

Type 2 surge protection plug - VAL-MS 320 ST

2838843

<https://www.phoenixcontact.com/sg/products/2838843>

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Surge protection connector type 2 with high-capacity varistor for VAL-MS base element, thermal monitoring, visual fault warning. Design: 320 V AC

Your advantages

- Quality proven millions of times over in the widest range of applications
- Rapid installation with bridges, thanks to industry-standard overall width of 1 HP
- Easy testing and insulation measurement, thanks to pluggable protection modules
- Wide range of applications due to various nominal voltages
- High degree of modularity provides individual solutions for every application

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Commercial Data

Item number	2838843
Packing unit	10 pc
Minimum order quantity	10 pc
Note	Made to Order (non-returnable)
Sales Key	0701*
Product Key	CL1321
Catalog Page	Page 68 (C-4-2019)
GTIN	4017918170813
Weight per Piece (including packing)	44.2 g
Weight per Piece (excluding packing)	43.86 g
Customs tariff number	85363030
Country of origin	CN

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2838843

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Technical Data

Notes

Order information:	Use in DC applications on request
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Product properties

IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN
	TT
Type	DIN rail module, two-section, divisible
Product type	Replacement plug
Number of positions	1
Surge protection fault message	optical
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 1.10

Insulation characteristics

Overvoltage category	III
Pollution degree	2

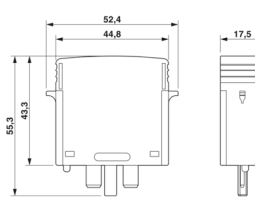
Electrical properties

Nominal frequency f_N	50 Hz (60 Hz)
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Connection data

Connection method	pluggable
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Dimensions

Dimensional drawing	
Width	17.5 mm
Height	52.4 mm
Depth	55.3 mm
Horizontal pitch	1 Div.

Material specifications

Color	jet black RAL 9005
Flammability rating according to UL 94	V-0
CTI value of material	600

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2838843

<https://www.phoenixcontact.com/sg/products/2838843>

Insulating material	PA 6.6
Material group	I
Housing material	PA 6.6

Protective circuit

Mode of protection	L-N
	L-PEN
Direction of action	1L-N/PE
Nominal voltage U_N	240/415 V AC (TN)
	240/415 V AC (TT)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous voltage U_C	335 V AC
Residual current I_{PE}	≤ 0.45 mA
Standby power consumption P_C	≤ 150 mVA
Nominal discharge current I_n (8/20) μ s	20 kA
Maximum discharge current I_{max} (8/20) μ s	40 kA
Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p	≤ 1.5 kV
Residual voltage U_{res}	≤ 1.5 kV (at I_n)
	≤ 1.3 kV (at 10 kA)
	≤ 1.2 kV (at 5 kA)
	≤ 1.1 kV (at 3 kA)
TOV behavior at U_T	415 V AC (5 s / withstand mode)
	440 V AC (120 min / safe failure mode)
Response time t_A	≤ 25 ns
Max. backup fuse with branch wiring	125 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)	25g (Half-sine / 11 ms / 3x \pm X, \pm Y, \pm Z)
Vibration (operation)	5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

Approval data

UL specifications

Maximum continuous operating voltage MCOV (L-N)	320 V AC
Nominal discharge current I_n (L-N)	20 kA
Mode of protection	L-N
Nominal voltage	320 V AC

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2838843

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Power distribution system	Single phase
Nominal frequency	50/60 Hz
Measured limiting voltage MLV (L-N)	2030 V
SPD Type	4CA

Standards and regulations

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

Mounting

Mounting type	on base element
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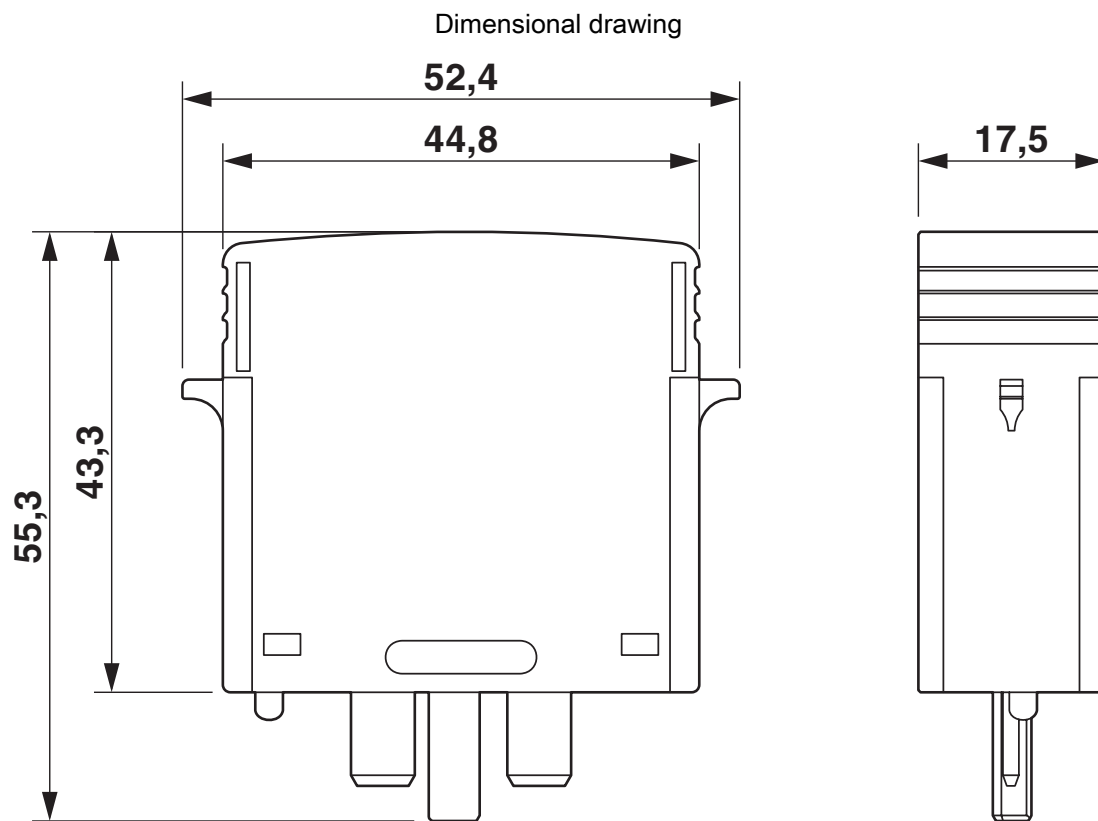
Type 2 surge protection plug - VAL-MS 320 ST

