# VAL-SPP-T2-275-1+1-UT - Type 2 surge arrester

1466211

https://www.phoenixcontact.com/us/products/1466211

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Plug-in surge arrester, in accordance with Type 2/Class II, for 1-phase power supply networks with separate N and PE (3-conductor system: L1, N, PE).

## Your advantages

- Easy and safe installation with forward-thinking handling and safety features
- Reliable system protection with maximum performance and endurance
- Can be used in a wide range of applications due to the optimized design and broad portfolio
- Simple planning due to comprehensive digital data and selectors

ELEKTROGERÄTE RÜCKNAHME

## Commercial data

| | |
|---|---|
| Item number | 1466211 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | CL18 |
| Product key | CL1381 |
| GTIN | 4063151858193 |
| Weight per piece (including packing) | 251 g |
| Weight per piece (excluding packing) | 226.6 g |
| Customs tariff number | 85363030 |
| Country of origin | DE |

# Technical data

## Notes

### General

| | |
|---|---|
| Note | For pollution degree 3 and wiring with fork cable lugs, an additional minimum lateral distance of 1 mm to earthed conductive surfaces must be maintained for cross-sections ≥ 16 mm².<br>No additional lateral distances are required for pollution degree 2. |

## Product properties

| | |
|---|---|
| Product type | Surge arrester |
| Product family | VAL-SPP |
| IEC test classification | II |
| | T2 |
| EN type | T2 |
| IEC power supply system | TN-S |
| | TT |
| Type | DIN rail module, two-section, divisible |
| Number of positions | 2 |
| End-of-life mode | OCM |
| Surge protection fault message | optical |
| Number of ports | One |

### Insulation characteristics

| | |
|---|---|
| Overvoltage category | III |
| Pollution degree | 3 |

## Electrical properties

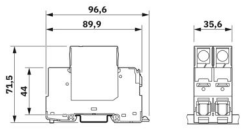
| | |
|---|---|
| Nominal frequency $f_N$ | 50 Hz (60 Hz) |

## Connection data

| | |
|---|---|
| Connection method | Screw connection |
| Screw thread | M5 |
| Tightening torque | 3 Nm ... 3.5 Nm |
| Stripping length | 18 mm |
| Conductor cross-section flexible | 1.5 mm² ... 35 mm² (without ferrule) |
| | 2x 1.5 mm² ... 16 mm² (2 conductors with the same cross-section) |
| Conductor cross-section rigid | 1.5 mm² ... 50 mm² |
| | 2x 1.5 mm² ... 16 mm² (2 conductors with the same cross-section) |
| Conductor cross-section AWG | 15 ... 2 |
| 2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve | 1.5 mm² ... 16 mm² |

| | |
|---|---|
| Conductor cross-section, flexible, with ferrule, with plastic sleeve | 1.5 mm² ... 35 mm² |
| | 2x 1.5 mm² ... 10 mm² (2 conductors with the same cross-section) |
| Conductor cross-section, flexible, with ferrule, without plastic sleeve | 1.5 mm² ... 25 mm² |
| | 2x 1.5 mm² ... 16 mm² (2 conductors with the same cross-section) |
| Connection method | Fork-type cable lug |
| Conductor cross-section flexible | 1.5 mm² ... 25 mm² |

## Dimensions

| | |
|---|---|
| Dimensional drawing |  |
| Width | 35.6 mm |
| Height | 96.6 mm |
| Depth | 71.5 mm (incl. DIN rail 7.5 mm) |
| Horizontal pitch | 2 HP |

## Material specifications

| | |
|---|---|
| Color | gray (RAL 7042) |
| | 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 |
| | PBT |
| Material group | I |
| Housing material | PA 6.6-FR 20 % GF |
| | PBT |

## Protective circuit

| | |
|---|---|
| Mode of protection | L-N |
| | L-PE |
| | N-PE |
| Nominal voltage $U_N$ | 240/415 V AC ±10 % (TN-S) |
| | 240/415 V AC ±10 % (TT) |
| Nominal frequency $f_N$ | 50 Hz (60 Hz) |
| Maximum continuous operating voltage $U_C$ (L-N) | 275 V AC |
| Maximum continuous operating voltage $U_C$ (L-PE) | 275 V AC |
| Maximum continuous operating voltage $U_C$ (N-PE) | 305 V AC |
| Rated load current $I_L$ | 80 A (25 mm²) |
| Protective conductor current $I_{PE}$ | ≤ 5 µA |
| Standby power consumption $P_C$ | ≤ 120 mVA |
| Nominal discharge current $I_n$ (8/20) µs | 20 kA |

