

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
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 ² ... 16 mm ²
Conductor cross section solid	2.5 mm ² ... 25 mm ²

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

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 ²)
	63 A (TWIN ferrule 2 x 10 mm ²)
Standby power consumption P_C	≤ 720 mVA
Nominal discharge current I_n (8/20) μs	20 kA
Maximum discharge current I_{max} (8/20) μs	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)	≤ 4 kV
Voltage protection level U_p (L-PE)	≤ 1.9 kV
Voltage protection level U_p (N-PE)	≤ 1.9 kV
Residual voltage U_{res} (L-N)	≤ 4 kV (at I_n)
	≤ 3.5 kV (at 10 kA)
	≤ 3.2 kV (at 5 kA)
	≤ 3.1 kV (at 4 kA)
	≤ 2.85 kV (at 2 kA)
Residual voltage U_{res} (L-PE)	≤ 1.9 kV (at I_n)
	≤ 1.65 kV (at 10 kA)
	≤ 1.5 kV (at 5 kA)
	≤ 1.45 kV (at 4 kA)
	≤ 1.35 kV (at 2 kA)
Residual voltage U_{res} (N-PE)	≤ 1.9 kV (at I_n)
	≤ 1.65 kV (at 10 kA)
	≤ 1.5 kV (at 5 kA)
	≤ 1.45 kV (at 4 kA)
	≤ 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	≤ 25 ns
Max. backup fuse with V-type through wiring	40 A (gG / Biconnect M4 fork-type cable lug, 6 mm ²)
	63 A (gG / TWIN ferrule 2x 10mm ²)
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	≤ 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
Standards/specifications	EN 61643-11

Mounting

Mounting type	DIN rail: 35 mm
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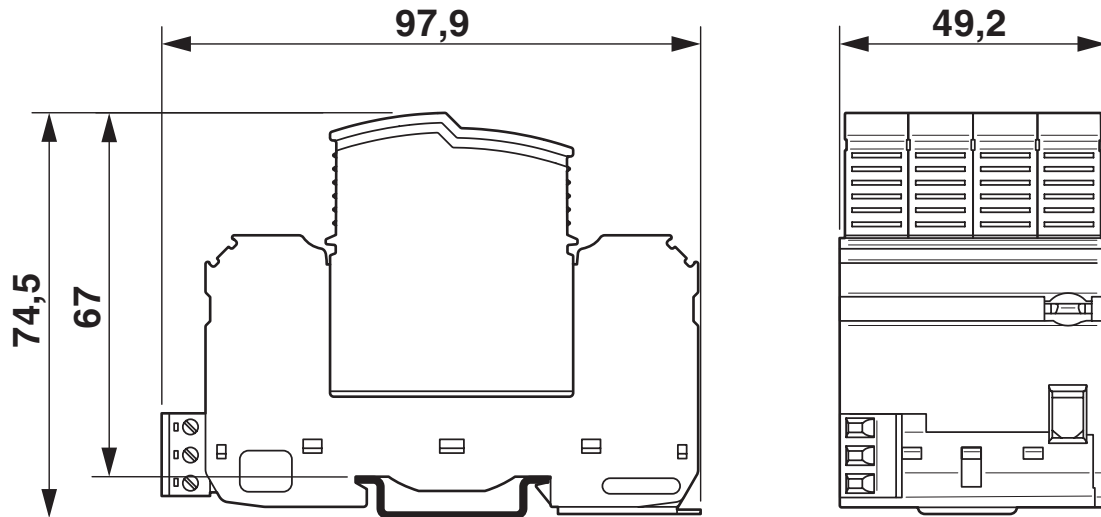
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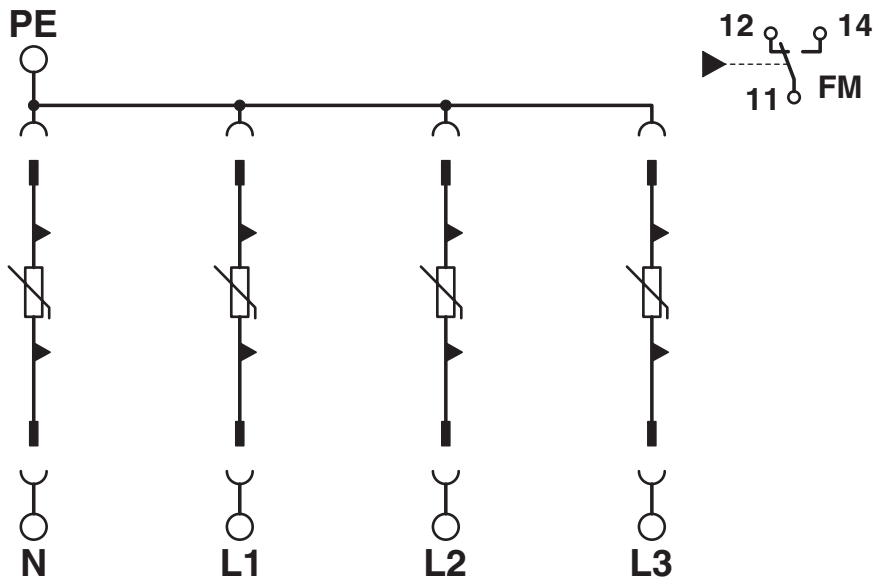
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Drawings

