

## Type 2 surge protection base element - VAL-MS/1+1-BE/FM - 2920531

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Base element for type 2 arresters of the VALVETRAB MS product range, with remote indication contact. Version for 1-phase power supply with separate installation of N and PE conductors.

### Why buy this product

- ✓ Versions with and without floating remote indication contact
- ✓ Single/multi-position design for accommodating protective plugs
- ✓ DIN rail module
- ✓ Coding when protective plug is inserted for the first time



### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 1 STK                                                                                                   |
| GTIN         | <br>4 046356 298995 |
| GTIN         | 4046356298995                                                                                           |

### Technical data

#### Dimensions

|                  |                                 |
|------------------|---------------------------------|
| Height           | 96.8 mm                         |
| Width            | 35.6 mm                         |
| Depth            | 51.5 mm (incl. DIN rail 7.5 mm) |
| Horizontal pitch | 2 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 %                                  |
| Shock (operation)                       | 25g (Half-sine / 11 ms /3x, #X, #Y, #Z)       |
| Vibration (operation)                   | 5g (10 ... 500 Hz / 2.5 h / X, Y, Z)          |

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## Technical data

### General

|                                        |                                 |
|----------------------------------------|---------------------------------|
| IEC test classification                | II                              |
|                                        | T2                              |
| EN type                                | T2                              |
| Mounting type                          | DIN rail: 35 mm                 |
| Color                                  | jet black RAL 9005              |
| Housing material                       | PBT                             |
| Degree of pollution                    | 2                               |
| Flammability rating according to UL 94 | V-0                             |
| Type                                   | Base element, DIN rail mounting |
| Number of positions                    | 2                               |
| Surge protection fault message         | Remote indication contact       |

### Protective circuit

|                                             |               |
|---------------------------------------------|---------------|
| Nominal frequency $f_N$                     | 50 Hz (60 Hz) |
| Maximum continuous voltage $U_C$            | 500 V AC      |
| Rated load current $I_L$                    | 80 A          |
| Short-circuit current rating $I_{SCCR}$     | 25 kA         |
| Max. backup fuse with branch wiring         | 200 A (gG)    |
| Max. backup fuse with V-type through wiring | 80 A (gG)     |

### Indicator/remote signaling

|                                  |                                              |
|----------------------------------|----------------------------------------------|
| Switching function               | PDT contact                                  |
| Operating voltage                | 5 V AC ... 250 V AC                          |
|                                  | 30 V DC                                      |
| Operating current                | 5 mA AC ... 1.5 A AC                         |
|                                  | 1 A DC                                       |
| Connection method                | Plug-in/screw connection via COMBICON        |
| Screw thread                     | M2                                           |
| Tightening torque                | 0.25 Nm                                      |
| Stripping length                 | 7 mm                                         |
| Conductor cross section flexible | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Conductor cross section solid    | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Conductor cross section AWG      | 28 ... 16                                    |

### Connection data

|                                  |                                                     |
|----------------------------------|-----------------------------------------------------|
| Connection method                | Screw connection                                    |
| Screw thread                     | M5                                                  |
| Tightening torque                | 3 Nm (1,5 mm <sup>2</sup> ... 16 mm <sup>2</sup> )  |
|                                  | 4.5 Nm (25 mm <sup>2</sup> ... 35 mm <sup>2</sup> ) |
| Stripping length                 | 16 mm                                               |
| Conductor cross section flexible | 1.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>          |
| Conductor cross section solid    | 1.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>          |

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## Technical data

### Connection data

|                                  |                                            |
|----------------------------------|--------------------------------------------|
| Conductor cross section AWG      | 15 ... 2                                   |
| Connection method                | Fork-type cable lug                        |
| Conductor cross section flexible | 1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup> |

### UL specifications

|              |          |
|--------------|----------|
| SPD Type     | 4CA      |
| Nom. voltage | 690 V AC |

### UL indicator/remote signaling

|                             |                        |
|-----------------------------|------------------------|
| Operating voltage           | 125 V AC               |
| Operating current           | 1 A AC                 |
| Tightening torque           | 4 lb <sub>F</sub> -in. |
| Conductor cross section AWG | 30 ... 14              |

### UL connection data

|                             |                         |
|-----------------------------|-------------------------|
| Conductor cross section AWG | 10 ... 2                |
| Tightening torque           | 30 lb <sub>F</sub> -in. |

### Standards and Regulations

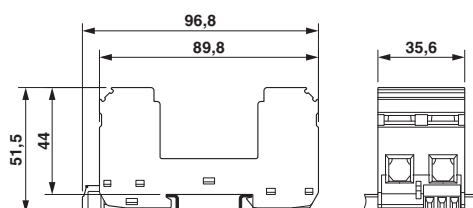
|                       |                   |
|-----------------------|-------------------|
| Standards/regulations | IEC 61643-11 2011 |
|                       | EN 61643-11 2012  |

### Environmental Product Compliance

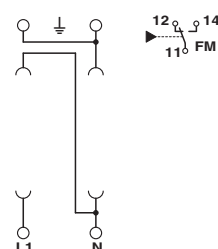
|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| China RoHS | Environmentally Friendly Use Period = 50           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

## Drawings

Dimensional drawing



Circuit diagram



## Approvals

### Approvals

#### Approvals

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

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### Approvals

#### Ex Approvals

#### Approval details

|                 |                                                                                     |                                                                                                                                                       |                         |
|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| ÖVE             |    | <a href="https://www.ove.at/en/certification-pz/certification-register/">https://www.ove.at/en/certification-pz/certification-register/</a>           | 18583-001-13            |
| 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>                                                                   | 2170208.01              |
| 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           |
| GL              |  | <a href="http://exchange.dnv.com/tari/">http://exchange.dnv.com/tari/</a>                                                                             | 94385-10 HH             |
| CCA             |                                                                                     |                                                                                                                                                       | NTR-AT 1947-A           |
| IECEE CB Scheme |  | <a href="http://www.iecee.org/">http://www.iecee.org/</a>                                                                                             | AT 2905/M1              |
| EAC             |  |                                                                                                                                                       | EAC-Zulassung           |
| EAC             |  |                                                                                                                                                       | RU C-<br>DE.A*30.B01561 |
| CSA             |  | <a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a>               | 13631                   |

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### Approvals

cULus Recognized



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

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