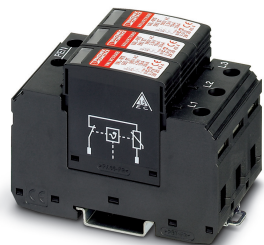


Type 2 surge arrester - VAL-MS 580/3+0 - 2920450

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Surge arrester for 4-conductor power supply systems (L1, L2, L3, PEN), consisting of a base element and protective connectors, for mounting on NS 35.

Your advantages

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



Key Commercial Data

| | |
|--------------|---------------|
| Packing unit | 1 pc |
| GTIN | |
| GTIN | 4046356163675 |

Technical data

Dimensions

| | |
|------------------|---------------------------------|
| Height | 89.8 mm |
| Width | 53.4 mm |
| Depth | 65.7 mm (incl. DIN rail 7.5 mm) |
| Horizontal pitch | 3 Div. |

Ambient conditions

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

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Technical data

Ambient conditions

| | |
|-----------------------|---|
| Shock (operation) | 25g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z) |
| Vibration (operation) | 5g (10 ... 500 Hz / 2.5 h / X, Y, Z) |

General

| | |
|--|---|
| IEC test classification | II |
| | T2 |
| EN type | T2 |
| IEC power supply system | TN-C |
| | IT |
| Mode of protection | L-PE |
| | L-PEN |
| Mounting type | DIN rail: 35 mm |
| Color | jet black RAL 9005 |
| Housing material | PA 6.6 |
| | PBT |
| Degree of pollution | 2 |
| Distance between live and grounded parts | 5 mm |
| Flammability rating according to UL 94 | V-0 |
| Type | DIN rail module, two-section, divisible |
| Number of positions | 3 |
| Surge protection fault message | optical |

Additional descriptions

| | |
|------|--|
| Note | Usable in all low-voltage systems between L-N or L-PEN. Only usable in IT Systems between L-PE, if the exposed-conductive-parts (bodies) of the equipment of the low-voltage installation is connected to the earthing arrangement of the transformer substation. (interconnected earthing arrangement of the HV-transformer substation with the bodies of the LV-installation. $R_E = R_A$ accordance to IEC 60364-4-442 / VDE 0100-442 Fig. 44D / Example a) |
|------|--|

Protective circuit

| | |
|--|---------------------------|
| Nominal voltage U_N | 400/690 V AC (TN-C) |
| | 500 V AC (IT) |
| Nominal frequency f_N | 50 Hz (60 Hz) |
| Maximum continuous voltage U_C | 580 V AC |
| Rated load current I_L | 80 A |
| Residual current I_{PE} | ≤ 0.75 mA |
| Standby power consumption P_C | ≤ 450 mVA |
| Nominal discharge current I_n (8/20) μ s | 15 kA |
| Maximum discharge current I_{max} (8/20) μ s | 30 kA |
| Short-circuit current rating I_{SCCR} | 25 kA |
| Voltage protection level U_p | ≤ 2.5 kV |
| Residual voltage U_{res} | ≤ 2.5 kV (at I_n) |

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Technical data

Protective circuit

| | |
|---|-------------------------------------|
| | ≤ 2.3 kV (at 10 kA) |
| | ≤ 2.1 kV (at 5 kA) |
| | ≤ 1.9 kV (at 3 kA) |
| TOV behavior at U_T | 690 V AC (5 s / withstand mode) |
| | 762 V AC (120 min / withstand mode) |
| Response time t_A | ≤ 25 ns |
| Max. backup fuse with V-type through wiring | 80 A (gG) |
| Max. backup fuse with branch wiring | 125 A (gG) |

Connection data

| | |
|----------------------------------|---|
| Connection method | Screw connection |
| Screw thread | M5 |
| Tightening torque | 3 Nm (1.5 mm ² ... 16 mm ²) |
| | 4.5 Nm (25 mm ² ... 35 mm ²) |
| Stripping length | 16 mm |
| Conductor cross section flexible | 1.5 mm ² ... 25 mm ² |
| Conductor cross section solid | 1.5 mm ² ... 35 mm ² |
| Conductor cross section AWG | 15 ... 2 |
| Connection method | Fork-type cable lug |
| Conductor cross section flexible | 1.5 mm ² ... 16 mm ² |

UL specifications

| | |
|---|--------------|
| SPD Type | 4CA |
| Maximum continuous operating voltage MCOV (L-L) | 1160 V AC |
| Maximum continuous operating voltage MCOV (L-G) | 580 V AC |
| Nom. voltage | 400/690 V AC |
| Mode of protection | L-L |
| | L-G |
| Power distribution system | Delta |
| Nominal frequency | 50/60 Hz |
| Measured limiting voltage MLV (L-L) | 4270 V |
| Measured limiting voltage MLV (L-G) | 2310 V |
| Nominal discharge current I_n (L-L) | 10 kA |
| Nominal discharge current I_n (L-G) | 10 kA |

