

VAL-US-480D/30-P - Type 1 surge protection plug



2910340

<https://www.phoenixcontact.com/us/products/2910340>

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UL Recognized type 1 SPD and IEC type 2 surge protection plug with a varistor and thermal disconnect for use with VAL-US base elements, mechanical and visual fault warning

Product description

Surge protective device replacement plug

Your advantages

- Thermal disconnect device for each individual plug
- Optical, mechanical status indication for the individual arresters
- Pluggable
- Mechanical coding of all slots
- Consists of base element and plug

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2910340 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | CL18 |
| Product key | CL1321 |
| GTIN | 4055626444826 |
| Weight per piece (including packing) | 63.1 g |
| Weight per piece (excluding packing) | 56 g |
| Customs tariff number | 85363030 |
| Country of origin | US |

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Technical data

Notes

General

| | |
|------|--|
| Note | <p>For use in all low-voltage systems between L-PEN.</p> <p>Only for use in IT systems between L-PE if the exposed conductive parts of the equipment of the low-voltage electrical installation are connected to the grounding system of the transformer station (common grounding of the HV transformer station and the exposed conductive part of the LV load system).</p> <p>RE = RA according to VDE 0100-442:2013, Figure 44.A1 and Table 44.A1</p> |
|------|--|

Product properties

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

Insulation characteristics

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

Electrical properties

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

Connection data

| | |
|-------------------|--------------------------|
| Connection method | VALVETRAB plug-in system |
|-------------------|--------------------------|

Dimensions

| | |
|---------------------|---------|
| Dimensional drawing | |
| Width | 17.5 mm |
| Height | 52.4 mm |
| Depth | 55.3 mm |

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| | |
|------------------|--------|
| Horizontal pitch | 1 Div. |
|------------------|--------|

Material specifications

| | |
|--|------------------|
| Color | 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 |

Protective circuit

| | |
|--|---|
| Mode of protection | L-PEN |
| Direction of action | 1L-N/PE |
| Nominal voltage U_N | 400/690 V AC (TN-C) |
| Nominal frequency f_N | 50 Hz (60 Hz) |
| Maximum continuous operating voltage U_C | 580 V AC |
| Protective conductor current I_{PE} | $\leq 500 \mu\text{A}$ |
| Standby power consumption P_C | $\leq 150 \text{ mVA}$ |
| Nominal discharge current I_n (8/20) μs | 15 kA |
| Maximum discharge current I_{max} (8/20) μs | 30 kA |
| Short-circuit current rating I_{SCCR} | 25 kA |
| Voltage protection level U_p | $\leq 2.5 \text{ kV}$ |
| Residual voltage U_{res} | $\leq 2.5 \text{ kV}$ (at I_n) $\leq 2.3 \text{ kV}$ (at 10 kA) $\leq 2.1 \text{ kV}$ (at 5 kA) $\leq 1.9 \text{ kV}$ (at 3 kA) |
| TOV behavior at U_T | 690 V AC (5 s / withstand mode) 762 V AC (120 min / withstand mode) |
| Max. backup fuse with branch wiring | 100 A (gG) |

Additional technical data

| | |
|--|-------|
| Maximum discharge current I_{max} (8/20) μs | 30 kA |
|--|-------|

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 | $\leq 2000 \text{ m}$ (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) |

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Approvals

UL specifications

| | |
|---|------------------|
| Maximum continuous operating voltage MCOV | 580 V AC |
| Short-circuit current rating (SCCR) | 200 kA |
| Voltage protection rating VPR | 2000 V |
| UL type | type 1 |
| Nominal discharge current I_n | 20 kA |
| Maximum Surge Current per Phase | 30 kA |
| Mode of protection | L-L L-G |
| Nominal voltage | 480 V AC (Delta) |
| Power distribution system | Single phase |
| Nominal frequency | 50/60 Hz |
| SPD Type | 1CA |

Standards and regulations

Air clearances and creepage distances

| | |
|--------------------------|--------------------------|
| Standards/regulations | EN 60664-1 / EN 61643-11 |
| Standards/specifications | IEC 61643-11 |
| Note | 2011 |
| Standards/specifications | EN 61643-11 |
| Note | 2012 |

Mounting

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

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Drawings

Dimensional drawing



Circuit diagram



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Approvals

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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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