

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



2817738

<https://www.phoenixcontact.com/us/products/2817738>

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



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 | 2817738 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales Key | C06 |
| Product Key | CL1321 |
| Catalog Page | Page 66 (C-4-2019) |
| GTIN | 4017918148157 |
| Weight per Piece (including packing) | 76.37 g |
| Weight per Piece (excluding packing) | 71.917 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

| | |
|--------------------------------|---------------------------------|
| IEC test classification | II |
| | T2 |
| EN type | T2 |
| Type | Base element, DIN rail mounting |
| Product type | Base element |
| Product family | VALVETRAB MS |
| Number of positions | 1 |
| Surge protection fault message | Remote indication contact |

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 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 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 |

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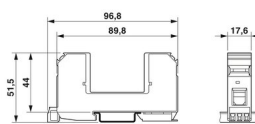
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Remote fault indicator contact

| | |
|----------------------------------|--|
| Connection method | Plug-in/screw connection via COMBICON |
| Screw thread | M2 |
| Tightening torque | 0.25 Nm |
| Conductor cross section flexible | 0.14 mm ² ... 1.5 mm ² |
| Conductor cross section solid | 0.14 mm ² ... 1.5 mm ² |
| Conductor cross section AWG | 28 ... 16 |

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 17.6 mm |
| Height | 96.8 mm |
| Depth | 51.5 mm (incl. DIN rail 7.5 mm) |
| Horizontal pitch | 1 Div. |

Material specifications

| | |
|--|--------------------|
| Color | jet black RAL 9005 |
| Flammability rating according to UL 94 | V-0 |
| CTI value of material | 600 |
| Insulating material | PA 6.6 |
| Material group | I |
| Housing material | PA 6.6 |

Mechanical properties

Mechanical data

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

Protective circuit

| | |
|---|---------------|
| Direction of action | 1L-N/PE |
| Nominal frequency f_N | 50 Hz (60 Hz) |
| Maximum continuous voltage U_C | 600 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 | 125 A (gG) |

Environmental and real-life conditions

Ambient conditions

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

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| | |
|---|---|
| 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) |

Approval data

UL specifications

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

UL indicator/remote signaling

| | |
|----------------------|----------|
| AC 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 |
| Standards/specifications | EN 61643-11 |

Mounting

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

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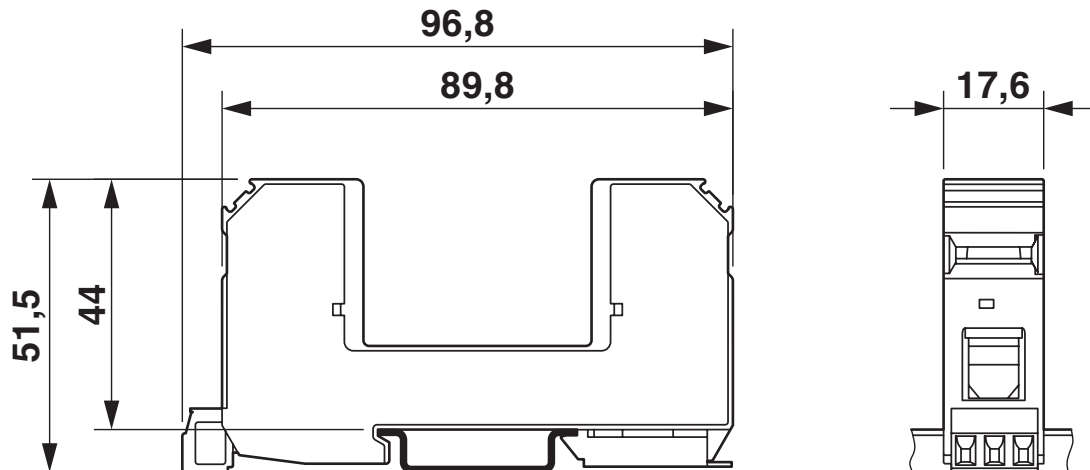
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Drawings

Circuit diagram



Dimensional drawing



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Approvals



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

Nominal Voltage U_N

Nominal Current I_N

Cross Section AWG

Cross Section mm^2

-

-



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



DNV GL
Approval ID: TAE000041M

Nominal Voltage U_N

Nominal Current I_N

Cross Section AWG

Cross Section mm^2

-

-



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



CSA
Approval ID: 13631



ÖVE
Approval ID: 18583-001-16

cULus Recognized

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Classifications

ECLASS

| | |
|---------------|----------|
| ECLASS-9.0 | 27130803 |
| ECLASS-10.0.1 | 27130803 |
| ECLASS-11.0 | 27130803 |

ETIM

| | |
|----------|----------|
| ETIM 8.0 | EC000472 |
|----------|----------|

UNSPSC

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

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Environmental Product Compliance

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

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Accessories

 Note: Applying some accessories below might limit this product.