UL connection data

| | |
|-----------------------------|-------------------------|
| Conductor cross section AWG | 10 ... 2 |
| Tightening torque | 30 lb _F -in. |

Standards and Regulations

| | |
|-----------------------|-------------------|
| Standards/regulations | IEC 61643-11 2011 |
| | EN 61643-11 2012 |

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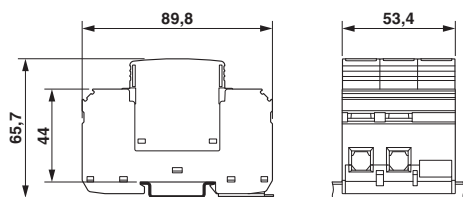
Technical data

Environmental Product Compliance

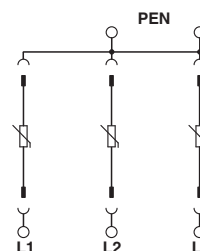
| | |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

Drawings

Dimensional drawing



Circuit diagram



Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27130805 |
| eCl@ss 11.0 | 27130805 |
| eCl@ss 4.0 | 27130800 |
| eCl@ss 4.1 | 27130800 |
| eCl@ss 5.0 | 27130800 |
| eCl@ss 5.1 | 27130800 |
| eCl@ss 6.0 | 27130800 |
| eCl@ss 7.0 | 27130805 |
| eCl@ss 9.0 | 27130805 |

ETIM

| | |
|----------|----------|
| ETIM 2.0 | EC000941 |
| ETIM 3.0 | EC000941 |
| ETIM 4.0 | EC000941 |
| ETIM 6.0 | EC000941 |
| ETIM 7.0 | EC000941 |

UNSPSC

| | |
|---------------|----------|
| UNSPSC 6.01 | 30212010 |
| UNSPSC 7.0901 | 39121610 |
| UNSPSC 11 | 39121610 |
| UNSPSC 12.01 | 39121610 |
| UNSPSC 13.2 | 39121620 |
| UNSPSC 18.0 | 39121620 |
| UNSPSC 19.0 | 39121620 |

Type 2 surge arrester - VAL-MS 580/3+0 - 2920450

Classifications

UNSPSC

| | |
|-------------|----------|
| UNSPSC 20.0 | 39121620 |
| UNSPSC 21.0 | 39121620 |

Approvals







Approvals

Approvals

CSA / CCA / UL Recognized / KEMA-KEUR / cUL Recognized / IECCEB Scheme / ÖVE / EAC / cULus Recognized

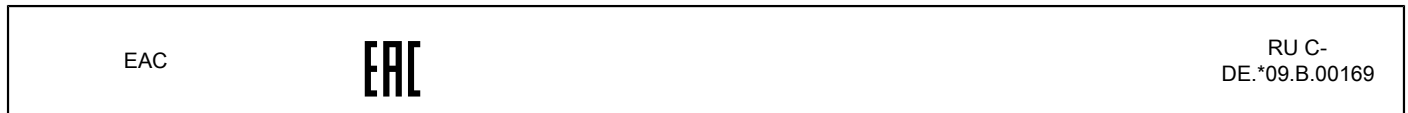
Ex Approvals

Approval details

| | | | |
|----------------|---|---|---------------|
| CSA |  | http://www.csagroup.org/services-industries/product-listing/ | 13631 |
| CCA | | | NTR-AT 1947-A |
| UL Recognized |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 330181 |
| KEMA-KEUR |  | http://www.dekra-certification.com | 71-113273 |
| cUL Recognized |  | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 330181 |
| IECCEB Scheme |  | http://www.iecee.org/ | AT 2905/M1 |
| ÖVE |  | https://www.ove.at/zertifizierung-pz/zertifizierungsregister/ | 18583-001-14 |

Type 2 surge arrester - VAL-MS 580/3+0 - 2920450

Approvals



Accessories

Accessories

Bridge

Wiring bridge - MPB 18/3- 6 - 2809241



Wiring bridge for modules with connecting pitch 17.5 mm, 3-phase, 6-pos.

Device marking

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

Feed-through terminal block

Feed-through terminal block - DK-BIC-35 - 2749880



Feed-through terminal block for VAL and FLT applications

Labeled device marker

Type 2 surge arrester - VAL-MS 580/3+0 - 2920450

Accessories

Marker for terminal blocks - ZBN 18,LGS:ERDE - 2749589



Marker for terminal blocks, Strip, white, labeled, horizontal: Grounding symbol, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

Marker for terminal blocks - ZBN 18,LGS:L1-N,ERDE - 2749576



Marker for terminal blocks, Strip, white, labeled, horizontal: L1, L2, L3, N, GND, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

Marker pen

Marker pen - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

Spare parts

Type 2 surge protection plug - VAL-MS 580-ST - 2920434



Type 2 surge protection plug with high-capacity varistor for VAL-MS base element, thermal monitoring, visual fault warning. Design: 580 V AC