

VAL-SEC-T2-380DC-P - Type 2 surge protection plug



2907880

<https://www.phoenixcontact.com/us/products/2907880>

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Replacement plug for surge protective devices from the VALVETRAB SEC product range for DC power sources.

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 2907880 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | CL01 |
| Product key | CL1353 |
| GTIN | 4055626245058 |
| Weight per piece (including packing) | 61.6 g |
| Weight per piece (excluding packing) | 61.6 g |
| Customs tariff number | 85363090 |
| Country of origin | DE |

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Technical data

Product properties

| | |
|--------------------------------|------------------|
| Product type | Replacement plug |
| Product family | SEC Family |
| IEC test classification | II T2 |
| EN type | T2 |
| IEC power supply system | DC |
| Type | Male |
| Number of positions | 1 |
| Surge protection fault message | optical |

Insulation characteristics

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

Electrical properties

| | |
|-----------------------|-----------------------|
| Nominal voltage U_N | 350 V DC ... 400 V DC |
|-----------------------|-----------------------|

Connection data

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

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 11.7 mm |
| Height | 46.4 mm |
| Depth | 59.4 mm |
| Horizontal pitch | 0.6 Div. |

Material specifications

| | |
|--|-----------------------------|
| Color | light gray (RAL 7035) |
| Flammability rating according to UL 94 | V-0 |
| CTI value of material | 600 |
| Insulating material | PA6.6-FR 20% GF PBT-FR |
| Material group | I |
| Housing material | PA 6.6-FR 20 % GF PBT-FR |

Protective circuit

| | |
|---|--|
| Mode of protection | (DC+) - (DC-) |
| | (DC+/DC-) - PE |
| Direction of action | (DC+/DC-) - PE |
| Nominal voltage U_N | 350 V DC ... 400 V DC |
| Maximum continuous operating voltage U_C | 450 V DC |
| Protective conductor current I_{PE} | $\leq 350 \mu\text{A DC}$ |
| Nominal discharge current I_n (8/20) μs | 20 kA |
| Maximum discharge current I_{max} (8/20) μs | 40 kA |
| Impulse discharge current (10/350) μs , charge | 0.5 As |
| Impulse discharge current (10/350) μs , specific energy | 0.25 kJ/ Ω |
| Impulse discharge current (10/350) μs , peak value I_{imp} | 1 kA |
| | 0.1 kA (without backup fuse) |
| Short-circuit current rating I_{SCCR} | 6 kA (for 20 A gG/B backup fuse) |
| | |
| Voltage protection level U_p | $\leq 1.5 \text{ kV}$ |
| Residual voltage U_{res} | $\leq 1.5 \text{ kV}$ (at I_n) |
| | $\leq 1.3 \text{ kV}$ (at 10 kA) |
| | $\leq 1.2 \text{ kV}$ (at 5 kA) |
| | $\leq 1.1 \text{ kV}$ (at 4 kA) |
| | $\leq 1 \text{ kV}$ (at 2 kA) |
| TOV behavior at U_T | 551 V DC (5 s / withstand mode) |
| Response time t_A | $\leq 25 \text{ ns}$ |
| Max. backup fuse with V-type through wiring | 20 A (gG / B at $I_{SCCR} > 200 \text{ A}$) |
| | 10 A (gG/B at $I_{SCCR} > 100 \text{ A}$) |
| Max. backup fuse with branch wiring | 20 A (gG / B at $I_{SCCR} > 200 \text{ A}$) |
| | 10 A (gG/B at $I_{SCCR} > 100 \text{ A}$) |

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 | $\leq 6000 \text{ m}$ (amsl) |
| Permissible humidity (operation) | 5 % ... 95 % |
| Shock (operation) | 30g (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 | 450 V DC |
| Nominal discharge current I_n | 20 kA |
| Mode of protection | (DC+) - G |

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| | |
|-------------------------------|-----------|
| | (DC-) - G |
| Nominal voltage | 400 V DC |
| Power distribution system | DC |
| Measured limiting voltage MLV | 1640 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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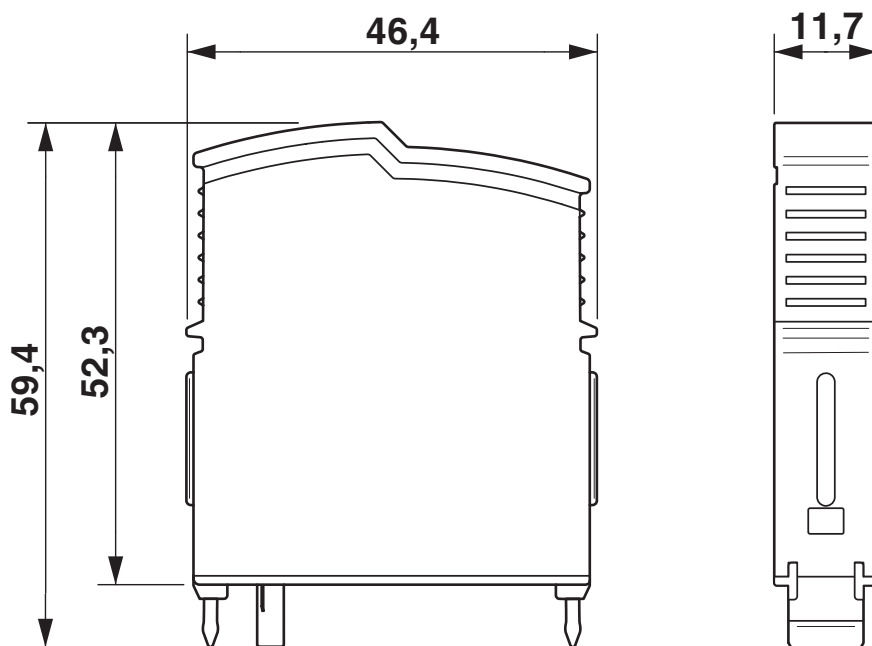


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Drawings

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

UAE-RoHS

Approval ID: 23-10-88707

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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% |
|-------------------------------------|----------------------------|

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