Type 2 surge arrester - VAL-MS 60 - 2868020

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Surge arresters consisting of base element and protective connector with high-capacity varistor, for mounting on NS 35/7.5, 1-channel

Your advantages

- Single-channel, DIN-rail mountable protective devices
- Base element with/without floating remote indication contact
- Disconnect device on each individual plug
- Consists of base element and plug
- Mechanical coding of all slots
- Optical, mechanical status indication for the individual arresters

Key Commercial Data

Packing unit	1 pc
GTIN	4 017918 930042
GTIN	4017918930042
Weight per Piece (excluding packing)	104.670 g
Custom tariff number	85363010
Country of origin	Germany

Technical data

Dimensions

Height	89.8 mm
Width	17.6 mm
Depth	65.7 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	1 Div.

Ambient conditions

Degree of protection	IP20 (only when all terminal points are used)

Type 2 surge arrester - VAL-MS 60 - 2868020

Technical data

Ambient conditions

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)	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
Mode of protection	L-PEN
Mounting type	DIN rail: 35 mm
Color	jet black RAL 9005
Housing material	PA 6.6
	PBT
Degree of pollution	2
Flammability rating according to UL 94	V-0
Type	DIN rail module, two-section, divisible
Number of positions	1
Surge protection fault message	optical

Protective circuit

Nominal voltage U_N	60 V AC (TN)
	60 V DC
	-48 V DC (RRH)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous voltage U_C	75 V AC
	100 V DC
Rated load current I_L	80 A
Residual current I_{PE}	≤ 0.45 mA
Standby power consumption P_C	≤ 35 mVA
Nominal discharge current I_n (8/20) µs	15 kA
Maximum discharge current I_{max} (8/20) µs	40 kA
Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p	≤ 0.55 kV
Residual voltage U_{res}	≤ 0.55 kV (at I_n)
	≤ 0.425 kV (at 10 kA)
	≤ 0.325 kV (at 5 kA)
	≤ 0.275 kV (at 3 kA)

Type 2 surge arrester - VAL-MS 60 - 2868020

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Protective circuit

TOV behavior at U_T	100 V AC (5 s / withstand mode)
Response time t_A	≤ 25 ns
Max. backup fuse with V-type through wiring	80 A AC (gG)
Max. backup fuse with branch wiring	125 A AC (gG)
	50 A DC (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-N)	75 V AC
Maximum continuous operating voltage MCOV (L+) - (L-)	100 V DC
Nom. voltage	60 V AC
Nominal voltage	60 V DC
Mode of protection	L-N
	(L+) - (L-)
Power distribution system	Single phase
Nominal frequency	50/60 Hz
Measured limiting voltage MLV (L-N)	630 V
Measured limiting voltage MLV (L+) - (L-)	810 V
Nominal discharge current I_n (L-N)	10 kA
Nominal discharge current I_n (L+) - (L-)	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

Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50

Type 2 surge arrester - VAL-MS 60 - 2868020

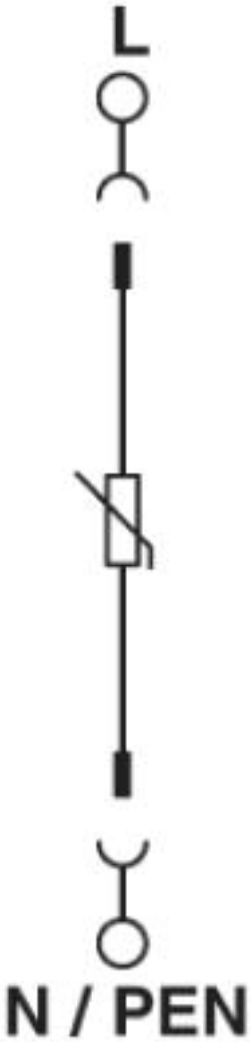
Technical data

Environmental Product Compliance

	For details about hazardous substances go to tab “Downloads”, Category “Manufacturer's declaration”

