

VAL-MS-T1/T2 75/12.5 ST - Type 1/2 surge protection plug



2801146  
<https://www.phoenixcontact.com/us/products/2801146>

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Replacement plug for VAL-MS-T1/T2 75/12.5... plug-in lighting/surge arrester.

Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 2801146                        |
| Packing unit                         | 10 pc                          |
| Minimum order quantity               | 10 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | CL18                           |
| Product key                          | CL1151                         |
| Catalog page                         | Page 47 (C-6-2015)             |
| GTIN                                 | 4046356708340                  |
| Weight per piece (including packing) | 819.1 g                        |
| Weight per piece (excluding packing) | 81.91 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               |
| Type                           | Male             |
| Surge protection fault message | optical          |

### Insulation characteristics

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

### Electrical properties

|                         |               |
|-------------------------|---------------|
| Nominal frequency $f_N$ | 50 Hz (60 Hz) |
| Nominal voltage $U_N$   | 60 V DC       |

### 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) |
|                                        | 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                             |
|                                                                  | N-PE                            |
|                                                                  | (L+) - (L-)                     |
|                                                                  | (L+) - PE                       |
| Direction of action                                              | L-N / L-PEN                     |
| Nominal voltage $U_N$                                            | 60 V AC $\pm 10$ % (TN)         |
|                                                                  | 60 V DC $\pm 10$ %              |
| Nominal frequency $f_N$                                          | 50 Hz (60 Hz)                   |
| Maximum continuous voltage $U_C$                                 | 75 V AC                         |
|                                                                  | 100 V DC                        |
| Residual current $I_{PE}$                                        | $\leq 0.3$ mA                   |
| Standby power consumption $P_C$                                  | $\leq 45.00$ mVA                |
| Nominal discharge current $I_n$ (8/20) $\mu$ s                   | 12.5 kA                         |
| Maximum discharge current $I_{max}$ (8/20) $\mu$ s               | 50 kA                           |
| Impulse discharge current (10/350) $\mu$ s, charge               | 6.25 As                         |
| Impulse discharge current (10/350) $\mu$ s, specific energy      | 39 kJ/ $\Omega$                 |
| Impulse discharge current (10/350) $\mu$ s, peak value $I_{imp}$ | 12.5 kA                         |
| Short-circuit current rating $I_{SCCR}$                          | 0.5 kA                          |
| Voltage protection level $U_p$                                   | $\leq 0.7$ kV                   |
| Residual voltage $U_{res}$                                       | $\leq 0.7$ kV (at $I_n$ )       |
|                                                                  | $\leq 0.65$ kV (at 10 kA)       |
|                                                                  | $\leq 0.6$ kV (at 5 kV)         |
|                                                                  | $\leq 0.55$ kV (at 4 kA)        |
|                                                                  | $\leq 0.55$ kV (at 3 kA)        |
| TOV behavior at $U_T$                                            | 208 V AC (5 s / withstand mode) |
|                                                                  | 100 V DC (5 s / withstand mode) |
| Response time $t_A$                                              | $\leq 25$ ns                    |
| Max. backup fuse with branch wiring                              | 160 A (gG)                      |

## 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                                | $\leq 2000$ 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

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|                                                       |              |
|-------------------------------------------------------|--------------|
| Maximum continuous operating voltage MCOV (L-N)       | 75 V AC      |
| Maximum continuous operating voltage MCOV (L+) - (L-) | 100 V DC     |
| Nominal discharge current $I_n$ (L-N)                 | 20 kA        |
| Nominal discharge current $I_n$ (L+) - (L-)           | 20 kA        |
| Mode of protection                                    | L-N          |
|                                                       | (L+) - (L-)  |
| Nominal voltage                                       | 60 V AC      |
| Nominal voltage                                       | 60 V DC      |
| Power distribution system                             | Single phase |
| Nominal frequency                                     | 50/60 Hz     |
| Measured limiting voltage MLV (L-N)                   | 2080 V       |
| Measured limiting voltage MLV (L+) - (L-)             | 2080 V       |
| SPD Type                                              | 4CA          |

## Standards and regulations

|                          |              |
|--------------------------|--------------|
| Standards/specifications | IEC 61643-11 |
| Note                     | 2011         |
| Standards/specifications | EN 61643-11  |
| Note                     | 2012         |

## Mounting

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

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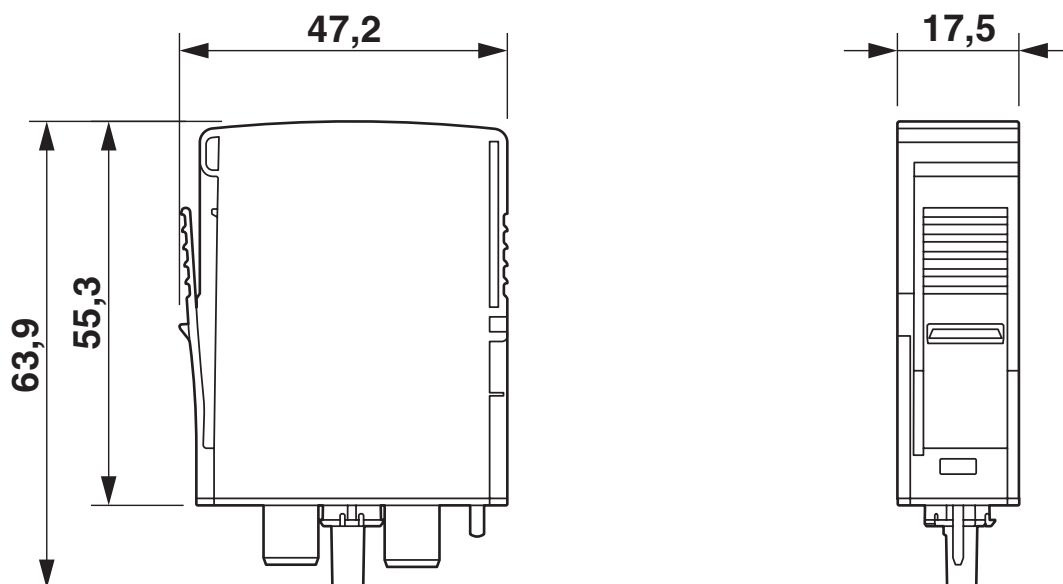


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## Drawings

Dimensional drawing



Circuit diagram



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27130890 |
|-------------|----------|

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | 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%               |

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