

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

2817738

<https://www.phoenixcontact.com/in/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	10 pc
Minimum order quantity	1 pc
Sales Key	CL1
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	85363010
Country of origin	IN

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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.
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### 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)
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#### 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 <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 rigid	1.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
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>

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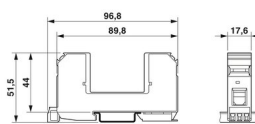
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## Remote fault indicator contact

Connection method	Plug-in/screw connection via COMBICON
Screw thread	M2
Tightening torque	0.25 Nm
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section rigid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
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
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## 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)

## Approvals

### 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 <sub>F</sub> -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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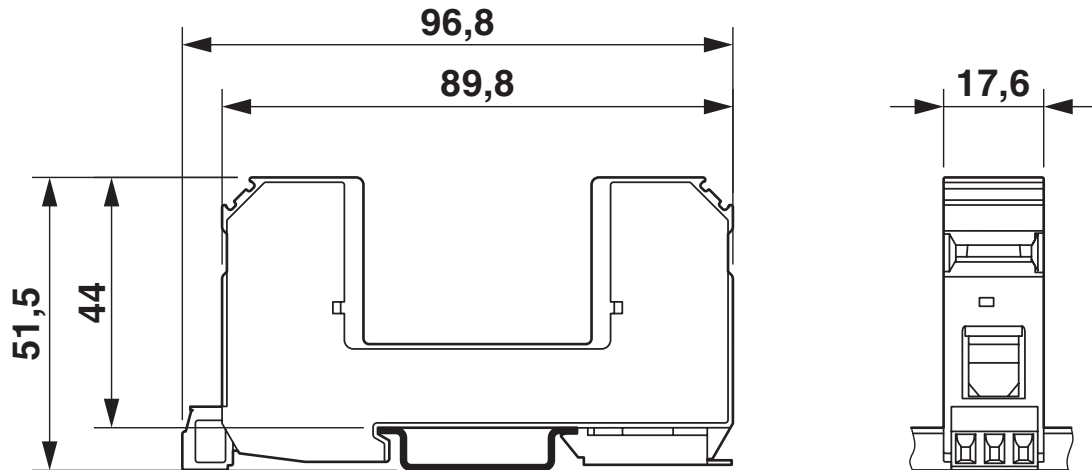
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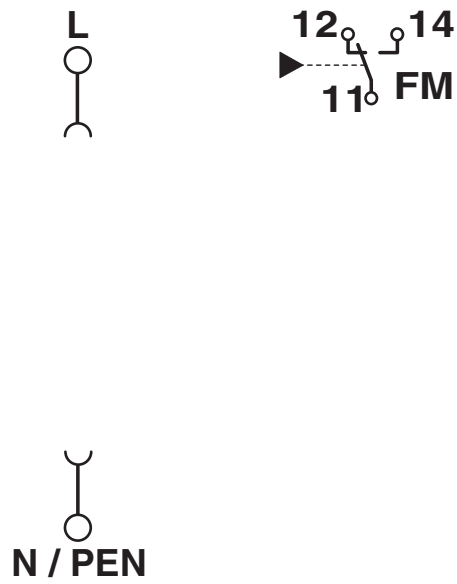
<https://www.phoenixcontact.com/in/products/2817738>

## Drawings

Dimensional drawing



Circuit diagram



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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



**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: 18583-001-16

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## Classifications

### ECLASS

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/in/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/in/products/2809283>



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

 Max. current carrying capacity: 80 A

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

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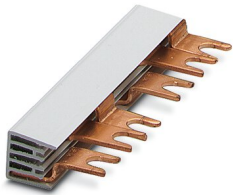
<https://www.phoenixcontact.com/in/products/2817738>

## MPB 18/3- 6 - Wiring bridge

2809241

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

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



 Max. current carrying capacity: 80 A

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## MPB 18/1-57 - Wiring bridge

2809238

<https://www.phoenixcontact.com/in/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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## MPB 18/1-12 - Wiring bridge

2748593

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



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

 Max. current carrying capacity: 125 A

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## MPB 18/1- 9 - Wiring bridge

2748580

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



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

 Max. current carrying capacity: 125 A

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## MPB 18/1- 6 - Wiring bridge

2748564

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

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



 Max. current carrying capacity: 125 A

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## MPB 18/1- 3 - Wiring bridge

2809212

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


## MPB 18/1- 2 - Wiring bridge

2809209

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

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



 Max. current carrying capacity: 125 A

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## ZBN 18,LGS:ERDE - Marker for terminal blocks

2749589

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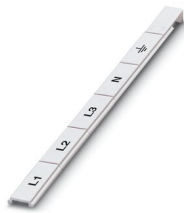
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<https://www.phoenixcontact.com/in/products/2817738>

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

2749576

<https://www.phoenixcontact.com/in/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

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## ZBN 18:UNBEDRUCKT - Zack marker strip

2809128

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

## B-STIFT - Marker pen

1051993

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



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

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## DK-BIC-35 - Feed-through terminal block

2749880

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



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

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## MPB 18/1- 3 - Wiring bridge

2809212

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



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

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## MPB 18/1- 6 - Wiring bridge

2748564

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



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

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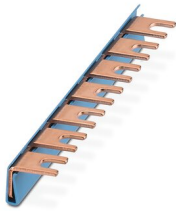
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## MPB 18/1- 7 BU - Wiring bridge

2856278

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



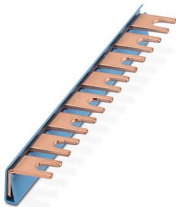
Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 7-pos., color: Blue

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## MPB 18/1- 8 BU - Wiring bridge

2858470

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

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



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## MPB 18/1- 9 - Wiring bridge

2748580

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



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

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## MPB 18/1-57 - Wiring bridge

2809238

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



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

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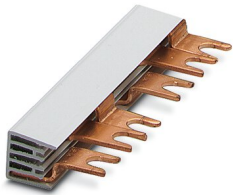
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## MPB 18/3- 6 - Wiring bridge

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



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## MPB 18/4- 8 - Wiring bridge

2809283

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



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