Type 2 surge arrester - VAL-MS 580/3+0 - 2920450

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Surge arrester for 4-conductor power supply systems (L1, L2, L3, PEN), consisting of a base element and protective connectors, for mounting on NS 35.

Your advantages

- With or without floating remote indication contact
- Optical, mechanical status indication for the individual arresters
- Type 2 consistent plug-in surge arresters
- Disconnect device on each individual plug
- Mechanical coding of all slots
- Multi-channel type 2 arresters

Key Commercial Data

Packing unit	1 pc
GTIN	4 046356 163675
GTIN	4046356163675

Technical data

Dimensions

Height	89.8 mm
Width	53.4 mm
Depth	65.7 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	3 Div.

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 (above mean sea level))
Permissible humidity (operation)	5 % ... 95 %

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Ambient conditions

Shock (operation)	25g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

General

IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN-C
	IT
Mode of protection	L-PE
	L-PEN
Mounting type	DIN rail: 35 mm
Color	jet black RAL 9005
Housing material	PA 6.6
	PBT
Degree of pollution	2
Distance between live and grounded parts	5 mm
Flammability rating according to UL 94	V-0
Type	DIN rail module, two-section, divisible
Number of positions	3
Surge protection fault message	optical

Additional descriptions

Note	Usable in all low-voltage systems between L-N or L-PEN. Only usable in IT Systems between L-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. $R_E = R_A$ accordance to IEC 60364-4-442 / VDE 0100-442 Fig. 44D / Example a)

Protective circuit

Nominal voltage U_N	400/690 V AC (TN-C)
	500 V AC (IT)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous voltage U_C	580 V AC
Rated load current I_L	80 A
Residual current I_{PE}	≤ 0.75 mA
Standby power consumption P_C	≤ 450 mVA
Nominal discharge current I_n (8/20) µs	15 kA
Maximum discharge current I_{max} (8/20) µs	30 kA
Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p	≤ 2.5 kV
Residual voltage U_{res}	≤ 2.5 kV (at I_n)

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Protective circuit

	≤ 2.3 kV (at 10 kA)
	≤ 2.1 kV (at 5 kA)
	≤ 1.9 kV (at 3 kA)
TOV behavior at U_T	690 V AC (5 s / withstand mode)
	762 V AC (120 min / withstand mode)
Response time t_A	≤ 25 ns
Max. backup fuse with V-type through wiring	80 A (gG)
Max. backup fuse with branch wiring	125 A (gG)

Connection data

Connection method	Screw connection
Screw thread	M5
Tightening torque	3 Nm (1.5 mm² ... 16 mm²)
	4.5 Nm (25 mm² ... 35 mm²)
Stripping length	16 mm
Conductor cross section flexible	1.5 mm² ... 25 mm²
Conductor cross section solid	1.5 mm² ... 35 mm²
Conductor cross section AWG	15 ... 2
Connection method	Fork-type cable lug
Conductor cross section flexible	1.5 mm² ... 16 mm²

UL specifications

SPD Type	4CA
Maximum continuous operating voltage MCOV (L-L)	1160 V AC
Maximum continuous operating voltage MCOV (L-G)	580 V AC
Nom. voltage	400/690 V AC
Mode of protection	L-L
	L-G
Power distribution system	Delta
Nominal frequency	50/60 Hz
Measured limiting voltage MLV (L-L)	4270 V
Measured limiting voltage MLV (L-G)	2310 V
Nominal discharge current I_n (L-L)	10 kA
Nominal discharge current I_n (L-G)	10 kA

UL connection data

Conductor cross section AWG	10 ... 2
Tightening torque	30 lb_f-in.

Standards and Regulations

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

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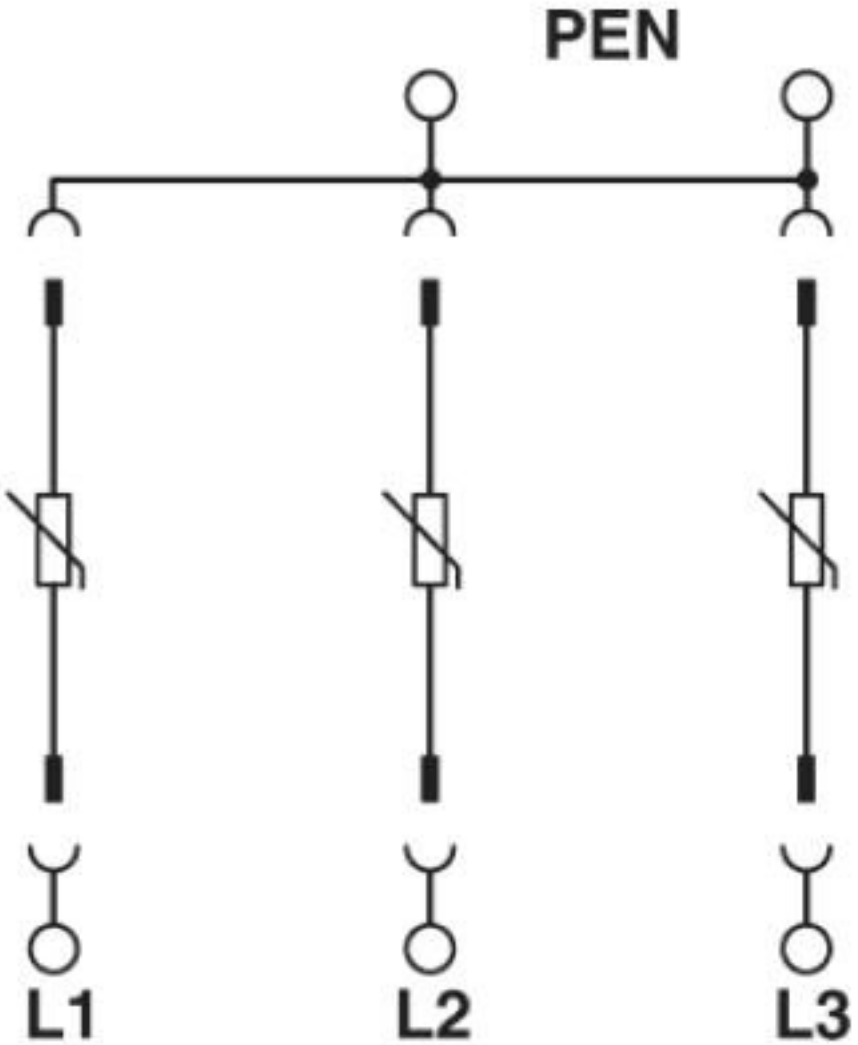
Technical data

Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Drawings

Circuit diagram



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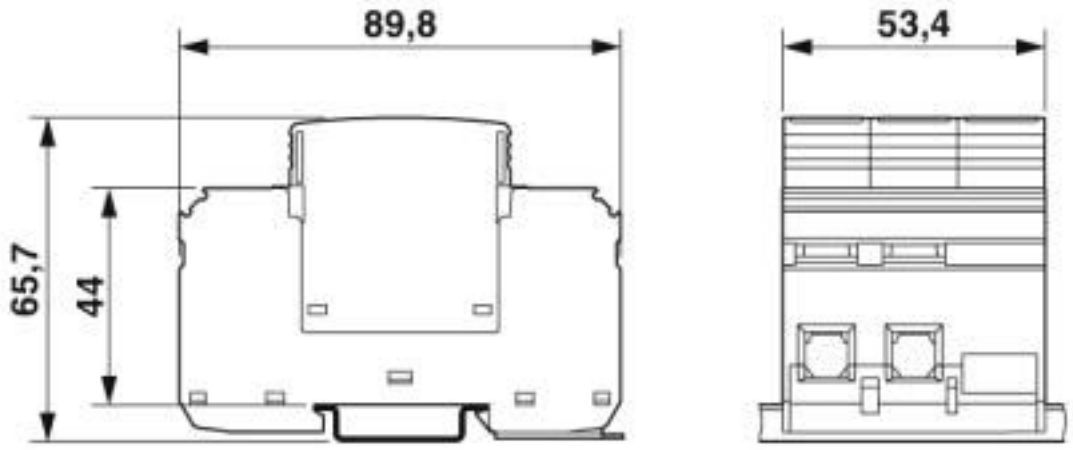
Dimensional drawing



Classifications

eCl@ss

eCl@ss 10.0.1	27130805
eCl@ss 4.0	27130800
eCl@ss 4.1	27130800
eCl@ss 5.0	27130800
eCl@ss 5.1	27130800
eCl@ss 6.0	27130800
eCl@ss 7.0	27130805
eCl@ss 8.0	27130805
eCl@ss 9.0	27130805

ETIM

ETIM 2.0	EC000941
ETIM 3.0	EC000941
ETIM 4.0	EC000941
ETIM 5.0	EC000941
ETIM 6.0	EC000941
ETIM 7.0	EC000941

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620
UNSPSC 18.0	39121620
UNSPSC 19.0	39121620
UNSPSC 20.0	39121620

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Classifications

UNSPSC

UNSPSC 21.0	39121620

Approvals

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CSA / CCA / UL Recognized / KEMA-KEUR / cUL Recognized / IECEE CB Scheme / ÖVE / EAC / cULus Recognized

Ex Approvals

Approval details

CSA	http://www.csagroup.org/services-industries/product-listing/	13631
CCA		NTR-AT 1947-A
UL Recognized	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 330181
KEMA-KEUR	http://www.dekra-certification.com	71-113273
cUL Recognized	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 330181
IECEE CB Scheme	http://www.iecee.org/	AT 2905/M1
ÖVE	https://www.ove.at/zertifizierung-pz/zertifizierungsregister/	18583-001-14

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Approvals

EAC		RU C-DE.*09.B.00169

cULus Recognized	

Accessories

Accessories

Bridge

Wiring bridge - MPB 18/3- 6 - 2809241

Wiring bridge for modules with connecting pitch 17.5 mm, 3-phase, 6-pos.

Device marking

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, Number of individual labels: 5

Feed-through terminal block

Feed-through terminal block - DK-BIC-35 - 2749880

Feed-through terminal block for VAL and FLT applications

Labeled device marker

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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, Number of individual labels: 5

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, Number of individual labels: 5

Marker pen

Marker pen - B-STIFT - 1051993

Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

Spare parts

Type 2 surge protection plug - VAL-MS 580-ST - 2920434

Type 2 surge protection plug with high-capacity varistor for VAL-MS base element, thermal monitoring, visual fault warning. Design: 580 V AC

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