

# Type 2 surge arrester - VAL-SEC-T2-4+0-440-FM



1076468

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Plug-in surge arrester, in accordance with Type 2/Class II, for 3-phase power supply networks with separate N and PE (5-conductor system: L1, L2, L3, N, PE), with remote indication contact.

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## Commercial Data

Item number	1076468
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	CL1
Product Key	CL1351
Catalog Page	Page 53 (C-4-2019)
GTIN	4055626784809
Weight per Piece (including packing)	430.6 g
Weight per Piece (excluding packing)	404.74 g
Customs tariff number	85363030
Country of origin	DE

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## Technical Data

### Notes

#### General

Note	Usable in all low-voltage systems between L-N or L-PEN. Only usable in IT Systems between L-PE and N-PE, if the exposed-conductive-parts (bodies) of the equipment of the low-voltage installation is connected to the earthing arrangement of the transformer substation. (interconnected earthing arrangement of the HV-transformer substation with the bodies of the LV-installation. RE = RA accordance to IEC 60364-4-442 / VDE 0100-442 Fig. 44D / Example a)
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### Product properties

IEC test classification	II T2
EN type	T2
IEC power supply system	TN-S IT
Type	DIN rail module, two-section, divisible
Product type	Surge arrester
Number of positions	3
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	5 V AC ... 250 V AC 125 V DC (200 mA DC)
Operating current	5 mA AC ... 1 A AC 1 A DC (30 V DC)

### Connection data

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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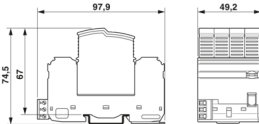


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Conductor cross section AWG	12 ... 4
Connection method	Fork-type cable lug
Conductor cross section flexible	1.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>

## Dimensions

Dimensional drawing	
Width	49.2 mm
Width	49.2 mm
Height	97.9 mm
Height	97.9 mm
Depth	74.5 mm (incl. DIN rail 7.5 mm)
Depth	74.5 mm
Horizontal pitch	2.7 Div.

## Material specifications

Color	light grey RAL 7035 traffic grey A RAL 7042
Flammability rating according to UL 94	V-0
CTI value of material	600
Insulating material	PA6.6-FR 20% GF PBT-FR
Material group	I
Housing material	PA 6.6-FR 20 % GF PBT-FR

## Protective circuit

Mode of protection	L-N L-PE N-PE
Direction of action	3L-N/PE
Nominal voltage $U_N$	400/690 V AC (TN-S) 400 V AC (IT)
Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous voltage $U_C$	440 V AC
Rated load current $I_L$	40 A (Biconnect M4 fork-type cable lug 6 mm <sup>2</sup> ) 63 A (TWIN ferrule 2 x 10 mm <sup>2</sup> )
Standby power consumption $P_C$	≤ 720 mVA
Nominal discharge current $I_n$ (8/20) $\mu$ s	20 kA
Maximum discharge current $I_{max}$ (8/20) $\mu$ s	40 kA
Short-circuit current rating $I_{SCCR}$	25 kA (for a backup fuse of up to 315 A gG)

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	50 kA (for a backup fuse of up to 200 A gG)
Voltage protection level $U_p$ (L-N)	$\leq 4$ kV
Voltage protection level $U_p$ (L-PE)	$\leq 1.9$ kV
Voltage protection level $U_p$ (N-PE)	$\leq 1.9$ kV
Residual voltage $U_{res}$ (L-N)	$\leq 4$ kV (at $I_n$ )
	$\leq 3.5$ kV (at 10 kA)
	$\leq 3.2$ kV (at 5 kA)
	$\leq 3.1$ kV (at 4 kA)
	$\leq 2.85$ kV (at 2 kA)
Residual voltage $U_{res}$ (L-PE)	$\leq 1.9$ kV (at $I_n$ )
	$\leq 1.65$ kV (at 10 kA)
	$\leq 1.5$ kV (at 5 kA)
	$\leq 1.45$ kV (at 4 kA)
	$\leq 1.35$ kV (at 2 kA)
Residual voltage $U_{res}$ (N-PE)	$\leq 1.9$ kV (at $I_n$ )
	$\leq 1.65$ kV (at 10 kA)
	$\leq 1.5$ kV (at 5 kA)
	$\leq 1.45$ kV (at 4 kA)
	$\leq 1.35$ kV (at 2 kA)
TOV behavior at $U_T$	581 V AC (5 s / withstand mode)
	762 V AC (120 min / safe failure mode)
Response time $t_A$	$\leq 25$ ns
Max. backup fuse with V-type through wiring	40 A (gG / Biconnect M4 fork-type cable lug, 6 mm <sup>2</sup> )
	63 A (gG / TWIN ferrule 2x 10mm <sup>2</sup> )
Max. backup fuse with branch wiring	315 A (gG)