| | |
|---|---|
| Maximum discharge current $I_{max}$ (8/20) µs | 40 kA |
| Total discharge current $I_{Total}$ (8/20) µs | 40 kA |
| Follow current interrupt rating $I_{fi}$ (N-PE) | 100 A |
| Short-circuit current rating $I_{SCCR}$ | 50 kA |
| Voltage protection level $U_p$ (L-N) | ≤ 1.35 kV |
| Voltage protection level $U_p$ (L-PE) | ≤ 1.6 kV |
| Voltage protection level $U_p$ (N-PE) | ≤ 1.5 kV |
| Residual voltage $U_{res}$ (L-N) | ≤ 1.35 kV (at $I_n$) |
| | ≤ 1.1 kV (at 10 kA) |
| | ≤ 1 kV (at 5 kA) |
| | ≤ 0.9 kV (at 3 kA) |
| Residual voltage $U_{res}$ (L-PE) | ≤ 1.6 kV (at $I_n$) |
| | ≤ 1.3 kV (at 10 kA) |
| | ≤ 1.1 kV (at 5 kA) |
| | ≤ 1 kV (at 3 kA) |
| Residual voltage $U_{res}$ (N-PE) | ≤ 0.5 kV (at $I_n$) |
| | ≤ 0.4 kV (at 10 kA) |
| | ≤ 0.3 kV (at 5 kA) |
| | ≤ 0.1 kV (at 3 kA) |
| TOV behavior at $U_T$ (L-N) | 350 V AC (5 s / withstand mode) |
| | 460 V AC (120 min / safe failure mode) |
| TOV behavior at $U_T$ (L-PE) | 1464 V AC (200 ms/withstand mode) |
| TOV behavior at $U_T$ (N-PE) | 1200 V AC (200 ms / withstand mode) |
| Response time $t_A$ (L-N) | ≤ 25 ns |
| Response time $t_A$ (L-PE) | ≤ 100 ns |
| Response time $t_A$ (N-PE) | ≤ 100 ns |
| Max. backup fuse with V-type through wiring | 80 A (gG) |
| Max. backup fuse with branch wiring | 315 A (gG) |

Additional technical data

| | |
|---|---|
| Short-circuit current rating $I_{SCCR}$ | 100 kA |

## 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 | ≤ 5000 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 (L-N) | 275 V AC |
| Maximum continuous operating voltage MCOV (L-G) | 275 V AC |
| Maximum continuous operating voltage MCOV (N-G) | 305 V AC |
| Nominal discharge current $I_n$ | 20 kA |
| Mode of protection | L-N |
| | L-G |
| | N-G |
| Nominal voltage | 240 V AC |
| Power distribution system | Single phase |
| Nominal frequency | 50/60 Hz |
| Measured limiting voltage MLV (L-N) | 1350 V |
| Measured limiting voltage MLV (L-G) | 2490 V |
| Measured limiting voltage MLV (N-G) | 1140 V |
| SPD Type | 4CA |

UL connection data

| | |
|---|---|
| Tightening torque | 30 $lb_f$-in. |
| Conductor cross-section AWG | 14 ... 2 |

## Standards and regulations

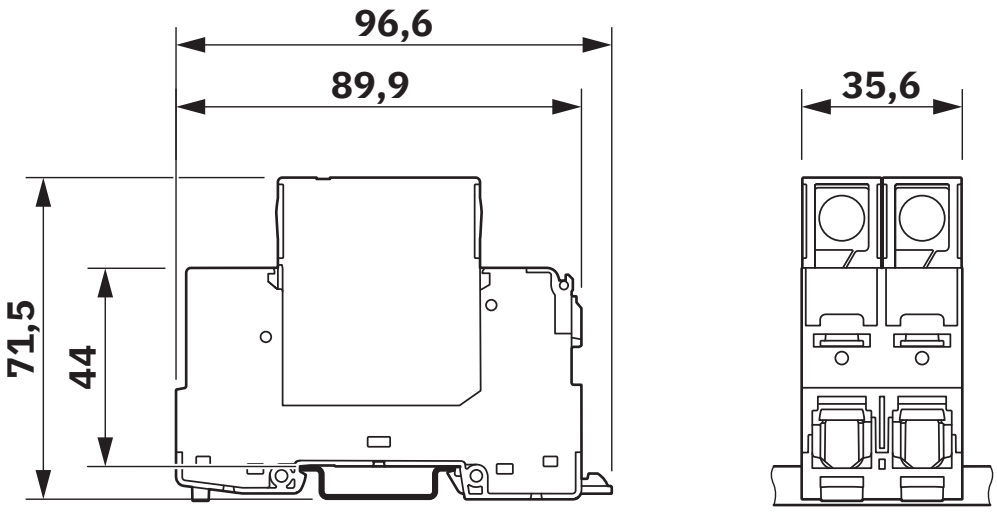
| | |
|---|---|
| Standards/specifications | IEC 61643-11 |
| Note | 2011 |
| Standards/specifications | EN 61643-11 |
| Note | 2012 + A11:2018 |