MPB 18/1-10/1.0.0 - Wiring bridge

2830443

<https://www.phoenixcontact.com/us/products/2830443>



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

 Max. current carrying capacity: 125 A

MPB 18/4- 8 - Wiring bridge

2809283

<https://www.phoenixcontact.com/us/products/2809283>



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

 Max. current carrying capacity: 80 A

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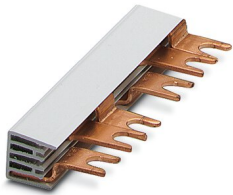
<https://www.phoenixcontact.com/us/products/2817738>

MPB 18/3- 6 - Wiring bridge

2809241

<https://www.phoenixcontact.com/us/products/2809241>

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



 Max. current carrying capacity: 80 A


MPB 18/1-57 - Wiring bridge

2809238

<https://www.phoenixcontact.com/us/products/2809238>

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



 Max. current carrying capacity: 125 A

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<https://www.phoenixcontact.com/us/products/2817738>


MPB 18/1-12 - Wiring bridge

2748593

<https://www.phoenixcontact.com/us/products/2748593>



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

 Max. current carrying capacity: 125 A


MPB 18/1- 9 - Wiring bridge

2748580

<https://www.phoenixcontact.com/us/products/2748580>



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

 Max. current carrying capacity: 125 A

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MPB 18/1- 8 - Wiring bridge

2748577

<https://www.phoenixcontact.com/us/products/2748577>



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

 Max. current carrying capacity: 125 A


MPB 18/1- 6 - Wiring bridge

2748564

<https://www.phoenixcontact.com/us/products/2748564>



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

 Max. current carrying capacity: 125 A

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MPB 18/1- 4 - Wiring bridge

2809225

<https://www.phoenixcontact.com/us/products/2809225>

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



 Max. current carrying capacity: 125 A

MPB 18/1- 3 - Wiring bridge

2809212

<https://www.phoenixcontact.com/us/products/2809212>

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



 Max. current carrying capacity: 125 A

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MPB 18/1- 2 - Wiring bridge

2809209

<https://www.phoenixcontact.com/us/products/2809209>

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



 Max. current carrying capacity: 125 A

ZBN 18,LGS:ERDE - Marker for terminal blocks

2749589

<https://www.phoenixcontact.com/us/products/2749589>

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



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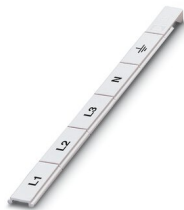
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ZBN 18,LGS:L1-N,ERDE - Marker for terminal blocks

2749576

<https://www.phoenixcontact.com/us/products/2749576>



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

ZBN 18:UNBEDRUCKT - Zack marker strip

2809128

<https://www.phoenixcontact.com/us/products/2809128>



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

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B-STIFT - Marker pen

1051993

<https://www.phoenixcontact.com/us/products/1051993>



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

DK-BIC-35 - Feed-through terminal block

2749880

<https://www.phoenixcontact.com/us/products/2749880>



Feed-through terminal block for VAL and FLT applications

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MPB 18/1- 2 - Wiring bridge

2809209

<https://www.phoenixcontact.com/us/products/2809209>

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



MPB 18/1- 3 - Wiring bridge

2809212

<https://www.phoenixcontact.com/us/products/2809212>

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



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MPB 18/1- 4 - Wiring bridge

2809225

<https://www.phoenixcontact.com/us/products/2809225>

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



MPB 18/1- 6 - Wiring bridge

2748564

<https://www.phoenixcontact.com/us/products/2748564>

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



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MPB 18/1- 7 BU - Wiring bridge

2856278

<https://www.phoenixcontact.com/us/products/2856278>

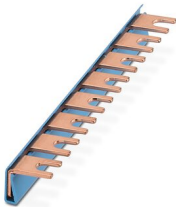


Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 7-pos., color: Blue

MPB 18/1- 8 BU - Wiring bridge

2858470

<https://www.phoenixcontact.com/us/products/2858470>



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

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MPB 18/1- 8 - Wiring bridge

2748577

<https://www.phoenixcontact.com/us/products/2748577>

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



MPB 18/1- 9 - Wiring bridge

2748580

<https://www.phoenixcontact.com/us/products/2748580>

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



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MPB 18/1-12 - Wiring bridge

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

MPB 18/1-57 - Wiring bridge

2809238

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

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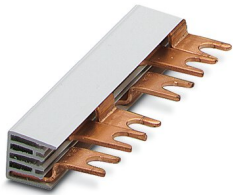
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MPB 18/3- 6 - Wiring bridge

2809241

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



MPB 18/4- 8 - Wiring bridge

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



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