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Drawings



Circuit diagram



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Approvals



cUL Recognized
Approval ID: FILE E 330181



UL Recognized
Approval ID: FILE E 330181



IECEE CB Scheme
Approval ID: AT 2905/M1



EAC
Approval ID: EAC-Zulassung

CCA

Approval ID: NTR-AT 1947-A

Nominal Voltage U_N

Nominal Current I_N

Cross Section AWG

Cross Section mm^2

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KEMA-KEUR
Approval ID: 71-113273



DNV GL
Approval ID: TAE000041M

Nominal Voltage U_N

Nominal Current I_N

Cross Section AWG

Cross Section mm^2

-

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EAC
Approval ID: RU C-DE.*09.B.00169



CSA
Approval ID: 13631



ÖVE
Approval ID: 18583-001-15

cULus Recognized

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Classifications

ECLASS

ECLASS-9.0	27130890
ECLASS-10.0.1	27130890
ECLASS-11.0	27130890

ETIM

ETIM 8.0	EC002496
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UNSPSC

UNSPSC 21.0	
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Environmental Product Compliance

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

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2838843

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Accessories

Wiring bridge

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

<https://www.phoenixcontact.com/sg/products/2830443>



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

Wiring bridge

Wiring bridge - MPB 18/4- 8 - 2809283

<https://www.phoenixcontact.com/sg/products/2809283>



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

Type 2 surge protection plug - VAL-MS 320 ST

2838843

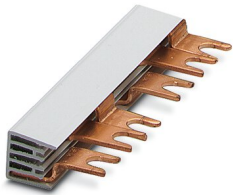
<https://www.phoenixcontact.com/sg/products/2838843>

Wiring bridge

Wiring bridge - MPB 18/3- 6 - 2809241

<https://www.phoenixcontact.com/sg/products/2809241>

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



Wiring bridge

Wiring bridge - MPB 18/1-57 - 2809238

<https://www.phoenixcontact.com/sg/products/2809238>

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



Type 2 surge protection plug - VAL-MS 320 ST

2838843

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Wiring bridge

Wiring bridge - MPB 18/1-12 - 2748593

<https://www.phoenixcontact.com/sg/products/2748593>



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

Wiring bridge

Wiring bridge - MPB 18/1- 9 - 2748580

<https://www.phoenixcontact.com/sg/products/2748580>



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

Type 2 surge protection plug - VAL-MS 320 ST

2838843

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Wiring bridge

Wiring bridge - MPB 18/1- 8 - 2748577

<https://www.phoenixcontact.com/sg/products/2748577>



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

Wiring bridge

Wiring bridge - MPB 18/1- 6 - 2748564

<https://www.phoenixcontact.com/sg/products/2748564>



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

Type 2 surge protection plug - VAL-MS 320 ST

2838843

<https://www.phoenixcontact.com/sg/products/2838843>

Wiring bridge

Wiring bridge - MPB 18/1- 4 - 2809225

<https://www.phoenixcontact.com/sg/products/2809225>



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

Wiring bridge

Wiring bridge - MPB 18/1- 3 - 2809212

<https://www.phoenixcontact.com/sg/products/2809212>



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

Type 2 surge protection plug - VAL-MS 320 ST

2838843

<https://www.phoenixcontact.com/sg/products/2838843>

Wiring bridge

Wiring bridge - MPB 18/1- 2 - 2809209

<https://www.phoenixcontact.com/sg/products/2809209>



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

Marker pen

Marker pen - B-STIFT - 1051993

<https://www.phoenixcontact.com/sg/products/1051993>



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

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2838843

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Type 2 surge protection base element

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

<https://www.phoenixcontact.com/sg/products/2817741>

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



Type 2 surge protection base element

Type 2 surge protection base element - VAL-MS BE/FM - 2817738

<https://www.phoenixcontact.com/sg/products/2817738>

Base element for type 2 arresters of the VALVETRAB MS series of products,
with remote indication contact. Design: 1-channel



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2838843

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Zack marker strip

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128

<https://www.phoenixcontact.com/sg/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

Marker for terminal blocks

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

<https://www.phoenixcontact.com/sg/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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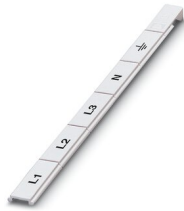
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Marker for terminal blocks

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

<https://www.phoenixcontact.com/sg/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

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