VAL-MS-T1/T2 BE/O - Type 2 surge protection base element

2905650

https://www.phoenixcontact.com/us/products/2905650

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Base element for type 1/2 arresters from the VALVETRAB MS T1/T2 product range. Version: 1-channel

Your advantages

- Rack-mount 2U panel applications
- Plug-in direction parallel to the conductor axis
- Versions with and without floating remote indication contact
- DIN rail mounting
- Accepts Type 1 and Type 2 VAL-MS plugs
- Coding when protective plug is inserted for the first time

Commercial data

Item number	2905650
Packing unit	12 pc
Minimum order quantity	12 pc
Sales key	CL18
Product key	CL1151
Catalog page	Page 49 (C-4-2019)
GTIN	4046356983006
Weight per piece (including packing)	95 g
Weight per piece (excluding packing)	81 g
Customs tariff number	85363030
Country of origin	US

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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	I / II
	T1 / T2
EN type	T1 / T2
Type	Base element, DIN rail mounting
Number of positions	1
Surge protection fault message	none

Insulation characteristics

Overvoltage category	III
Pollution degree	2

Electrical properties

Nominal frequency f_N	50 Hz (60 Hz)
Nominal voltage U_N	500 V AC

Connection data

Connection method	Biconnect terminal blocks
Screw thread	M5
Tightening torque	30 lb_f-in. (UL)
Stripping length	16 mm
Conductor cross section flexible min.	1.5 mm²
Conductor cross section flexible max.	25 mm²
Conductor cross section, rigid min.	1.5 mm²
Conductor cross section, rigid max.	35 mm²
Conductor cross section AWG	15 ... 2 (IEC)
	10 ... 2 (UL)

Dimensions

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Dimensional drawing	
Width	17.6 mm
Height	77.1 mm
Depth	89.2 mm

Material specifications

Color	black (RAL 9005)
	gray (RAL 7042)
Flammability rating according to UL 94	V0
Housing material	PBT

Mechanical properties

Mechanical data

Open side panel	No

Protective circuit

Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous voltage U_C	600 V AC
Rated load current I_L	80 A (with serial 16mm² through wiring)
	80 A (with serial 16mm² through wiring)
Short-circuit current rating I_{SCCR}	25 kA
Max. backup fuse with V-type through wiring	80 A AC (gL/gG)
Max. backup fuse with branch wiring	160 A (gL/gG)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
	IP20
Ambient temperature (operation)	-40 °C ... 80 °C
Altitude	max. 2000 m
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	25g
Vibration (operation)	5g

Approvals

UL specifications

SPD Type	4 (for Type 2 applications)

Standards and regulations

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Standards/specifications	IEC 61643-1
Note	2005
Standards/specifications	EN 61643-11/A11
Note	2007

Mounting
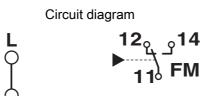
Mounting type	DIN rail: 35 mm
Mounting position	Horizontal, flat-mounted DIN rail, NS 35
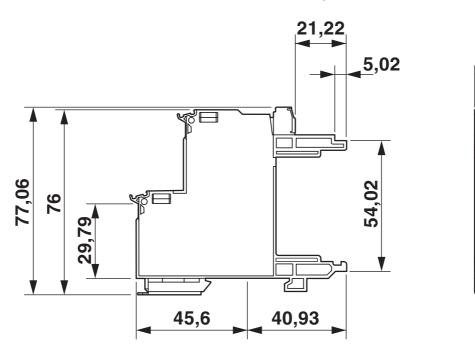
Drawings

Circuit diagram

L

12   14

FM

11

N / PEN

Dimensional drawing

21,22

5,02

17,6

77,06

76

29,79

54,02

45,6   40,93

FM version shown

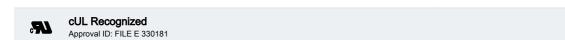# VAL-MS-T1/T2 BE/O - Type 2 surge protection base element

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Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2905650

cUL Recognized
Approval ID: FILE E 330181

UL Recognized
Approval ID: FILE E 330181

cULus Recognized

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Classifications

ECLASS

ECLASS-11.0	27130803
ECLASS-13.0	27171292

ETIM

ETIM 9.0	EC002496

UNSPSC

UNSPSC 21.0	39121600

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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Accessories

> ⓘ   Note: Applying some accessories below might limit this product.

MPB F600X16/ 1GS - Wiring bridge

2818355

https://www.phoenixcontact.com/us/products/2818355

Wiring bridge flexible, diameter: 16 mm^2, with a fork-type cable lug on one side, length: 600 mm

ⓘ Max. current carrying capacity: 125 A

MPB F400X16/ 1GS - Wiring bridge

2818342

https://www.phoenixcontact.com/us/products/2818342

Wiring bridge flexible, diameter 16 mm^2, with a fork-type cable lug on one side, length: 400 mm

ⓘ Max. current carrying capacity: 125 A

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MPB F200X16/ 1GS - Wiring bridge

2818339

https://www.phoenixcontact.com/us/products/2818339

Wiring bridge flexible, diameter 16 mm^2, with a fork-type cable lug on one side, length: 200 mm

ℹ️ Max. current carrying capacity: 125 A

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

ℹ️ Max. current carrying capacity: 125 A

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MPB 18/1-20/1.2.5 - Wiring bridge

2830168

https://www.phoenixcontact.com/us/products/2830168

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 20 pitches with contact sequence 1-2-0-0-5

ℹ Max. current carrying capacity: 125 A

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

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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

MPB 18/3- 9 - Wiring bridge

2809254

https://www.phoenixcontact.com/us/products/2809254

Wiring bridge for modules with connecting pitch 17.5 mm, 3-phase, 9-pos.

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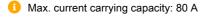https://www.phoenixcontact.com/us/products/2905650

MPB 18/4-12 - Wiring bridge

2809296

https://www.phoenixcontact.com/us/products/2809296

Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 12-pos.

ⓘ Max. current carrying capacity: 80 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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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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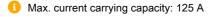https://www.phoenixcontact.com/us/products/2905650

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.

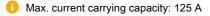ⓘ Max. current carrying capacity: 125 A

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

VAL-MS-T1/T2 BE/O - Type 2 surge protection base element

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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

VAL-MS-T1/T2 BE/O - Type 2 surge protection base element

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https://www.phoenixcontact.com/us/products/2905650

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.

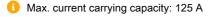ⓘ Max. current carrying capacity: 125 A

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

VAL-MS-T1/T2 BE/O - Type 2 surge protection base element

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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.

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

2749880

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

Feed-through terminal block for VAL and FLT applications

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

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SZS 0,4X2,5 VDE - Screwdriver

1205037

https://www.phoenixcontact.com/us/products/1205037

Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

SZK PZ2 VDE - Screwdriver

1206463

https://www.phoenixcontact.com/us/products/1206463

Screwdriver, PZ crosshead, VDE insulated, size: PZ 2 x 100 mm, 2-component grip, with non-slip grip

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com