

# Type 2 surge arrester - VAL-CP-MCB-1S-350/40/FM



2882763

<https://www.phoenixcontact.com/us/products/2882763>

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Combination of type 2 surge protection and arrester backup fuse, with monitoring of arrester and arrester backup fuse, in combination with a remote indication contact. Design: 3-conductor system (L1, N, PE), mounting on NS 35 DIN rail

## Your advantages

- Combinations of type 2 arresters with integrated arrester backup fuse
- Signaling to monitoring systems via remote indication contact in the event of an error
- Overload of the surge protection results in all-pos. disconnection from the mains
- Type 2 consistent plug-in surge arresters
- Optical, mechanical status indication for the individual arresters

## Commercial Data

Item number	2882763
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	CL1314
Catalog Page	Page 74 (C-4-2019)
GTIN	4046356175821
Weight per Piece (including packing)	501.5 g
Weight per Piece (excluding packing)	501.5 g
Country of origin	HU

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## Technical Data

### Product properties

IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN-S
	TT
Type	DIN rail module, two-section, divisible
Product type	Surge arrester
Number of positions	2
Surge protection fault message	Optical, remote indicator 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	250 V AC
	250 V DC
Operating current	1 mA AC ... 2 A AC
	1 mA DC ... 50 mA DC

### Connection data

#### Connection protective circuit

Connection method	Screw connection
Tightening torque	3.5 Nm
Stripping length	14 mm
Conductor cross section flexible	4 mm <sup>2</sup> ... 25 mm <sup>2</sup>
Conductor cross section solid	4 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Conductor cross section AWG	18 ... 2

#### Protective ground connection

Connection method	Screw connection
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	16 mm
Conductor cross section flexible	2.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross section solid	2.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>

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Conductor cross section AWG	12 ... 4
Remote fault indicator contact	
Connection method	Pluggable screw connection
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 solid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	28 ... 16

## Dimensions

Dimensional drawing	
Width	72 mm
Height	101 mm
Depth	76 mm
Horizontal pitch	4 Div.

## Material specifications

Color	light grey RAL 7035
Flammability rating according to UL 94	V-0
CTI value of material	600
Insulating material	PBT-FR
Material group	I
Housing material	PBT-FR

## Protective circuit

Mode of protection	L-N
	L-PE
	N-PE
Direction of action	1L-N & N-PE
Nominal voltage $U_N$	240 V AC (TN-S)
	240 V AC (TT)
Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous operating voltage $U_C$ (L-N)	350 V AC
Maximum continuous operating voltage $U_C$ (L-PE)	350 V AC
Maximum continuous operating voltage $U_C$ (N-PE)	264 V AC
Residual current $I_{PE}$	$\leq 1 \mu A$
Nominal discharge current $I_n$ (8/20) $\mu s$ (L-N)	15 kA
Nominal discharge current $I_n$ (8/20) $\mu s$ (L-PE)	15 kA
Nominal discharge current $I_n$ (8/20) $\mu s$ (N-PE)	20 kA
Maximum discharge current $I_{max}$ (8/20) $\mu s$	30 kA

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Follow current interrupt rating $I_{fi}$ (N-PE)	100 A
Short-circuit current rating $I_{SCCR}$	25 kA
Voltage protection level $U_p$ (L-N)	$\leq 2.5$ kV
Voltage protection level $U_p$ (N-PE)	$\leq 1.7$ kV
Residual voltage $U_{res}$ (L-N)	$\leq 2.3$ kV (at $I_n$ )
	$\leq 1.6$ kV (at 10 kA)
	$\leq 1.3$ kV (at 5 kA)
	$\leq 1$ kV (at 3 kA)
Residual voltage $U_{res}$ (L-PE)	$\leq 2.5$ kV (at $I_n$ )
	$\leq 2$ kV (at 10 kA)
	$\leq 1.5$ kV (at 5 kA)
	$\leq 1.1$ kV (at 3 kA)
Residual voltage $U_{res}$ (N-PE)	$\leq 1.2$ kV (at 10 kA)
	$\leq 0.8$ kV (at 5 kA)
	$\leq 0.5$ kV (at 4 kA)
	$\leq 0.3$ kV (at 3 kA)
TOV behavior at $U_T$ (L-N)	415 V AC (5 s / withstand mode)
	457 V AC (120 min / safe failure mode)
TOV behavior at $U_T$ (N-PE)	1200 V AC (200 ms / withstand mode)
Response time $t_A$ (L-N)	$\leq 25$ ns
Response time $t_A$ (L-PE)	$\leq 100$ ns
Response time $t_A$ (N-PE)	$\leq 100$ ns
Max. backup fuse with V-type through wiring	40 A (gG)

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	$\leq 2000$ m (amsl (above mean sea level))
Permissible humidity (operation)	5 % ... 95 %

## Standards and regulations

Standards/specifications	IEC 61643-11
Standards/specifications	EN 61643-11
Standards/specifications	IEC 60364-4-443
Standards/specifications	IEC 60364-5-534

## Mounting

Mounting type	DIN rail: 35 mm
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# Type 2 surge arrester - VAL-CP-MCB-1S-350/40/FM

