

Type 2 surge protection plug - VAL-MS 320 ST - 2838843

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Surge protection connector type 2 with high-capacity varistor for VAL-MS base element, thermal monitoring, visual fault warning. Design: 320 V AC

Your advantages

- ✓ Single-channel, DIN-rail mountable protective devices
- ✓ Base element with/without floating remote indication contact
- ✓ Disconnect device on each individual plug
- ✓ Optical, mechanical status indication for the individual arresters
- ✓ Mechanical coding of all slots



Key Commercial Data

| | |
|--------------|---|
| Packing unit | 10 pc |
| GTIN |  4 017918 170813 |
| GTIN | 4017918170813 |

Technical data

Dimensions

| | |
|------------------|---------|
| Height | 52.4 mm |
| Width | 17.5 mm |
| Depth | 55.3 mm |
| Horizontal pitch | 1 Div. |

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 (above mean sea level)) |
| Permissible humidity (operation) | 5 % ... 95 % |
| Shock (operation) | 25g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z) |

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Technical data

Ambient conditions

| | |
|-----------------------|--------------------------------------|
| 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 |
| | TT |
| Mode of protection | L-N |
| | L-PEN |
| Mounting type | on base element |
| Color | jet black RAL 9005 |
| Housing material | PA 6.6 |
| Degree of pollution | 2 |
| Flammability rating according to UL 94 | V-0 |
| Type | DIN rail module, two-section, divisible |
| Number of positions | 1 |
| Arrester can be tested with CHECKMASTER from software version: | From SW rev. 1.10 |
| Surge protection fault message | optical |

Protective circuit

| | |
|--|--|
| Nominal voltage U_N | 240/415 V AC (TN) |
| | 240/415 V AC (TT) |
| Nominal frequency f_N | 50 Hz (60 Hz) |
| Maximum continuous voltage U_C | 335 V AC |
| Residual current I_{PE} | ≤ 0.45 mA |
| Standby power consumption P_C | ≤ 150 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 | ≤ 1.5 kV |
| Residual voltage U_{res} | ≤ 1.5 kV (at I_n) |
| | ≤ 1.3 kV (at 10 kA) |
| | ≤ 1.2 kV (at 5 kA) |
| | ≤ 1.1 kV (at 3 kA) |
| TOV behavior at U_T | 415 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) |

Connection data

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

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Technical data

UL specifications

| | |
|---|--------------|
| SPD Type | 4CA |
| Maximum continuous operating voltage MCOV (L-N) | 320 V AC |
| Nom. voltage | 320 V AC |
| Mode of protection | L-N |
| Power distribution system | Single phase |
| Nominal frequency | 50/60 Hz |
| Measured limiting voltage MLV (L-N) | 2030 V |
| Nominal discharge current I_n (L-N) | 20 kA |

Standards and Regulations

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

Environmental Product Compliance

| | |
|------------|---|
| China RoHS | Environmentally Friendly Use Period = 50 years |
| | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

Drawings

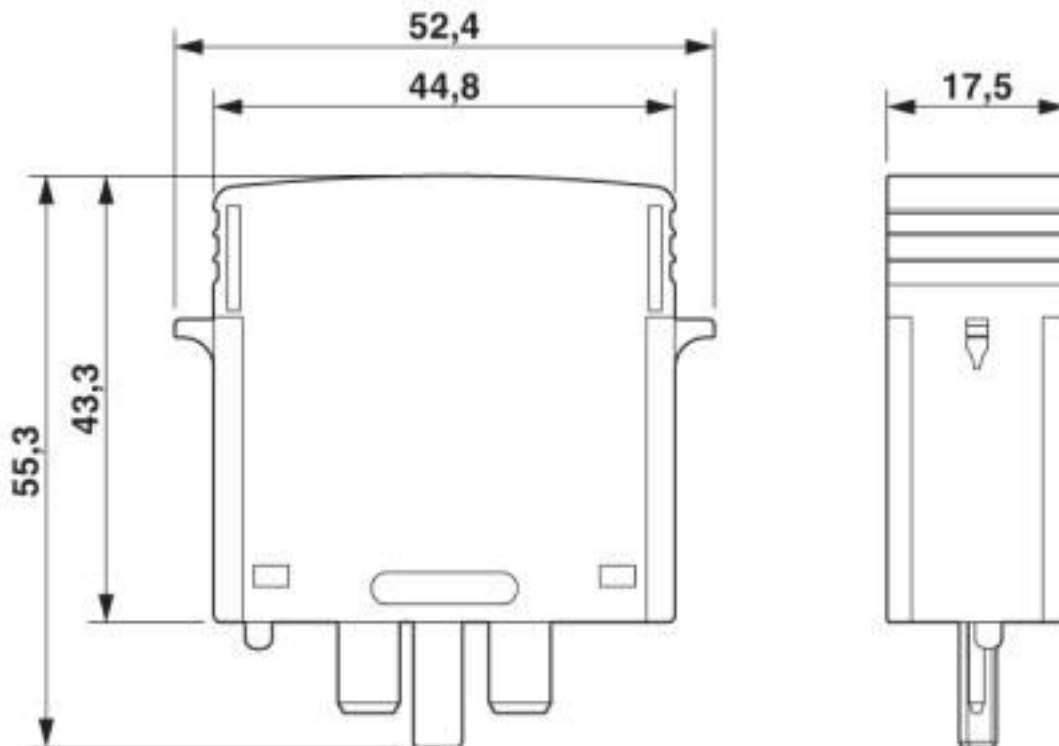
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Circuit diagram



