

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



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

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Technical data

Product properties

Product type	Surge arrester
Product family	SEC Family
IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN-S
	TT
Type	DIN rail module, two-section, divisible
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 ² ... 25 mm ²
Conductor cross section rigid	4 mm ² ... 35 mm ²
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 ² ... 16 mm ²

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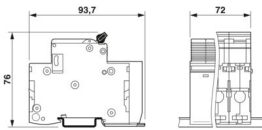
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Conductor cross section rigid	2.5 mm ² ... 25 mm ²
Conductor cross section AWG	12 ... 4

Remote fault indicator contact

Connection method	Pluggable screw connection
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section flexible	0.14 mm ² ... 1.5 mm ²
Conductor cross section rigid	0.14 mm ² ... 1.5 mm ²
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) black (RAL 9005)
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) μs (L-N)	15 kA

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Nominal discharge current I_n (8/20) μ s (L-PE)	15 kA
Nominal discharge current I_n (8/20) μ s (N-PE)	20 kA
Maximum discharge current I_{max} (8/20) μ s	30 kA
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)	≤ 2.5 kV
Voltage protection level U_p (N-PE)	≤ 1.7 kV
Residual voltage U_{res} (L-N)	≤ 2.3 kV (at I_n)
	≤ 1.6 kV (at 10 kA)
	≤ 1.3 kV (at 5 kA)
	≤ 1 kV (at 3 kA)
Residual voltage U_{res} (L-PE)	≤ 2.5 kV (at I_n)
	≤ 2 kV (at 10 kA)
	≤ 1.5 kV (at 5 kA)
	≤ 1.1 kV (at 3 kA)
Residual voltage U_{res} (N-PE)	≤ 1.2 kV (at 10 kA)
	≤ 0.8 kV (at 5 kA)
	≤ 0.5 kV (at 4 kA)
	≤ 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)	≤ 25 ns
Response time t_A (L-PE)	≤ 100 ns
Response time t_A (N-PE)	≤ 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	≤ 2000 m (amsl)
Permissible humidity (operation)	5 % ... 95 %

Standards and regulations

Standards/specifications	IEC 61643-11
Note	2011
Standards/specifications	EN 61643-11
Note	2012
Standards/specifications	IEC 60364-4-443
Standards/specifications	IEC 60364-5-534

Mounting

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Mounting type	DIN rail: 35 mm
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