

# VAL-SPP-T2-NPE-P - Type 2 surge protection plug



1466689

<https://www.phoenixcontact.com/in/products/1466689>

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Type 2 surge protection plug, with N-PE total current spark gap for VAL-SPP base element, thermal monitoring, optical red/green status indicator.

## 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

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1466689       |
| Packing unit                         | 10 pc         |
| Minimum order quantity               | 1 pc          |
| Product key                          | CL138Z        |
| GTIN                                 | 4063151860172 |
| Weight per piece (including packing) | 39.2 g        |
| Weight per piece (excluding packing) | 36 g          |
| Country of origin                    | DE            |

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## Technical data

### Product properties

|                                |                  |
|--------------------------------|------------------|
| Product type                   | Replacement plug |
| Product family                 | VAL-SPP          |
| IEC test classification        | II               |
|                                | T2               |
| EN type                        | T2               |
| IEC power supply system        | TN               |
|                                | TT               |
| Type                           | Male             |
| Number of positions            | 1                |
| Surge protection fault message | optical          |

### Insulation characteristics

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

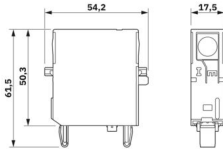
### Electrical properties

|                         |               |
|-------------------------|---------------|
| 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 Div.                                                                               |

### 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

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|                                                                 |                                                                                                                                             |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Mode of protection                                              | N-PE                                                                                                                                        |
| Direction of action                                             | N-PE                                                                                                                                        |
| Nominal voltage $U_N$                                           | 240 V AC $\pm 10\%$ (TN - only N-PE)<br>240 V AC $\pm 10\%$ (TT - only N-PE)                                                                |
| Nominal frequency $f_N$                                         | 50 Hz (60 Hz)                                                                                                                               |
| Maximum continuous voltage $U_C$                                | 305 V AC                                                                                                                                    |
| Residual current $I_{PE}$                                       | $\leq 5\ \mu\text{A}$                                                                                                                       |
| Standby power consumption $P_C$                                 | $\leq 1.5\ \text{mVA}$                                                                                                                      |
| Nominal discharge current $I_n$ (8/20) $\mu\text{s}$            | 20 kA                                                                                                                                       |
| Maximum discharge current $I_{\text{max}}$ (8/20) $\mu\text{s}$ | 40 kA                                                                                                                                       |
| Follow current interrupt rating $I_{fi}$                        | 100 A                                                                                                                                       |
| Voltage protection level $U_p$                                  | $\leq 1.5\ \text{kV}$                                                                                                                       |
| Residual voltage $U_{\text{res}}$                               | $\leq 0.5\ \text{kV}$ (at $I_n$ )<br>$\leq 0.4\ \text{kV}$ (at 10 kA)<br>$\leq 0.3\ \text{kV}$ (at 5 kA)<br>$\leq 0.1\ \text{kV}$ (at 3 kA) |
| Front of wave sparkover voltage at 6 kV (1.2/50) $\mu\text{s}$  | $\leq 1.5\ \text{kV}$                                                                                                                       |
| TOV behavior at $U_T$                                           | 1200 V AC (200 ms / withstand mode)                                                                                                         |
| Response time $t_A$                                             | $\leq 100\ \text{ns}$                                                                                                                       |

## 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                                | $\leq 5000\ \text{m}$ (amsl)                              |
| Permissible humidity (operation)        | 5 % ... 95 %                                              |
| Shock (operation)                       | 25g (Half-sine / 11 ms / 3x $\pm X$ , $\pm Y$ , $\pm Z$ ) |
| Vibration (operation)                   | 5g (10 ... 500 Hz / 2.5 h / X, Y, Z)                      |

## Approvals

### UL specifications

|                                                 |              |
|-------------------------------------------------|--------------|
| Maximum continuous operating voltage MCOV (N-G) | 305 V AC     |
| Nominal discharge current $I_n$ (N-G)           | 20 kA        |
| Mode of protection                              | N-G          |
| Nominal voltage                                 | 277 V AC     |
| Power distribution system                       | Single phase |
| Nominal frequency                               | 50/60 Hz     |
| Measured limiting voltage MLV (N-G)             | 1140 V       |
| SPD Type                                        | 4CA          |

## Standards and regulations

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

## Mounting

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

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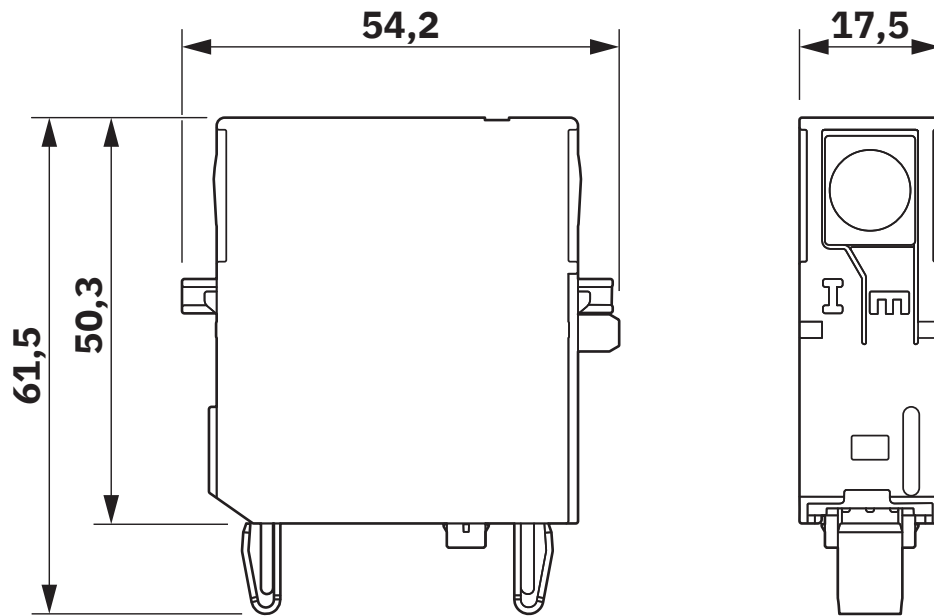
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## Drawings

Dimensional drawing



Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/in/products/1466689>



**IECEE CB Scheme**

Approval ID: NL-109184

**CCA**

Approval ID: NTR NL-8052



**KEMA-KEUR**

Approval ID: 71-138153 REV.2



**cULus Recognized**

Approval ID: E330181

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27130890 |
| ECLASS-13.0 | 27171292 |

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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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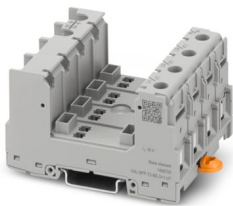
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## Accessories

### VAL-SPP-T2-BE-3+1-UT - Type 2 surge protection base element

1466705

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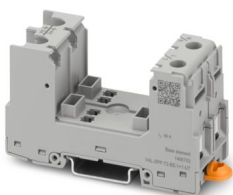


Base element for type 2/Class II arresters from the VALVETRAB SPP product family. Version for 3-phase power supply networks with separate N and PE (5-conductor system: L1, L2, L3, N, PE).

### VAL-SPP-T2-BE-1+1-UT - Type 2 surge protection base element

1466703

<https://www.phoenixcontact.com/in/products/1466703>



Base element for type 2 arresters from the VAL-SPP product family. Version for 1-phase power supplies with separate cable routing of N and PE.

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