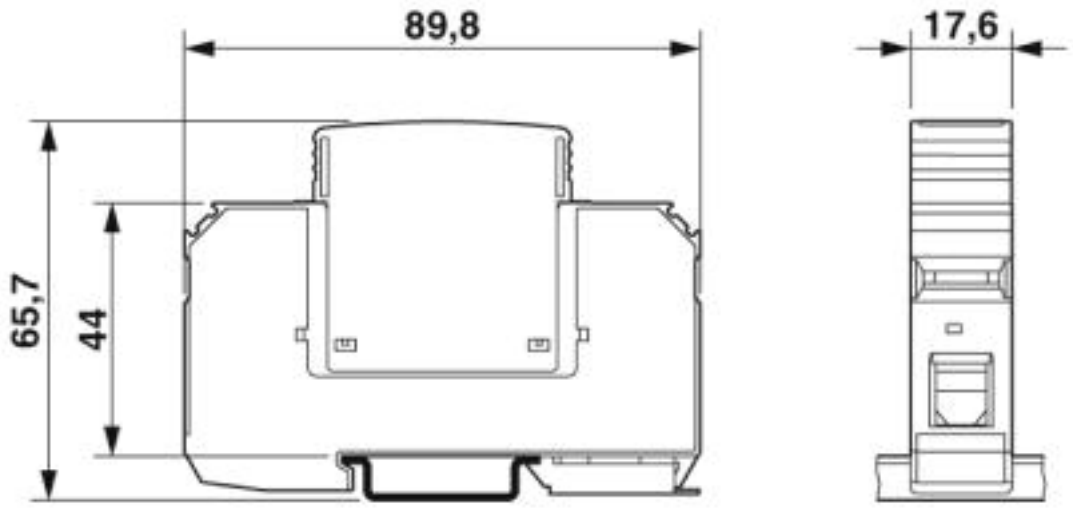
Drawings

Circuit diagram



Type 2 surge arrester - VAL-MS 60 - 2868020

Dimensional drawing



Classifications

eCl@ss

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

Type 2 surge arrester - VAL-MS 60 - 2868020

Classifications

UNSPSC

UNSPSC 20.0	39121620
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	2170208.01
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

Type 2 surge arrester - VAL-MS 60 - 2868020

Approvals

EAC		RU C-DE.A*30.B01561

cULus Recognized	

Accessories

Accessories

Bridge

Wiring bridge - MPB 18/1- 2 - 2809209

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 2-pos.

Wiring bridge - MPB 18/1- 3 - 2809212

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 3-pos.

Wiring bridge - MPB 18/1- 4 - 2809225

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 4-pos.

Wiring bridge - MPB 18/1- 6 - 2748564

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 6-pos.

Type 2 surge arrester - VAL-MS 60 - 2868020

Accessories

Wiring bridge - MPB 18/1- 7 BU - 2856278

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 7-pos., color: Blue

Wiring bridge - MPB 18/1- 8 BU - 2858470

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 8-pos., color: Blue

Wiring bridge - MPB 18/1- 8 - 2748577

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 8-pos.

Wiring bridge - MPB 18/1- 9 - 2748580

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 9-pos.

Wiring bridge - MPB 18/1-12 - 2748593

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 12-pos.

Type 2 surge arrester - VAL-MS 60 - 2868020

Accessories

Wiring bridge - MPB 18/1-57 - 2809238

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 57-pos.

Wiring bridge - MPB 18/3- 6 - 2809241

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

Wiring bridge - MPB 18/4- 8 - 2809283

Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 8-pos.

Wiring bridge - MPB 18/1-10/1.0.0 - 2830443

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 10 pitches with contact sequence 1-0-0

Wiring bridge - MPB 18/4- 8 - 2809283

Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 8-pos.

Type 2 surge arrester - VAL-MS 60 - 2868020

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Wiring bridge - MPB 18/3- 6 - 2809241

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

Wiring bridge - MPB 18/1-57 - 2809238

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 57-pos.

Wiring bridge - MPB 18/1-12 - 2748593

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 12-pos.

Wiring bridge - MPB 18/1- 9 - 2748580

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 9-pos.

Wiring bridge - MPB 18/1- 8 - 2748577

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 8-pos.

Type 2 surge arrester - VAL-MS 60 - 2868020

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Wiring bridge - MPB 18/1- 6 - 2748564

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 6-pos.

Wiring bridge - MPB 18/1- 4 - 2809225

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 4-pos.

Wiring bridge - MPB 18/1- 3 - 2809212

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 3-pos.

Wiring bridge - MPB 18/1- 2 - 2809209

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 2-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

Type 2 surge arrester - VAL-MS 60 - 2868020

Accessories

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

Feed-through terminal block for VAL and FLT applications

Labeled device marker

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 60 ST - 2807573

Surge protection plug type 2 with high-capacity varistor for VAL-MS base element, thermal monitoring, visual fault warning. Design: 60 V AC

Type 2 surge arrester - VAL-MS 60 - 2868020

Accessories

Type 2 surge protection base element - VAL-MS BE - 2817741

Base element for type 2 arresters of the VALVETRAB MS series of products. Design: 1-channel