

## VAL-MS/3+1-BE/FM

Order No.: 2838898



<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2838898>

Base element for type 2 arresters of the VALVETRAB MS series of products, with remote indication contact. Version for 3-phase power supply with separate installation of N and PE conductors.

### Commercial data

|                          |                   |
|--------------------------|-------------------|
| GTIN (EAN)               | 4017918171933     |
| sales group              | J022              |
| Pack                     | 1 pcs.            |
| Customs tariff           | 85363030          |
| Weight/Piece             | 0.2552 KG         |
| Catalog page information | Page 34 (TT-2009) |

### Product notes

WEEE/RoHS-compliant since:  
01/31/2006



<http://www.download.phoenixcontact.com>  
Please note that the data given here has been taken from the online catalog. For comprehensive information and data, please refer to the user documentation. The General Terms and Conditions of Use apply to Internet downloads.

### Technical data

#### Standards

|                                          |                |
|------------------------------------------|----------------|
| Housing material                         | PBT / PA       |
| Inflammability class acc. to UL 94       | V0             |
| Color                                    | black          |
| Standards for air and creepage distances | DIN VDE 0110-1 |

|                                 |                                         |
|---------------------------------|-----------------------------------------|
| Degree of protection            | IP20                                    |
| Mounting type                   | DIN rail 35 mm                          |
| Design                          | DIN rail module, two-section, divisible |
| Number of positions             | 4                                       |
| Ambient temperature (operation) | -40 °C ... 80 °C                        |
| Message surge protection faulty | Remote indicator contact                |
| Direction of action             | 3L-N & N-PE                             |
| Width                           | 70.80 mm                                |
| Height                          | 51.50 mm                                |
| Length                          | 99.00 mm                                |
| Pitch unit                      | 4 Div.                                  |

#### Protective circuit

|                                                                     |                                                     |
|---------------------------------------------------------------------|-----------------------------------------------------|
| Arrester rated voltage $U_c$                                        | 450 V AC (L-L)                                      |
| Arrester rated voltage $U_c$ (L-N)                                  | 260 V AC                                            |
| Arrester rated voltage $U_c$ (N-PE)                                 | 260 V AC                                            |
| Rated load current                                                  | 80 A (Serial through wiring at 16 mm <sup>2</sup> ) |
| Max. required backup fuse with branch wiring                        | 125 A (gL / gG)                                     |
| Short circuit resistance $I_{cc}$ with max. backup fuse (effective) | 25 kA                                               |

#### Connection, protective circuit

|                                        |                                |
|----------------------------------------|--------------------------------|
| Type of connection                     | Screw connection               |
| Connection type IN                     | Biconnect screw terminal block |
| Connection type OUT                    | Biconnect screw terminal block |
| Screw thread                           | M5                             |
| Tightening torque                      | 4.5 Nm                         |
| Stripping length                       | 14.5 mm                        |
| Conductor cross section stranded min.  | 0.5 mm <sup>2</sup>            |
| Conductor cross section stranded max.  | 25 mm <sup>2</sup>             |
| Conductor cross section solid min.     | 0.5 mm <sup>2</sup>            |
| Conductor cross section solid max.     | 35 mm <sup>2</sup>             |
| Conductor cross section AWG/kcmil min. | 20                             |
| Conductor cross section AWG/kcmil max  | 2                              |

#### Remote indicator contact

|                 |                                |
|-----------------|--------------------------------|
| Connection name | Remote fault indicator contact |
|-----------------|--------------------------------|

|                                               |                       |
|-----------------------------------------------|-----------------------|
| Switching function                            | PDT, 1-pos.           |
| Type of connection                            | Screw connection      |
| Screw thread                                  | M2                    |
| Tightening torque                             | 0.25 Nm               |
| Stripping length                              | 7 mm                  |
| Conductor cross section stranded min.         | 0.14 mm <sup>2</sup>  |
| Conductor cross section stranded max.         | 1.5 mm <sup>2</sup>   |
| Conductor cross section solid min.            | 0.14 mm <sup>2</sup>  |
| Conductor cross section solid max.            | 1.5 mm <sup>2</sup>   |
| Conductor cross section AWG/kcmil min.        | 28                    |
| Conductor cross section AWG/kcmil max         | 16                    |
| Maximum operating voltage U <sub>max</sub> AC | 250 V                 |
| Maximum operating voltage U <sub>max</sub> DC | 30 V DC               |
| Max. operating current I <sub>max</sub>       | 0.75 A (250 V AC)     |
|                                               | 3 A (125 V AC)        |
|                                               | 2 A (30 V DC)         |
| Min. permissible switching capacity           | 0.12 VA (12 V, 10 mA) |

#### Environmental conditions

|                       |                     |
|-----------------------|---------------------|
| Standards/regulations | IEC 61643-1         |
|                       | DIN EN 61643-11     |
|                       | DIN EN 61643-11/A11 |

