
IEC category	T1, T2
EN type	T1, T2
Nominal voltage UN	120 V AC
Arrester rated voltage UC	175 V AC
Arrester rated voltage UC (L-PEN)	175 V AC
UT (TOV-proof)	208 V AC (5 s/L-PEN)
Nominal frequency fN	50 Hz (60 Hz)
Nominal load current IL	80 A (with serial 16mm ² through wiring)
Ground conductor current IPE	≤ 800 µA
Standby power consumption PC	≤ 140 mVA
Max. discharge surge current I _{max} (8/20) µs maximum (L-PEN)	150 kA (3 x L)
Max. discharge surge current I _{max} (8/20) µs maximum (L-PEN)	50 kA
Nominal discharge surge current I _n (8/20) µs (L-PEN)	37.5 kA (3 x L)
Nominal discharge surge current I _n (8/20) µs (L-PEN)	12.5 kA
Lightning test current (10/350) µs, charge	18.75 As
Lightning test current (10/350) µs, specific energy	352.00 kJ/Ω
Lightning test current (10/350) µs, peak value limp	37.5 kA
Lightning test current (10/350) µs, charge	6.25 As
Lightning test current (10/350) µs, specific energy	39.00 kJ/Ω
Lightning test current (10/350) µs, peak value limp	12.5 kA (1-pos.)
Protection level Up	≤ 0.8 kV
Protection level UP (L-PEN)	≤ 0.7 kV
Residual voltage (L-PEN)	≤ 0.7 kV (at 10 kA)
Residual voltage (L-PEN)	≤ 0.6 kV (at 5 kA)
Residual voltage (L-PEN)	≤ 0.55 kV (at 3 kA)
Residual voltage (L-PEN)	≤ 0.8 kV
Response time	≤ 25 ns
Response time (L-N)	≤ 25 ns
Max. required backup fuse with branch wiring	160 A (gL/gG)
Max. required backup fuse with V-type through wiring	80 A (gL/gG / with 16 mm ²)

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Protective circuit

Short-circuit resistance IP with max. backup fuse (effective)	25 kArms
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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
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

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
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
Maximum operating voltage U _{max} . AC	250 V AC
Max. operating current I _{max}	1.5 A AC (250 V AC)
Max. operating current I _{max}	1.5 A DC (30 V DC)

Standards

Standards/regulations	IEC 61643-1 2005
Standards/regulations	EN 61643-11/A11 2007

Classifications

eclass

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801

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eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130802
eCl@ss 7.0	27130802

etim

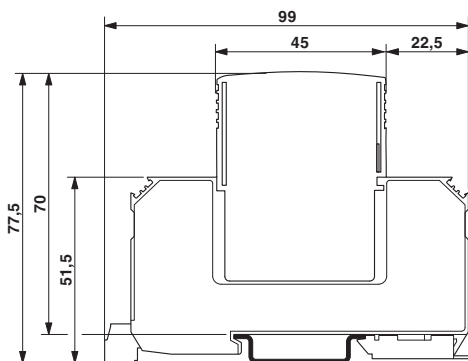
ETIM 2.0	EC000941
ETIM 3.0	EC000941
ETIM 4.0	EC000381
ETIM 5.0	EC000381

unspsc

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

Drawings

Dimensioned drawing



Circuit diagram

