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Especialistas en Automatización

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Lightning/surge arrester type 1/2 - VAL-MS-T1/T2 335/12.5/4+0-FM - 2800644

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Plug-in varistor-based lightning arrester for 3-phase TN-S power supply networks with separate N and PE (5-conductor system: L1, L2, L3, N, PE), for Lightning Protection Levels III and IV, with remote indication contact.

Why buy this product

- Plugs can be checked with CHECKMASTER
- With or without floating remote indication contact
- Secure hold of plugs in the event of high lightning current loads and strong vibrations thanks to new latching
- Thermal disconnect device for each individual plug
- Mechanical coding of all slots
- Optical, mechanical status indication for the individual arresters



Key Commercial Data

| | |
|--------------|---|
| Packing unit | 1 STK |
| GTIN |  4 046356 624268 |

Technical data

Dimensions

| | |
|------------------|---------|
| Height | 99 mm |
| Width | 71.2 mm |
| Depth | 77.5 mm |
| Horizontal pitch | 4 Div. |

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 |

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Technical data

Ambient conditions

| | |
|----------------------------------|--|
| 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 |
| EN type | T1 / T2 |
| | T1 |
| IEC power supply system | TN-S |
| Number of ports | One |
| SPD design | Voltage-limiting type |
| Mode of protection | L-PE |
| | N-PE |
| 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 |

Protective circuit

| | |
|---|---------------------|
| Nominal voltage U_N | 240/415 V AC (TN-S) |
| Nominal frequency f_N | 50 Hz (60 Hz) |
| Maximum continuous voltage U_C | 335 V AC |
| Rated load current I_L | 80 A |
| Residual current I_{PE} | ≤ 3.2 mA |
| Standby power consumption P_C | ≤ 1080 mVA |
| Nominal discharge current I_n (8/20) μ s | 12.5 kA |
| Maximum discharge current I_{max} (8/20) μ s | 50 kA |
| Impulse discharge current (10/350)# μ s, charge | 6.5 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 |
| Total discharge current I_{Total} (8/20) μ s | 200 kA |

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Protective circuit

| | |
|--|--|
| Total discharge current I_{Total} (10/350) μ s | 50 kA |
| Short-circuit current rating I_{SCCR} | 25 kA |
| Voltage protection level U_p | ≤ 1.2 kV |
| | ≤ 1.6 kV (30 kA - 8/20 μ s) |
| Residual voltage U_{res} | ≤ 1.2 kV (at I_n) |
| | ≤ 1.1 kV (at 10 kA) |
| | ≤ 1 kV (at 5 kA) |
| | ≤ 0.9 kV (at 3 kA) |
| TOV behavior at U_T | 415 V AC (5 s / withstand mode) |
| | 457 V AC (120 min / safe failure mode) |
| Response time t_A | ≤ 25 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 |

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) | 670 V AC |

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Technical data

UL specifications

| | |
|---|--------------|
| Maximum continuous operating voltage MCOV (L-N) | 670 V AC |
| Maximum continuous operating voltage MCOV (L-G) | 335 V AC |
| Maximum continuous operating voltage MCOV (N-G) | 335 V AC |
| Nom. voltage | 415/240 V AC |
| Mode of protection | L-L |
| | L-N |
| | L-G |
| | N-G |
| Power distribution system | 3Y |
| Nominal frequency | 50/60 Hz |
| Measured limiting voltage MLV (L-L) | 3650 V |
| Measured limiting voltage MLV (L-N) | 3650 V |
| Measured limiting voltage MLV (L-G) | 2630 V |
| Measured limiting voltage MLV (N-G) | 2630 V |
| Nominal discharge current I _n (L-L) | 20 kA |
| Nominal discharge current I _n (L-N) | 20 kA |
| Nominal discharge current I _n (L-G) | 20 kA |
| Nominal discharge current I _n (N-G) | 20 kA |

UL indicator/remote signaling

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

UL connection data

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

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 |
| eCl@ss 9.0 | 27130802 |

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Classifications

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

Approvals

Approvals

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

Ex Approvals

Approvals submitted

Approval details

KEMA-KEUR

ÖVE

GL

IECEE CB Scheme

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Approvals

UL Recognized

cUL Recognized

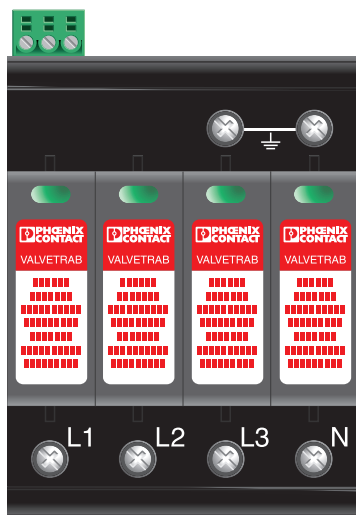
EAC

CCA

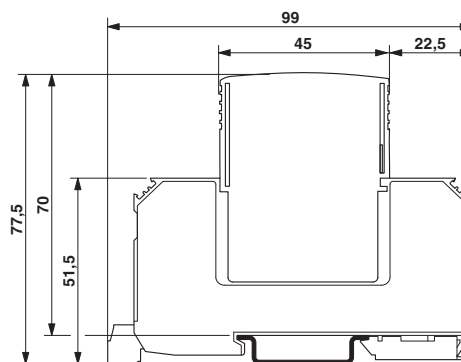
cULus Recognized

Drawings

Product drawing

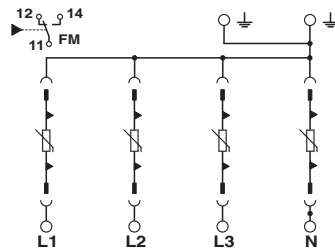


Dimensional drawing



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Circuit diagram



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