

# 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
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.
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### 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 <sub>f</sub> -in. (UL)
Stripping length	16 mm
Conductor cross-section flexible min.	1.5 mm <sup>2</sup>
Conductor cross-section flexible max.	25 mm <sup>2</sup>
Conductor cross-section, rigid min.	1.5 mm <sup>2</sup>
Conductor cross-section, rigid max.	35 mm <sup>2</sup>
Conductor cross-section AWG	15 ... 2 (IEC) 10 ... 2 (UL)

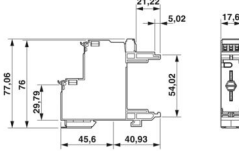
### Dimensions

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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
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## Protective circuit

Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous operating voltage $U_C$	600 V AC
Rated load current $I_L$	80 A (with serial 16mm <sup>2</sup> through wiring) 80 A (with serial 16mm <sup>2</sup> 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)
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## 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

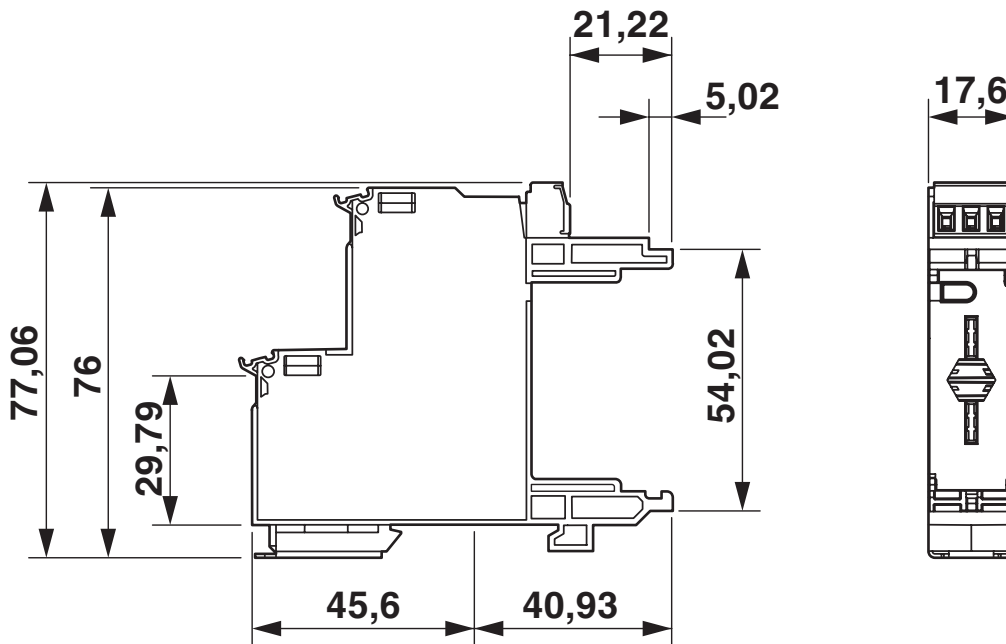
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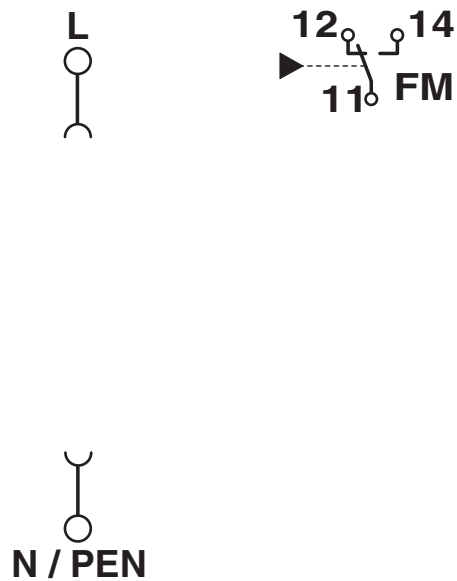
## Drawings

Dimensional drawing



FM version shown

Circuit diagram



FM version shown

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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**  
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## Classifications

### ECLASS

ECLASS-13.0	27171292
ECLASS-15.0	27171292

### ETIM

ETIM 10.0	EC002496
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### UNSPSC

UNSPSC 21.0	39121600
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### 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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