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	$\leq 2000$ m (amsl (above mean sea level))
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	30g (Half-sine / 11 ms / 3x $\pm X$ , $\pm Y$ , $\pm Z$ )
Vibration (operation)	5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

## Standards and regulations

Standards/specifications	IEC 61643-11
EN 61643-11	
Standards/specifications	EN 61643-11

## Mounting

Mounting type	DIN rail: 35 mm
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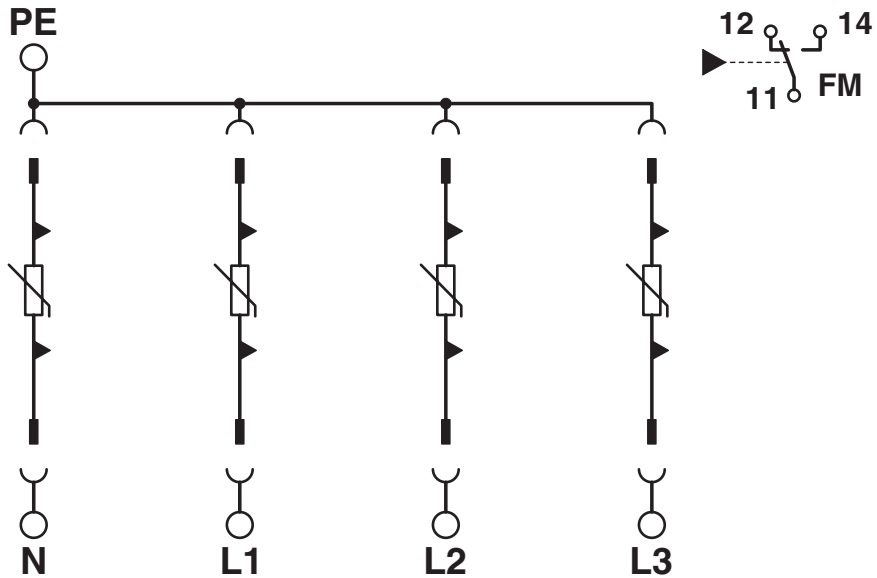


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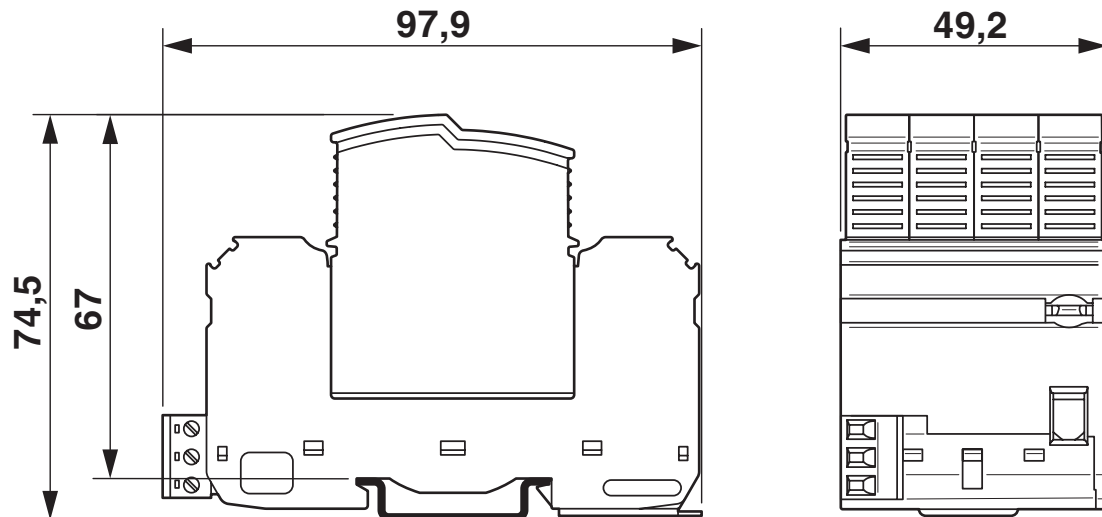
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## Drawings

Circuit diagram



Dimensional drawing



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