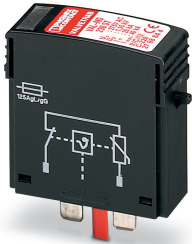


## Type 2 surge protection plug - VAL-MS 230 ST - 2798844


Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



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



### Key Commercial Data

|                                      |   |
|--------------------------------------|---|
| Packing unit                         | 1 pc  |
| GTIN                                 | <br>4 017918 073947 |
| GTIN                                 | 4017918073947   |
| Weight per Piece (excluding packing) | 42.650 g  |
| Custom tariff number                 | 85363010  |
| Country of origin                    | Germany   |

### 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 %                           |

## Type 2 surge protection plug - VAL-MS 230 ST - 2798844

### 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                                      |
|  | 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 $U_C$                   | 275 V AC                               |
| Residual current $I_{PE}$                          | $\leq 0.45$ mA                         |
| Standby power consumption $P_C$                    | $\leq 120$ mVA                         |
| Nominal discharge current $I_n$ (8/20) $\mu$ s     | 20 kA                                  |
| Maximum discharge current $I_{max}$ (8/20) $\mu$ s | 40 kA                                  |
| Short-circuit current rating $I_{SCCR}$            | 25 kA                                  |
| Voltage protection level $U_p$                     | $\leq 1.35$ kV                         |
| Residual voltage $U_{res}$                         | $\leq 1.35$ kV (at $I_n$ )             |
|  | $\leq 1.1$ kV (at 10 kA)               |
|  | $\leq 1$ kV (at 5 kA)                  |
|  | $\leq 0.9$ kV (at 3 kA)                |
| TOV behavior at $U_T$                              | 335 V AC (5 s / withstand mode)        |
|  | 440 V AC (120 min / safe failure mode) |

# Type 2 surge protection plug - VAL-MS 230 ST - 2798844

## Technical data

### Protective circuit

|                                     |              |
|-------------------------------------|--------------|
| Response time $t_A$                 | $\leq 25$ ns |
| Max. backup fuse with branch wiring | 125 A (gG)   |

### Connection data

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

### UL specifications

|   |              |
|---|--------------|
| SPD Type  | 4CA          |
| Maximum continuous operating voltage MCOV (L-N) | 275 V AC     |
| Nom. voltage                                    | 230 V AC     |
| Mode of protection                              | L-N          |
| Power distribution system                       | Single phase |
| Nominal frequency                               | 50/60 Hz     |
| Measured limiting voltage MLV (L-N)             | 1910 V       |
| Nominal discharge current $I_n$ (L-N)           | 20 kA        |

### Standards and Regulations

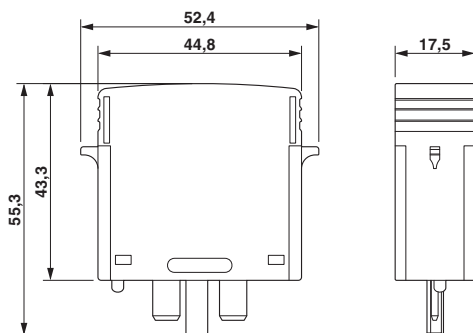
|                       |                   |
|-----------------------|-------------------|
| Standards/regulations | IEC 61643-11 2011 |
|                       | EN 61643-11 2012  |

### 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

Dimensional drawing



Circuit diagram



## Type 2 surge protection plug - VAL-MS 230 ST - 2798844

### Classifications

#### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27130890 |
| eCl@ss 11.0   | 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 |

#### 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 / CCA / UL Recognized / KEMA-KEUR / cUL Recognized / IECCEB Scheme / ÖVE / EAC / EAC / DNV GL / cULus Recognized

---

# Type 2 surge protection plug - VAL-MS 230 ST - 2798844

## Approvals

Ex Approvals

### Approval details

|                 |  |   |                         |
|-----------------|--|---|-------------------------|
| CSA             |  | <a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>               | 13631                   |
| CCA             |  |   | NTR-AT 1947-A           |
| UL Recognized   |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 330181           |
| KEMA-KEUR       |  | <a href="http://www.dekra-certification.com">http://www.dekra-certification.com</a>   | 71-113273               |
| cUL Recognized  |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 330181           |
| IECEE CB Scheme |  | <a href="http://www.iecee.org/">http://www.iecee.org/</a>   | AT 2905/M1              |
| ÖVE             |  | <a href="https://www.ove.at/zertifizierung-pz/zertifizierungsregister/">https://www.ove.at/zertifizierung-pz/zertifizierungsregister/</a>             | 18583-001-14            |
| EAC             |  |   | EAC-Zulassung           |
| EAC             |  |   | RU C-<br>DE.*09.B.00169 |

# Type 2 surge protection plug - VAL-MS 230 ST - 2798844

## Approvals

|        |  |   |            |
|--------|--|---|------------|
| DNV GL |  | <a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a> | TAE000041M |
|--------|--|---|------------|

|                  |  |
|------------------|--|
| cULus Recognized |  |
|------------------|--|

## Accessories

### Accessories

#### 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

#### 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 pen

## Type 2 surge protection plug - VAL-MS 230 ST - 2798844

### 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