

VAL-MS-T1/T2 335/12.5 ST - Type 1/2 surge protection plug



2800190

<https://www.phoenixcontact.com/gb/products/2800190>

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L-N replacement plug for VAL-MS-T1/T2 335/12.5 plug-in lighting/surge arrester.



Your advantages

- Quality proven millions of times over in the widest range of applications
- Rapid installation with bridges, thanks to industry-standard overall width of 1 HP
- Easy testing and insulation measurement, thanks to pluggable protection modules
- Can be used in lightning protection level III and IV due to discharge capacity of 12.5 kA per position
- Vibration-resistant latching ensures the plug remains firmly in place

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 2800190 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Note | Made to order (non-returnable) |
| Sales key | CL1151 |
| Product key | CL1151 |
| GTIN | 4046356518611 |
| Weight per piece (including packing) | 112.7 g |
| Weight per piece (excluding packing) | 107.34 g |
| Customs tariff number | 85363030 |
| Country of origin | DE |

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Technical data

Product properties

| | |
|--------------------------------|---|
| Product type | Replacement plug |
| Product family | VALVETRAB MS |
| IEC test classification | I / II T1 / T2 |
| EN type | T1 / T2 |
| IEC power supply system | TN-C TN-S TT |
| Type | DIN rail module, two-section, divisible |
| Number of positions | 1 |
| Surge protection fault message | optical |

Insulation characteristics

| | |
|----------------------|-----|
| Overvoltage category | III |
| Pollution degree | 2 |

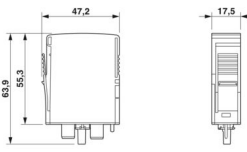
Electrical properties

| | |
|-------------------------|---------------|
| Nominal frequency f_N | 50 Hz (60 Hz) |
|-------------------------|---------------|

Connection data

| | |
|-------------------|-----------|
| Connection method | pluggable |
|-------------------|-----------|

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 17.7 mm |
| Height | 47 mm |
| Depth | 67.3 mm |
| Horizontal pitch | 1 Div. |

Material specifications

| | |
|--|------------------|
| Color | black (RAL 9005) |
| Flammability rating according to UL 94 | V-0 |
| CTI value of material | 600 |
| Insulating material | PA 6.6/PBT |
| Material group | I |
| Housing material | PA 6.6 PBT |

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Protective circuit

| | |
|---|---|
| Mode of protection | L-N |
| | L-PEN |
| Direction of action | L-N / L-PEN |
| Nominal voltage U_N | 240/415 V AC (TN-C, TN-S) |
| | 240/415 V AC (TT) |
| Nominal frequency f_N | 50 Hz (60 Hz) |
| Maximum continuous operating voltage U_C | 335 V AC |
| Protective conductor current I_{PE} | $\leq 800 \mu\text{A}$ |
| Standby power consumption P_C | $\leq 270 \text{ mVA}$ |
| 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 |
| Short-circuit current rating I_{SCCR} | 25 kA |
| Voltage protection level U_p | $\leq 1.2 \text{ kV}$ |
| | $\leq 1.6 \text{ kV}$ (30 kA - 8/20 μs) |
| Residual voltage U_{res} | $\leq 1.2 \text{ kV}$ (at I_n) |
| | $\leq 1.1 \text{ kV}$ (at 10 kA) |
| | $\leq 1 \text{ kV}$ (at 5 kA) |
| | $\leq 0.9 \text{ kV}$ (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 | $\leq 25 \text{ ns}$ |
| Max. backup fuse with branch wiring | 160 A (gG) |

Additional technical data

| | |
|--|-------|
| Maximum discharge current I_{max} (8/20) μs | 65 kA |
|--|-------|

Environmental and real-life conditions

Ambient conditions

| | |
|---|---|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -40 °C ... 80 °C |
| Ambient temperature (storage/transport) | -40 °C ... 80 °C |
| Altitude | $\leq 2000 \text{ m}$ (amsl) |
| Permissible humidity (operation) | 5 % ... 95 % |
| Shock (operation) | 30g (Half-sine / 11 ms / 3x $\pm X$, $\pm Y$, $\pm Z$) |
| Vibration (operation) | 7.5g (10 ... 500 Hz / 2.5 h / X, Y, Z) |

