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.

Key Commercial Data

Packing unit	1 pc
GTIN	4 055626 784809
GTIN	4055626784809
Weight per Piece (excluding packing)	404.740 g
Custom tariff number	85363030
Country of origin	Germany

Technical data

Dimensions

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

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 ±X, ±Y, ±Z)
Vibration (operation)	5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

General

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Technical data

General

IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN-S
	IT
Mode of protection	L-N
	L-PE
	N-PE
Mounting type	DIN rail: 35 mm
Color	light grey RAL 7035
	traffic grey A RAL 7042
Housing material	PA 6.6-FR 20% GF
	PBT-FR
Degree of pollution	2
Flammability rating according to UL 94	V-0
Type	DIN rail module, two-section, divisible
Number of positions	3
Surge protection fault message	Optical, remote indicator contact

Additional descriptions

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)

Protective circuit

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 mm²)
	63 A (TWIN ferrule 2 x 10 mm²)
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 (in case of 315 A gG backup fuse)
	50 kA (in case of 200 A gG backup fuse)
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

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Protective circuit

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 mm²)
	63 A (gG / TWIN ferrule 2x 10mm²)
Max. backup fuse with branch wiring	315 A (gG)

Indicator/remote signaling

Switching function	PDT 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 method	Plug-in/screw connection via COMBICON
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section flexible	0.14 mm² ... 1.5 mm²
Conductor cross section solid	0.14 mm² ... 1.5 mm²
Conductor cross section AWG	28 ... 16

Connection data

Connection method	Screw connection
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	16 mm

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Connection data

Conductor cross section flexible	2.5 mm² ... 16 mm²
Conductor cross section solid	2.5 mm² ... 25 mm²
Conductor cross section AWG	12 ... 4
Connection method	Fork-type cable lug
Conductor cross section flexible	1.5 mm² ... 6 mm²

Standards and Regulations

Standards/regulations	IEC 61643-11 2011
	EN 61643-11 2012

Environmental Product Compliance

REACh SVHC	Lead 7439-92-1

Classifications

eCl@ss

eCl@ss 8.0	27130805
eCl@ss 9.0	27130805

ETIM

ETIM 5.0	EC000941
ETIM 6.0	EC000941

Accessories

Accessories

Bridge

Wiring bridge - MPB SET VAL-CP-3S - 2880684

Wiring bridge set, consisting of three flexible bridges 15 cm black, 1 bridge 27 cm blue.

Device marking

Label - EML (20XE)R - 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

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Accessories

Label - EML (20XE)R YE - 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

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128

Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128

Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm

End block

End clamp - CLIPFIX 35 - 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

Labeled device marker

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

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Accessories

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

Marker pen

Marker pen - X-PEN 0,35 - 0811228

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

Terminal marking

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

Flat zack marker sheet, Sheet, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into flat marker groove, for terminal block width: 5.2 mm, lettering field size: 5 x 4.5 mm

Spare parts

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

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