

VAL-MS 230-UD-ST - Type 2 surge protection plug



2858962

<https://www.phoenixcontact.com/us/products/2858962>

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Surge protection connector type 2 with high-capacity varistor for VAL-MS base element, thermal monitoring, visual fault warning. Design: 230 V AC

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2858962 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | CL18 |
| Product key | CL1321 |
| GTIN | 4017918916367 |
| Weight per piece (including packing) | 61.4 g |
| Weight per piece (excluding packing) | 39.16 g |
| Customs tariff number | 85363030 |
| Country of origin | DE |

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Technical data

Product properties

| | |
|--|---|
| Product type | Replacement plug |
| Product family | VALVETRAB MS |
| IEC test classification | II T2 |
| EN type | T2 |
| IEC power supply system | TN TT |
| Type | DIN rail module, two-section, divisible |
| Number of positions | 1 |
| Surge protection fault message | optical |
| Arrester can be tested with CHECKMASTER from software version: | From SW rev. 1.10 |

Insulation characteristics

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

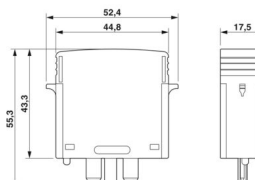
Electrical properties

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

Connection data

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

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 17.5 mm |
| Height | 52.4 mm |
| Depth | 55.3 mm |
| 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 |
| Material group | I |

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| | |
|------------------|--------|
| Housing material | PA 6.6 |
|------------------|--------|

Protective circuit

| | |
|--|--|
| Mode of protection | L-PEN |
| | L-N |
| Direction of action | 1L-N/PE |
| Nominal voltage U_N | 240/415 V AC (TN) |
| | 240/415 V AC (TT) |
| Nominal frequency f_N | 50 Hz (60 Hz) |
| Maximum continuous operating voltage U_C | 275 V AC |
| Protective conductor current I_{PE} | ≤ 0.45 mA |
| Standby power consumption P_C | ≤ 120 mVA |
| Nominal discharge current I_n (8/20) μ s | 20 kA |
| Maximum discharge current I_{max} (8/20) μ s | 40 kA |
| Short-circuit current rating I_{SCCR} | 25 kA |
| Voltage protection level U_p | ≤ 1.35 kV |
| Residual voltage U_{res} | ≤ 1.35 kV (at I_n) |
| | ≤ 1.1 kV (at 10 kA) |
| | ≤ 1 kV (at 5 kA) |
| | ≤ 0.9 kV (at 3 kA) |
| TOV behavior at U_T | 335 V AC (5 s / withstand mode) |
| | 440 V AC (120 min / safe failure mode) |
| Response time t_A | ≤ 25 ns |
| Max. backup fuse with branch wiring | 125 A (gG) |

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 | ≤ 2000 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 (L-N) | 275 V AC |
| Nominal discharge current I_n (L-N) | 20 kA |
| Mode of protection | L-N |
| Nominal voltage | 230 V AC |
| Power distribution system | Single phase |
| Nominal frequency | 50/60 Hz |

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| | |
|-------------------------------------|--------|
| Measured limiting voltage MLV (L-N) | 1910 V |
| SPD Type | 4CA |

Standards and regulations

Air clearances and creepage distances

| | |
|--------------------------|---|
| Standards/regulations | DIN VDE 0110-1 / IEC 60664-1 / VDE 0675-6 |
| 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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cUL Recognized

Approval ID: FILE E 330181



UL Recognized

Approval ID: FILE E 330181



IECEE CB Scheme

Approval ID: AT 2905/M1

CCA

Approval ID: NTR-AT 1947-A



KEMA-KEUR

Approval ID: 71-148002



CSA

Approval ID: 13631



ÖVE

Approval ID: 18583-001-17

UAE-RoHS

Approval ID: 22-09-51250



ÖVE

Approval ID: 18583-001-18

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

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 2.239 kg CO2e |
|---------|---------------|

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