

VAL-MS 385/65/3+0-FM - Type 2 surge arrester



2921006

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Type 2 surge protective device for 4-conductor power supply systems (L1, L2, L3, PEN), with plug latching and remote indication contact.

Commercial data

Item number	2921006
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Product key	CL1322
GTIN	4046356280129
Weight per piece (including packing)	484.9 g
Weight per piece (excluding packing)	484.9 g
Country of origin	DE

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Technical data

Product properties

Product type	Surge arrester
Product family	VALVETRAB MS
IEC test classification	II T2
EN type	T2
IEC power supply system	TN-C
Type	DIN rail module, two-section, divisible
Surge protection fault message	Optical, remote indicator contact
Number of ports	One

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 ... 1.5 A AC 1 A DC

Connection data

Connection method	Screw connection
Screw thread	M5
Tightening torque	3 Nm (1.5 mm ² ... 16 mm ²) 4.5 Nm (25 mm ² ... 35 mm ²)
Stripping length	16 mm
Conductor cross-section flexible	1.5 mm ² ... 25 mm ²
Conductor cross-section rigid	1.5 mm ² ... 35 mm ²
Conductor cross-section AWG	15 ... 2
Connection method	Fork-type cable lug
Conductor cross-section flexible	1.5 mm ² ... 16 mm ²

Remote fault indicator contact

Connection method	Plug-in/screw connection via COMBICON
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm

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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	53.4 mm
Height	98.7 mm
Depth	77.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	3 Div.

Material specifications

Flammability rating according to UL 94	V-0
CTI value of material	600
Insulating material	PA 6.6/PBT
Material group	I
Housing material	PA 6.6 PBT

Protective circuit

Mode of protection	L-PEN
Direction of action	3L-PEN
Nominal voltage U_N	240/415 V AC (TN-C)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous operating voltage U_C	385 V AC
Rated load current I_L	80 A
Protective conductor current I_{PE}	$\leq 1800 \mu\text{A}$
Standby power consumption P_C	$\leq 690 \text{ mVA}$
Nominal discharge current I_n (8/20) μs	30 kA
Maximum discharge current I_{max} (8/20) μs	65 kA
Impulse discharge current (10/350) μs , charge	1.25 As
Impulse discharge current (10/350) μs , specific energy	1.56 kJ/ Ω
Impulse discharge current (10/350) μs , peak value I_{imp}	2.5 kA
Total discharge current I_{Total} (8/20) μs	200 kA
Total discharge current I_{Total} (10/350) μs	7.5 kA
Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p	$\leq 1.8 \text{ kV}$
Residual voltage U_{res}	$\leq 1.8 \text{ kV}$ (at I_n) $\leq 1.3 \text{ kV}$ (at 10 kA) $\leq 1.2 \text{ kV}$ (at 5 kA)

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	≤ 1.15 kV (at 3 kA)
TOV behavior at U_T	480 V AC (5 s / withstand mode)
Response time t_A	≤ 25 ns
Max. backup fuse with V-type through wiring	80 A (gG - 16 mm ²)
Max. backup fuse with branch wiring	250 A (gG)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20 (only when all terminal points are used)
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 2000 m (amsl)
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	30g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	7.5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

Standards and regulations

Standards/specifications	IEC 61643-11
Note	2011
Standards/specifications	EN 61643-11
Note	2012

Mounting

Mounting type	DIN rail: 35 mm
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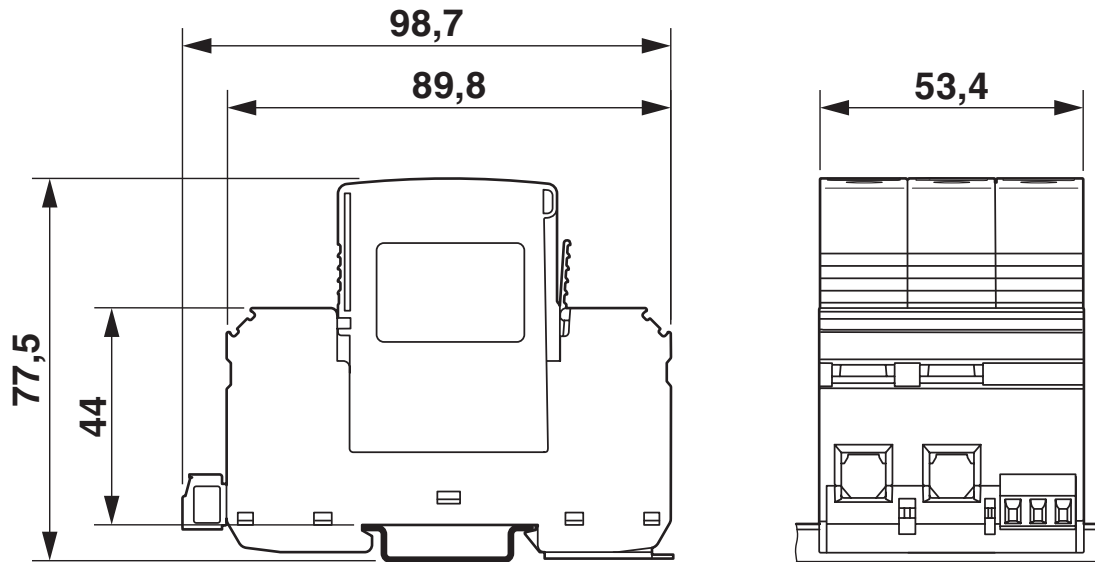
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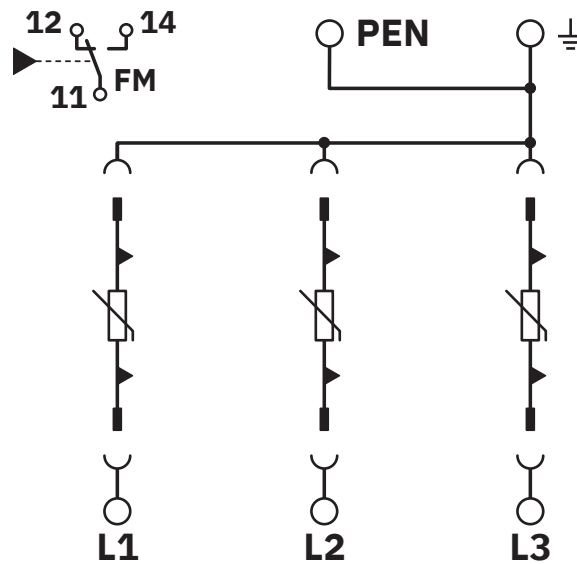
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Drawings

Dimensional drawing



Circuit diagram



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Environmental product compliance

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com