

Lightning/surge arrester type 1/2 - VAL-MS-T1/T2 175/12.5/3+0-FM - 2800672

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

Product Features

- 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 coding of all slots
- Thermal disconnect device for each individual plug



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	480.0 g
Custom tariff number	85363030
Country of origin	Germany

Technical data

Dimensions

Height	99 mm
Width	53.4 mm
Depth	77.5 mm
Horizontal pitch	3 Div.

Ambient conditions

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Ambient conditions

Degree of protection	IP20 (only when all terminal points are used)
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 2000 m (amsl (above mean sea level))
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	30g (half sinus / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	7.5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

General

Standards/specifications	IEC 61643-11 2011
	EN 61643-11 2012
IEC test classification	I / II
	T1 / T2
	T1
	I
EN type	T1 / T2
	T1
IEC power supply system	TN-C
Number of ports	One
SPD design	Voltage-limiting type
Mode of protection	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
Type	DIN rail module, two-section, divisible
Surge protection fault message	Optical, remote indicator contact

Additional descriptions

Note	Nominal voltage UN = 120 V AC/240 V AC split-phase (separate GND)
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Protective circuit

Nominal voltage U _N	120/208 V AC (TN-C)
Nominal frequency f _N	50 Hz (60 Hz)
Maximum continuous voltage U _C	175 V AC

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Protective circuit

Rated load current I_L	80 A
Residual current I_{PE}	$\leq 2400 \mu\text{A}$
Standby power consumption P_C	$\leq 420 \text{ mVA}$
Nominal discharge current I_n (8/20) μs	12.5 kA
Maximum discharge current I_{max} (8/20) μs	50 kA
Impulse discharge current (10/350) μs , charge	6.25 As
Impulse discharge current (10/350) μs , specific energy	39 kJ/ Ω
Impulse discharge current (10/350) μs , peak value I_{imp}	12.5 kA
Total discharge current I_{Total} (8/20) μs	150 kA
Total discharge current I_{Total} (10/350) μs	37.5 kA
Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p	$\leq 0.8 \text{ kV}$
Residual voltage U_{res}	$\leq 0.8 \text{ kV}$ (at I_n)
	$\leq 0.7 \text{ kV}$ (at 10 kA)
	$\leq 0.6 \text{ kV}$ (at 5 kA)
	$\leq 0.55 \text{ kV}$ (at 3 kA)
TOV behavior at U_T	208 V AC (5 s / withstand mode)
	229 V AC (120 min / withstand mode)
Response time t_A	$\leq 25 \text{ ns}$
Max. backup fuse with branch wiring	160 A (gG)
Max. backup fuse with V-type through wiring	80 A (gG - 16 mm ²)

Indicator/remote signaling

Connection name	Remote fault indicator contact
Switching function	PDT contact
Operating voltage	5 V AC ... 250 V AC
	30 V DC
Operating current	5 mA AC ... 1.5 A
	1 A
Connection method	Screw connection
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section flexible	0.14 mm ² ... 1.5 mm ²
Conductor cross section solid	0.14 mm ² ... 1.5 mm ²
Conductor cross section AWG	28 ... 16

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Connection data

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

UL specifications

SPD Type	4CA
Maximum continuous operating voltage MCOV (L-L)	350 V AC
Maximum continuous operating voltage MCOV (L-G)	175 V AC
Nom. voltage	208/120 V AC
Mode of protection	L-L
	L-G
Power distribution system	3Y
Nominal frequency	50/60 Hz
Measured limiting voltage MLV (L-L)	2800 V
Measured limiting voltage MLV (L-G)	2200 V
Nominal discharge current I _n (L-L)	20 kA
Nominal discharge current I _n (L-G)	20 kA

UL indicator/remote signaling

Operating voltage	125 V AC
Operating current	1 A
Tightening torque	4 lb _r -in.
Conductor cross section AWG	30 ... 14

UL connection data

Conductor cross section AWG	10 ... 2
Tightening torque	30 lb _r -in.

Classifications

eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801

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Classifications

eCl@ss

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
eCl@ss 9.0	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

Approvals

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KEMA-KEUR / ÖVE / GL / IECCEB Scheme / CCA / UL Recognized / cUL Recognized / EAC / cULus Recognized

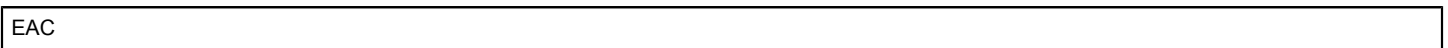
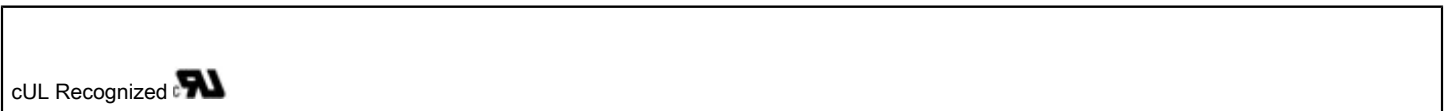
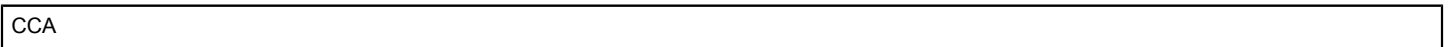
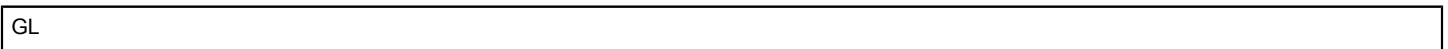
Ex Approvals

Approvals submitted

Approval details

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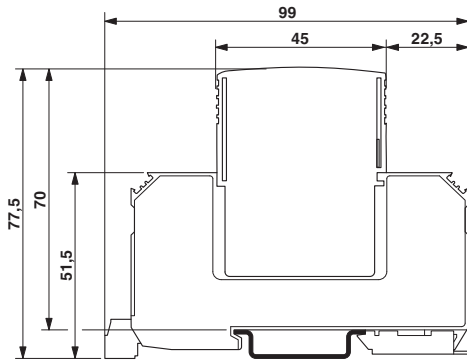
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Drawings

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Dimensional drawing



Circuit diagram