Dimensional drawing



Circuit diagram



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Classifications

ECLASS

ECLASS-9.0	27130805
ECLASS-10.0.1	27130805
ECLASS-11.0	27130805

ETIM

ETIM 8.0	EC000941
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UNSPSC

UNSPSC 21.0	39121600
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Environmental Product Compliance

REACH SVHC

Lead 7439-92-1

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Accessories

Marker pen

Marker pen - X-PEN 0,35 - 0811228

<https://www.phoenixcontact.com/pc/products/0811228>



Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

End clamp

End clamp - CLIPFIX 35 - 3022218

<https://www.phoenixcontact.com/pc/products/3022218>



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, width: 9.5 mm, color: gray

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Label

Label - EML (20XE)R - 0803452

<https://www.phoenixcontact.com/pc/products/0803452>



Label, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: adhesive, lettering field size: continuous x 20 mm

Label

Label - EML (20XE)R YE - 0803453

<https://www.phoenixcontact.com/pc/products/0803453>



Label, Roll, yellow, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: adhesive, lettering field size: continuous x 20 mm

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Flat zack marker sheet

Flat zack marker sheet - ZBFM 5/WH:UNBEDRUCKT - 0803595

<https://www.phoenixcontact.com/pc/products/0803595>

Flat zack marker sheet, Sheet, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap in, for terminal block width: 5.2 mm, lettering field size: 5 x 4.5 mm, Number of individual labels: 120



Zack marker strip

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128

<https://www.phoenixcontact.com/pc/products/2809128>

Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap in, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5



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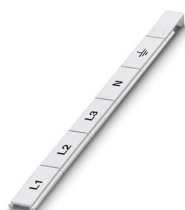
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Marker for terminal blocks

Marker for terminal blocks - ZBN 18,LGS:L1-N,ERDE - 2749576

<https://www.phoenixcontact.com/pc/products/2749576>



Marker for terminal blocks, Strip, white, labeled, horizontal: L1, L2, L3, N, GND, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

Marker for terminal blocks

Marker for terminal blocks - ZBN 18,LGS:ERDE - 2749589

<https://www.phoenixcontact.com/pc/products/2749589>



Marker for terminal blocks, Strip, white, labeled, horizontal: Grounding symbol, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

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Type 2 surge protection plug

Type 2 surge protection plug - VAL-SEC-T2-440-P - 2909969

<https://www.phoenixcontact.com/pc/products/2909969>



Replacement plug for surge arresters from the VALVETRAB SEC product range for L-N and L-PEN paths.

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