# VAL-US-SPP-600D/40-P - Type 2 surge protection plug

1790792

https://www.phoenixcontact.com/us/products/1790792

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Surge protection plug for use with VAL-SPP or VAL-US-SPP base elements, UL Recognized type 1 component and IEC type 2, with varistor and thermal disconnect device, plug-in, with local status indicator (green/red).

## Your advantages

- Universal surge protection plug with UL Recognized type 1 and IEC type 2
- Clear status indication with local optical green/red display
- Safe installation with mechanical coding

## Commercial data

| | |
|---|---|
| Item number | 1790792 |
| Packing unit | 10 pc |
| Minimum order quantity | 1 pc |
| Sales key | CL17 |
| Product key | CL138Z |
| GTIN | 4067923411111 |
| Weight per piece (including packing) | 73.6 g |
| Weight per piece (excluding packing) | 70.4 g |
| Customs tariff number | 85363030 |
| Country of origin | DE |

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## Technical data

### Notes

General

| | |
|---|---|
| Note | Only for use in IT systems between L-PE if the common earthing of the HV transformer station and conductive parts of the LV consumer system are interconnected ($R_E = R_A$ & $R_E = Z$ according to IEC 60364-4-44:2024, Figure 1 and Table 1). |

### Product properties

| | |
|---|---|
| Product type | Replacement plug |
| Product family | VAL-SPP |
| IEC test classification | II |
| | T2 |
| EN type | T2 |
| IEC power supply system | IT |
| Type | Male |
| Number of positions | 1 |
| End-of-life mode | OCM |
| Surge protection fault message | optical |
| Number of ports | One |

Insulation characteristics

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

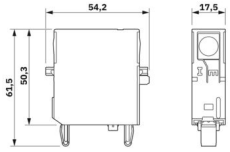
### Electrical properties

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

### Connection data

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

### Dimensions

| | |
|---|---|
| Dimensional drawing |  |
| Width | 17.5 mm |
| Height | 54.2 mm |
| Depth | 61.5 mm |
| Horizontal pitch | 1 HP |

### Material specifications

| | |
|---|---|
| Color | light gray (RAL 7035) |
| Flammability rating according to UL 94 | V-0 |
| CTI value of material | 600 |
| Insulating material | PA 6.6-FR 20 % GF |
| Material group | I |
| Housing material | PA 6.6-FR 20 % GF |

## Protective circuit

| | |
|---|---|
| Mode of protection | L-PE |
| Nominal voltage $U_N$ | 600 V AC ±10 % (IT) |
| Nominal frequency $f_N$ | 50 Hz (60 Hz) |
| Maximum continuous operating voltage $U_C$ | 760 V AC |
| Protective conductor current $I_{PE}$ | ≤ 0.4 mA |
| Standby power consumption $P_C$ | ≤ 300 mVA |
| Operating effective current $I_C$ at $U_N$ | ≤ 0.4 mA |
| Nominal discharge current $I_n$ (8/20) µs | 20 kA |
| Short-circuit current rating $I_{SCCR}$ | 25 kA |
| Voltage protection level $U_p$ | ≤ 3 kV |
| Residual voltage $U_{res}$ | ≤ 3 kV (at $I_n$) |
| TOV behavior at $U_T$ | 1005 V AC (5 s / withstand mode) |
| | 1316 V AC (120 min / withstand mode) |
| Response time $t_A$ | ≤ 25 ns |
| Max. backup fuse with branch wiring | 250 A (gG) |

## Environmental and real-life conditions

### Ambient conditions

| | |
|---|---|
| Degree of protection | IP20C (Installed) |
| Ambient temperature (operation) | -40 °C ... 85 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Ambient temperature (assembly) | -5 °C ... 50 °C |
| Altitude | ≤ 2000 m (amsl) |
| Permissible humidity (operation) | 5 % ... 95 % |
| Shock (operation) | 25g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z) |
| Vibration (operation) | 5g (10 ... 500 Hz / 2.5 h / X, Y, Z) |

## Approvals

### UL specifications

| | |
|---|---|
| Maximum continuous operating voltage MCOV | 750 V AC |
| Short-circuit current rating (SCCR) | 200 kA |
| Voltage protection rating VPR | 2500 V |
| Nominal discharge current $I_n$ | 20 kA |
| Maximum Surge Current per Phase | 1x 40 kA (IEEE C62.73) |
| Mode of protection | Ld-Ld |

| | |
|---|---|
| Nominal voltage | 600 V AC (Delta) |
| Power distribution system | Delta |
| Nominal frequency | 50/60 Hz |
| SPD Type | 1CA |

## Standards and regulations

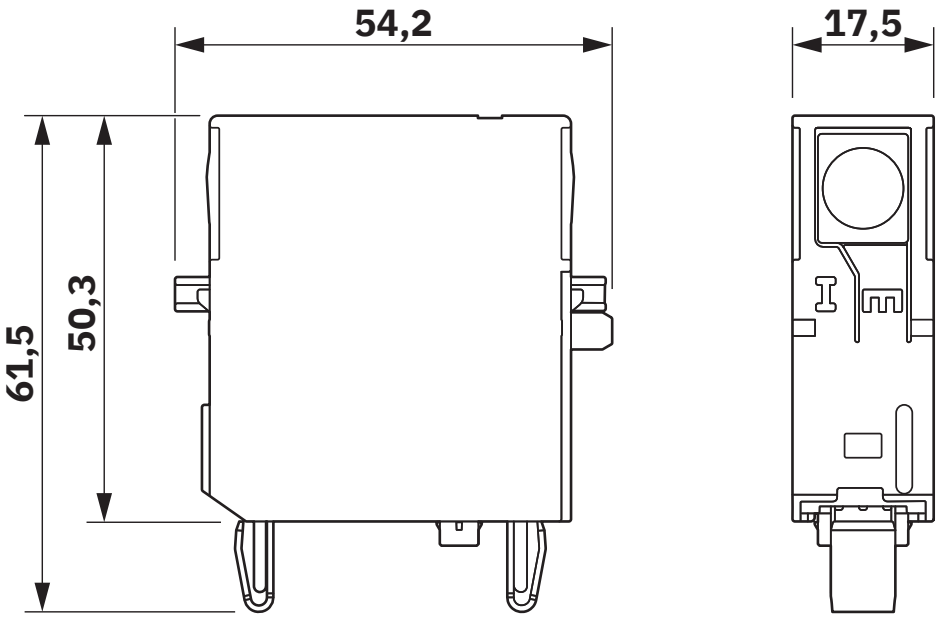
| | |
|---|---|
| Standards/specifications | IEC 61643-11 |
| Note | 2011 |
| Standards/specifications | EN 61643-11 |
| Note | 2012 + A11:2018 |

## Mounting

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

## Drawings

Dimensional drawing




Circuit diagram



## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1790792

**cULus Recognized**
Approval ID: E330181-20240716

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## Classifications

### ECLASS

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

### ETIM

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

## 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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