

VAL-MS/3+0-BE/FM - Type 2 surge protection base element



2881803

<https://www.phoenixcontact.com/us/products/2881803>

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Base element for type 2 arresters of the VALVETRAB MS product range, with remote indication contact. Version for 3-phase power supplies with PEN conductor.



Your advantages

- Quality proven millions of times over in the widest range of applications
- Rapid installation with bridges, thanks to industry-standard overall width of 1 HP
- Easy testing and insulation measurement, thanks to pluggable protection modules
- Wide range of applications due to various nominal voltages
- High degree of modularity provides individual solutions for every application

Commercial data

| | |
|--------------------------------------|--------------------|
| Item number | 2881803 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | CL18 |
| Product key | CL1321 |
| Catalog page | Page 67 (C-4-2019) |
| GTIN | 4046356091442 |
| Weight per piece (including packing) | 233 g |
| Weight per piece (excluding packing) | 204 g |
| Customs tariff number | 85366990 |
| Country of origin | DE |

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Technical data

Notes

General

| | |
|------|---|
| Note | For installation into a touch protected cabinet. For applications with $U_C > 500$ V distances at the side and distances at the connection area must be minimum of 5 mm between different active parts including earthed parts. |
|------|---|

Product properties

| | |
|--------------------------------|---------------------------------|
| Product type | Base element |
| Product family | VALVETRAB MS |
| IEC test classification | II |
| | T2 |
| EN type | T2 |
| Type | Base element, DIN rail mounting |
| Number of positions | 3 |
| Surge protection fault message | Remote indication contact |

Data management status

| | |
|------------------|----|
| Article revision | 09 |
|------------------|----|

Insulation characteristics

| | |
|----------------------|-----|
| Overvoltage category | III |
| Pollution degree | 2 |

Electrical properties

| | |
|-------------------------|---------------|
| Nominal frequency f_N | 50 Hz (60 Hz) |
|-------------------------|---------------|

Indicator/remote signaling

| | |
|--------------------|--------------------------------|
| Connection name | Remote fault indicator contact |
| Switching function | Changeover 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 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 rigid | 1.5 mm ² ... 35 mm ² |

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

Remote fault indicator contact

| | |
|----------------------------------|--|
| 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 ² ... 1.5 mm ² |
| Conductor cross section rigid | 0.14 mm ² ... 1.5 mm ² |
| Conductor cross section AWG | 28 ... 16 |

Dimensions

| | |
|---------------------|---------------------------------|
| Dimensional drawing | |
| Width | 53.4 mm |
| Height | 98.7 mm |
| Depth | 51.5 mm (incl. DIN rail 7.5 mm) |
| Horizontal pitch | 3 Div. |

Material specifications

| | |
|--|------------------|
| Color | black (RAL 9005) |
| Flammability rating according to UL 94 | V-0 |
| CTI value of material | 600 |
| Insulating material | PBT |
| Material group | I |
| Housing material | PBT |

Mechanical properties

Mechanical data

| | |
|-----------------|----|
| Open side panel | No |
|-----------------|----|

Protective circuit

| | |
|---|---------------|
| Direction of action | 3L-PEN |
| Nominal frequency f_N | 50 Hz (60 Hz) |
| Maximum continuous voltage U_C | 800 V AC |
| Rated load current I_L | 80 A |
| Short-circuit current rating I_{SCCR} | 25 kA |
| Max. backup fuse with V-type through wiring | 80 A (gG) |
| Max. backup fuse with branch wiring | 200 A (gG) |

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Environmental and real-life conditions

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) |
| 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) |

Approvals

UL specifications

| | |
|-----------------|----------|
| Nominal voltage | 690 V AC |
| SPD Type | 4CA |

UL indicator/remote signaling

| | |
|----------------------|----------|
| Operating voltage | 125 V AC |
| AC operating current | 1 A AC |

UL connection data

| | |
|-----------------------------|-------------------------|
| Tightening torque | 30 lb _F ·in. |
| Conductor cross section AWG | 14 ... 2 |