## Mounting

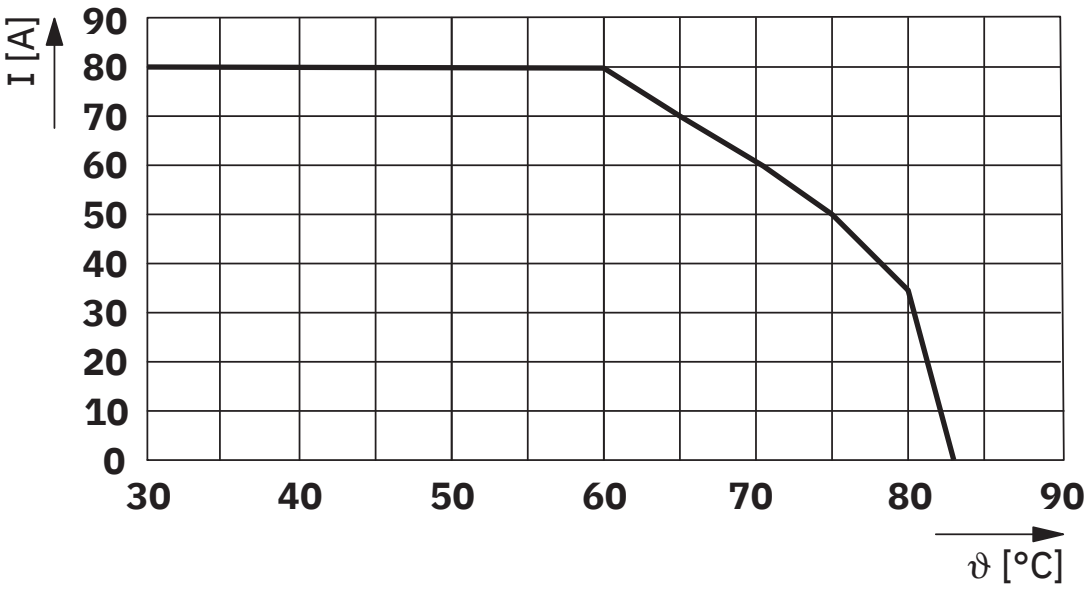
| | |
|---|---|
| Mounting type | DIN rail: 35 mm |

## Drawings

Dimensional drawing

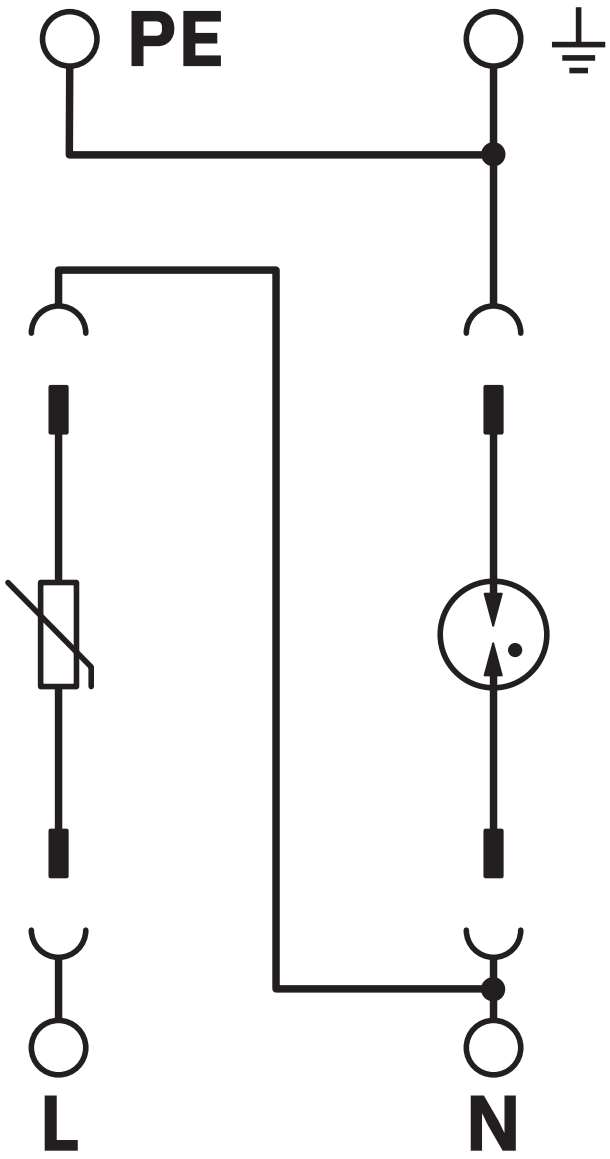



Diagram




Max. permissible current in relation to the ambient temperature

Circuit diagram



## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1466211

**IECEE CB Scheme**
Approval ID: NL-118261

**CCA**
Approval ID: NTR NL-8052

**DNV**
Approval ID: TAE0000501

**cULus Recognized**
Approval ID: E330181-20240717

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27171202 |
| ECLASS-15.0 | 27171202 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC000941 |

### UNSPSC

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

## 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 | 1.998 kg CO2e |

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