

Type 2 surge protection device - VAL-MS 230/2+0 - 2800103

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2-pos. rail-mountable surge arrester for 2+0 circuit, thermal/dynamic monitoring and visual fault indicator. Arrester rated voltage: 275 V AC.

Product Features

- With or without floating remote indication contact
- Optical, mechanical status indication for the individual arresters
- Disconnect device on each individual plug
- Mechanical coding of all slots
- Multi-channel type 2 arresters
- Type 2 consistent plug-in surge arresters



Key commercial data

| | |
|--------------------------------------|-----------|
| Packing unit | 1 pc |
| Weight per Piece (excluding packing) | 240.0 GRM |
| Custom tariff number | 85363030 |
| Country of origin | Germany |

Technical data

Dimensions

| | |
|------------------|---------|
| Height | 90 mm |
| Width | 35.6 mm |
| Depth | 58 mm |
| Horizontal pitch | 2 Div. |

Ambient conditions

| | |
|----------------------|---|
| Degree of protection | IP20 (only when all terminal points are used) |
|----------------------|---|

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Ambient conditions

| | |
|---|--|
| Ambient temperature (operation) | -40 °C ... 80 °C |
| Ambient temperature (storage/transport) | -40 °C ... 80 °C |
| Altitude | ≤ 2000 m (amsl (above mean sea level)) |
| Permissible humidity (operation) | 5 % ... 95 % |
| Shock (operation) | 25g |
| Vibration (operation) | 5g |

General

| | |
|---|---|
| Standards/specifications | IEC 61643-11 2011 |
| | EN 61643-11 2012 |
| IEC test classification | II |
| | T2 |
| EN type | T2 |
| IEC power supply system | TN-C |
| Number of ports | One |
| SPD design | Voltage-limiting type |
| Mode of protection | L-PEN |
| Mounting type | DIN rail: 35 mm |
| Color | black |
| Housing material | PA 6.6 |
| | PBT |
| Pollution degree | 2 |
| Inflammability class according to UL 94 | V-0 |
| Type | DIN rail module, two-section, divisible |
| Surge protection fault message | Optical |

Protective circuit

| | |
|--|-----------------------|
| Nominal voltage U_N | 240/415 V AC (TN-C) |
| Nominal frequency f_N | 50 Hz (60 Hz) |
| Maximum continuous operating voltage U_C (L-PEN) | 275 V AC |
| Rated load current I_L | 80 A |
| Residual current I_{PE} | ≤ 0.9 mA |
| Standby power consumption P_C | ≤ 240 mVA |
| Nominal discharge current I_n (8/20) μ s (L-PEN) | 20 kA |
| Maximum discharge current I_{max} (8/20) μ s (L-PEN) | 40 kA |
| Short-circuit current rating I_{SCCR} | 25 kA |
| Voltage protection level U_p (L-PEN) | ≤ 1.35 kV |
| Residual voltage U_{res} (L-PEN) | ≤ 1.35 kV (at I_n) |

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Protective circuit

| | |
|---|---------------------------------|
| | ≤ 1.1 kV (at 10 kA) |
| | ≤ 1 kV (at 5 kA) |
| | ≤ 0.9 kV (at 3 kA) |
| TOV behavior at U_T (L-PEN) | 335 V AC (5 s / withstand mode) |
| Response time t_A (L-PEN) | ≤ 25 ns |
| Max. backup fuse with branch wiring | 125 A AC (gG) |
| Max. backup fuse with V-type through wiring | 80 A AC (gG) |

Connection data

| | |
|---------------------------------------|------------------------------|
| Connection method | Screw connection |
| Conductor cross section stranded min. | 1.5 mm ² |
| Conductor cross section stranded max. | 25 mm ² |
| Conductor cross section solid min. | 1.5 mm ² |
| Conductor cross section solid max. | 35 mm ² |
| AWG conductor cross section | 15 ... 2 |
| | 10 ... 2 (UL) |
| Screw thread | M5 |
| Tightening torque | 4.5 Nm |
| | 30 lb _F -in. (UL) |
| Stripping length | 16 mm |

NEMA/UL protective circuit

| | |
|---|------------------------------------|
| UL class | Type 4 SPD for Type 2 applications |
| Maximum continuous operating voltage MCOV (L-N) | 275 V AC |
| Nominal voltage U_N | 230 V AC |
| Mode of protection | L-L |
| | L-G |
| Power distribution system | 1S |
| Nominal frequency | 50/60 Hz |
| Voltage protection rating VPR (L-L) | 1.8 kV |
| Voltage protection rating VPR (L-G) | 1 kV |
| Nominal discharge current I_n (L-L) | 20 kA |
| Nominal discharge current I_n (L-G) | 20 kA |

Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 4.0 | 27140201 |
|------------|----------|

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Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 4.1 | 27130801 |
| eCl@ss 5.0 | 27130801 |
| eCl@ss 5.1 | 27130801 |
| eCl@ss 6.0 | 27130805 |
| eCl@ss 7.0 | 27130805 |
| eCl@ss 8.0 | 27130805 |

ETIM

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|----------|----------|
| ETIM 2.0 | EC000941 |
| ETIM 3.0 | EC000941 |
| ETIM 4.0 | EC000941 |
| ETIM 5.0 | EC000941 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 30212010 |
| UNSPSC 7.0901 | 39121610 |
| UNSPSC 11 | 39121610 |
| UNSPSC 12.01 | 39121610 |
| UNSPSC 13.2 | 39121620 |

Approvals

Approvals

Approvals

UL Recognized / cUL Recognized / CSA / ÖVE / CCA / IECCEB Scheme / cULus Recognized

Ex Approvals

Approvals submitted

Approval details

| |
|---|
| UL Recognized  |
|---|

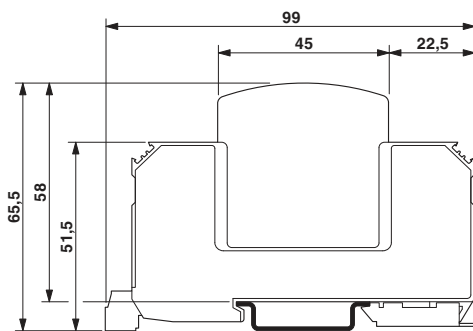
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Approvals

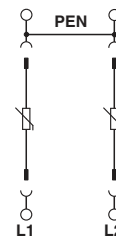
| |
|------------------|
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| CCA |
| IECEE CB Scheme |
| cULus Recognized |

Drawings

Dimensioned drawing



Circuit diagram



The illustration shows the dimensional drawing for a version with remote indicator contact