Approvals

UL specifications

| | |
|---|----------|
| Maximum continuous operating voltage MCOV (L-N) | 335 V AC |
|---|----------|

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| | |
|---------------------------------------|--------------|
| Nominal discharge current I_n (L-N) | 20 kA |
| Mode of protection | L-N |
| Nominal voltage | 240 V AC |
| Power distribution system | Single phase |
| Nominal frequency | 50/60 Hz |
| Measured limiting voltage MLV (L-N) | 2630 V |
| SPD Type | 4CA |

Standards and regulations

| | |
|--------------------------|--------------|
| Standards/specifications | IEC 61643-11 |
| Note | 2011 |

EN 61643-11

| | |
|--------------------------|-------------|
| Standards/specifications | EN 61643-11 |
| Note | 2012 |

Mounting

| | |
|---------------|-----------------|
| Mounting type | on base element |
|---------------|-----------------|

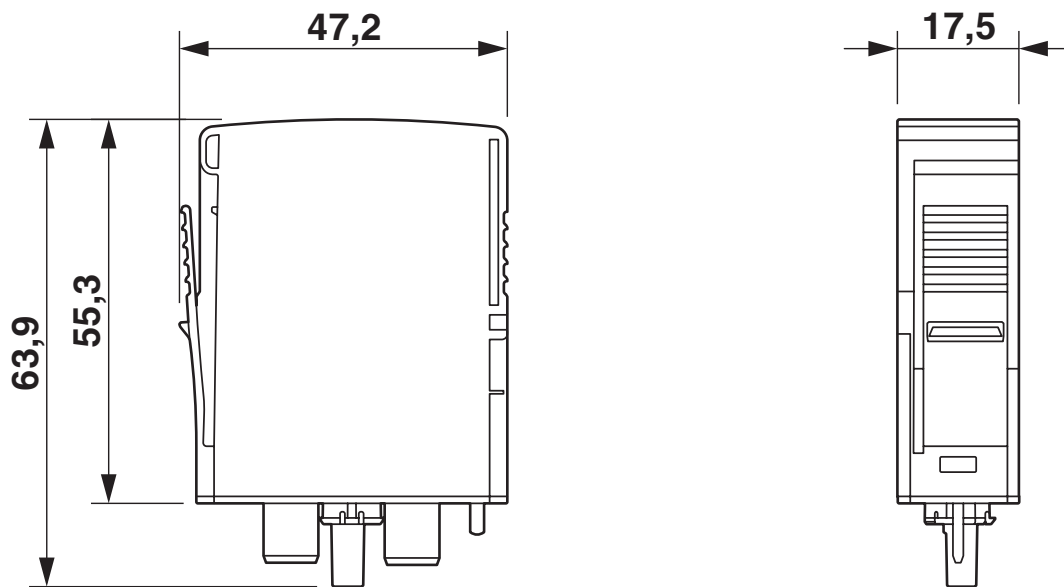
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Drawings

Dimensional drawing



Circuit diagram



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Approvals

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cUL Recognized
Approval ID: FILE E 330181



UL Recognized
Approval ID: FILE E 330181



IECEE CB Scheme
Approval ID: AT 2584

CCA

Approval ID: NTR-AT 1906



KEMA-KEUR
Approval ID: 2162496-01



DNV GL
Approval ID: TAE00001N9



ÖVE
Approval ID: 18583-009-09

UAE-RoHS

Approval ID: 23-10-88705

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27171292 |
| ECLASS-15.0 | 27171292 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC002496 |
|-----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121600 |
|-------------|----------|

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Environmental product compliance

EU RoHS

| | |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

China RoHS

| | |
|--|--|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 1.309 kg CO2e |
|---------|---------------|

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PHOENIX CONTACT Ltd
Halesfield 13, Telford
Shropshire, TF7 4PG
01952 681700
info@phoenixcontact.co.uk