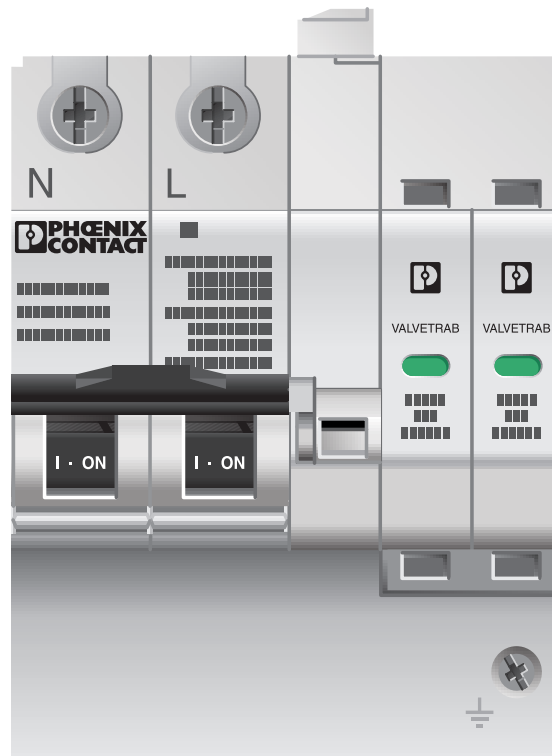


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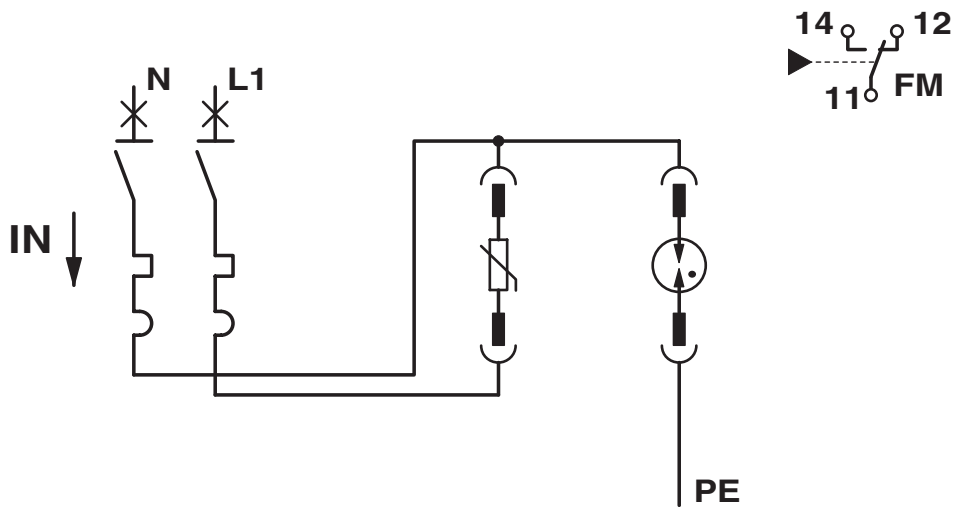
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## Drawings

Product drawing



Circuit diagram



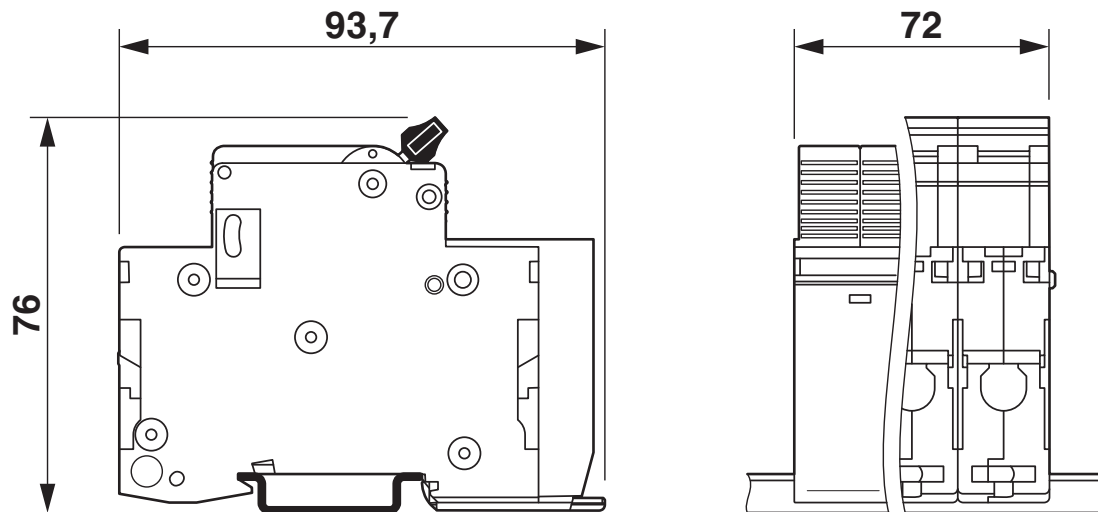
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Dimensional drawing



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## Approvals



**IECEE CB Scheme**

Approval ID: NL-71431



**EAC**

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

**CCA**

Approval ID: NTR-NL 7873

Nominal Voltage  $U_N$

Nominal Current  $I_N$

Cross Section AWG

Cross Section  $\text{mm}^2$

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**KEMA-KEUR**

Approval ID: 71-117871

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## Classifications

### ECLASS

ECLASS-9.0	27130805
ECLASS-10.0.1	27130805
ECLASS-11.0	27130805
ECLASS-12.0	27171202

### ETIM

ETIM 8.0	EC000941
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### 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

### Type 2 surge protection plug

Type 2 surge protection plug - VAL-CP-350-ST-GY - 2882718

<https://www.phoenixcontact.com/us/products/2882718>



Replacement plug for VAL-CP surge protective device with high-capacity varistor with a low leakage current.

### Type 2 surge protection plug

Type 2 surge protection plug - VAL-CP-N/PE-350-ST-GY - 2882734

<https://www.phoenixcontact.com/us/products/2882734>



Replacement plug for VAL-CP surge arrester with N-PE spark gap.

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