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Dimensional drawing



Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27130890 |
| 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 8.0 | 27130890 |
| eCl@ss 9.0 | 27130890 |

ETIM

| | |
|----------|----------|
| ETIM 2.0 | EC000941 |
| ETIM 3.0 | EC000941 |
| ETIM 4.0 | EC000941 |
| ETIM 5.0 | EC002496 |
| ETIM 6.0 | EC000941 |
| ETIM 7.0 | EC000941 |

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Classifications

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

Approvals

Approvals

Approvals

CSA / GL / CCA / UL Recognized / KEMA-KEUR / cUL Recognized / IECCE CB Scheme / ÖVE / EAC / EAC / cULus Recognized

Ex Approvals

Approval details

| | | | |
|-----|--|---|-------|
| CSA | | http://www.csagroup.org/services-industries/product-listing/ | 13631 |
|-----|--|---|-------|

| | | | |
|----|--|---|-------------|
| GL | | https://approvalfinder.dnvgl.com/ | 94385-10 HH |
|----|--|---|-------------|

| | | | |
|-----|--|--|---------------|
| 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 |
|-----------|--|---|-----------|

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Approvals

| | | | |
|------------------|--|---|---------------------|
| cUL Recognized | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 330181 |
| IECEE CB Scheme | | http://www.iecee.org/ | AT 2905/M1 |
| ÖVE | | https://www.ove.at/zertifizierung-pz/zertifizierungsregister/ | 18583-001-14 |
| EAC | | | EAC-Zulassung |
| EAC | | | RU C-DE.*09.B.00169 |
| cULus Recognized | | | |

Accessories

Accessories

Bridge

Wiring bridge - MPB 18/1-10/1.0.0 - 2830443



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 10 pitches with contact sequence 1-0-0

Wiring bridge - MPB 18/4- 8 - 2809283



Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 8-pos.

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Accessories

Wiring bridge - MPB 18/3- 6 - 2809241



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

Wiring bridge - MPB 18/1-57 - 2809238



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 57-pos.

Wiring bridge - MPB 18/1-12 - 2748593



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 12-pos.

Wiring bridge - MPB 18/1- 9 - 2748580



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 9-pos.

Wiring bridge - MPB 18/1- 8 - 2748577



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 8-pos.

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Accessories

Wiring bridge - MPB 18/1- 6 - 2748564



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 6-pos.

Wiring bridge - MPB 18/1- 4 - 2809225



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 4-pos.

Wiring bridge - MPB 18/1- 3 - 2809212



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 3-pos.

Wiring bridge - MPB 18/1- 2 - 2809209



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 2-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

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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

Labeled device marker

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 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

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Accessories

Marker pen - B-STIFT - 1051993



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

Additional products

Type 2 surge protection base element - VAL-MS BE - 2817741



Base element for type 2 arresters of the VALVETRAB MS series of products. Design: 1-channel

Type 2 surge protection base element - VAL-MS BE/FM - 2817738



Base element for type 2 arresters of the VALVETRAB MS series of products, with remote indication contact. Design: 1-channel

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