Standards and regulations

| | |
|--------------------------|--------------|
| Standards/specifications | IEC 61643-11 |
| Note | 2011 |
| Standards/specifications | EN 61643-11 |
| Note | 2012 |

Mounting

| | |
|---------------|-----------------|
| Mounting type | DIN rail: 35 mm |
|---------------|-----------------|

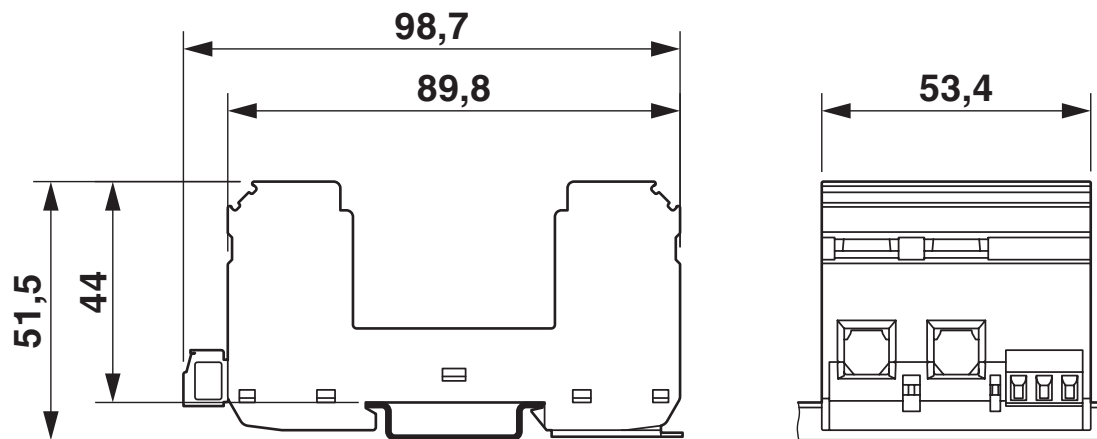
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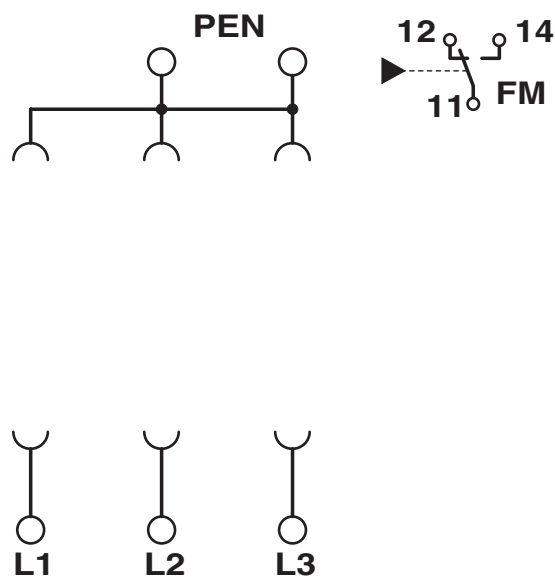
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Drawings

Dimensional drawing



Circuit diagram



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Approvals

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cUL Recognized
Approval ID: FILE E 330181



UL Recognized
Approval ID: FILE E 330181



IECEE CB Scheme
Approval ID: AT 2905/M1



EAC
Approval ID: EAC-Zulassung

CCA

Approval ID: NTR-AT 1947-A



KEMA-KEUR
Approval ID: 71-113273 REV.1



DNV GL
Approval ID: TAE000041M



EAC
Approval ID: RU C-DE.*09.B.00169



CSA
Approval ID: 13631



ÖVE
Approval ID: 18583-001-17

UAE-RoHS

Approval ID: 22-09-51251

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27130803 |
| ECLASS-13.0 | 27171292 |

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC002496 |
|----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121600 |
|-------------|----------|

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Environmental product compliance

| | |
|---|--|
| EU RoHS | |
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
| China RoHS | |
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |
| EU REACH SVHC | |
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |

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