#### Certificates / Approvals



Certification

CB, CCA, CUL, GOST, KEMA, OEVE, UL

#### Accessories

| Item           | Designation | Description                                                              |
|----------------|-------------|--------------------------------------------------------------------------|
| <b>Bridges</b> |             |                                                                          |
| 2809209        | MPB 18/1- 2 | Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 2-pos. |
| 2809212        | MPB 18/1- 3 | Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 3-pos. |

|         |                   |                                                                                                               |
|---------|-------------------|---------------------------------------------------------------------------------------------------------------|
| 2809225 | MPB 18/1- 4       | Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 4-pos.                                      |
| 2748564 | MPB 18/1- 6       | Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 6-pos.                                      |
| 2748577 | MPB 18/1- 8       | Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 8-pos.                                      |
| 2748580 | MPB 18/1- 9       | Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 9-pos.                                      |
| 2748593 | MPB 18/1-12       | Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 12-pos.                                     |
| 2830168 | MPB 18/1-20/1.2.5 | Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 20 pitches with contact sequence 1-2-0-0-5  |
| 2809238 | MPB 18/1-57       | Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 57-pos.                                     |
| 2809241 | MPB 18/3- 6       | Wiring bridge for modules with connecting pitch 17.5 mm, 3-phase, 6-pos.                                      |
| 2809283 | MPB 18/4- 8       | Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 8-pos.                                      |
| 2809283 | MPB 18/4- 8       | Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 8-pos.                                      |
| 2809296 | MPB 18/4-12       | Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 12-pos.                                     |
| 2809296 | MPB 18/4-12       | Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 12-pos.                                     |
| 2818339 | MPB F200X16/ 1GS  | Wiring bridge flexible, diameter 16 mm <sup>2</sup> , with a fork-type cable lug on one side, length: 200 mm  |
| 2818339 | MPB F200X16/ 1GS  | Wiring bridge flexible, diameter 16 mm <sup>2</sup> , with a fork-type cable lug on one side, length: 200 mm  |
| 2818342 | MPB F400X16/ 1GS  | Wiring bridge flexible, diameter 16 mm <sup>2</sup> , with a fork-type cable lug on one side, length: 400 mm  |
| 2818342 | MPB F400X16/ 1GS  | Wiring bridge flexible, diameter 16 mm <sup>2</sup> , with a fork-type cable lug on one side, length: 400 mm  |
| 2818355 | MPB F600X16/ 1GS  | Wiring bridge flexible, diameter: 16 mm <sup>2</sup> , with a fork-type cable lug on one side, length: 600 mm |
| 2818355 | MPB F600X16/ 1GS  | Wiring bridge flexible, diameter: 16 mm <sup>2</sup> , with a fork-type cable lug on one side, length: 600 mm |

#### General

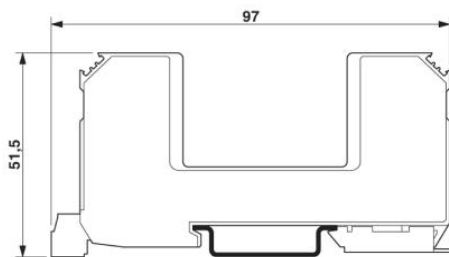
|         |                   |                                                                                                          |
|---------|-------------------|----------------------------------------------------------------------------------------------------------|
| 2749880 | DK-BIC-35         | Feed-through terminal block for VAL and FLT applications                                                 |
| 2830443 | MPB 18/1-10/1.0.0 | Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 10 pitches with contact sequence 1-0-0 |

## Marking

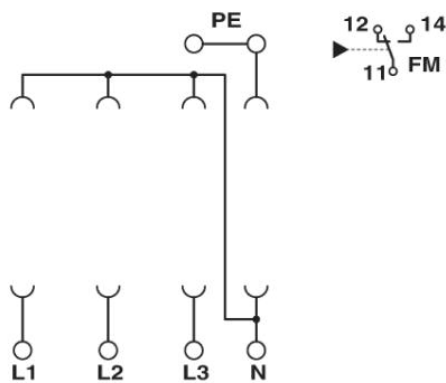
|         |                      |                                                                                                                                                                                    |
|---------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1051993 | B-STIFT              | Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm                                                                        |
| 2749589 | ZBN 18,LGS:ERDE      | Marking labels, printed horizontally, strips with 5 labels, GND (grounding symbol), color: White                                                                                   |
| 2749576 | ZBN 18,LGS:L1-N,ERDE | Marker labels, printed horizontally, strips with 5 labels, L1, L2, L3, N, GND, color: white                                                                                        |
| 0800763 | ZBN 18:SO/CMS        | Marker labels, 5-section, special printing, labeled according to customer requirements (Please specify the required marking with order), for terminal width: 17.5 mm, color: White |
| 2809128 | ZBN 18:UNBEDRUCKT    | Unprinted marker labels, strips with 5 labels for individual labeling with M-PEN or CMS system, for terminal block width: 17.5 mm, color: White                                    |

## Diagrams/Drawings

### Dimensioned drawing



### Circuit diagram



**Address**

PHOENIX CONTACT Inc., USA  
586 Fulling Mill Road  
Middletown, PA 17057, USA  
Phone (800) 888-7388  
Fax (717) 944-1625  
<http://www.phoenixcon.com>



© 2010 Phoenix Contact  
Technical modifications reserved;