

VAL-MS-T1/T2 1000DC-PV-ST - Type 1/2 surge protection plug



2801162

<https://www.phoenixcontact.com/in/products/2801162>

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Replacement plug for PV arrester combinations from the VAL-MS-T1/T2 1000DC-PV-... product range

Commercial Data

Item number	2801162
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	CL1
Product Key	CL1152
Catalog Page	Page 50 (C-4-2019)
GTIN	4046356714310
Weight per Piece (including packing)	99 g
Weight per Piece (excluding packing)	71.55 g
Customs tariff number	85363030
Country of origin	IN

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Technical Data

Product properties

IEC test classification	PV I / II
	PV T1 / T2
EN type	T1 / T2
IEC power supply system	DC
Type	Male
Product type	Replacement plug
Product family	VALVETRAB MS
Number of positions	1
Installation location	Interior
Installation location of the disconnect device	Internal
Accessibility	Accessible
SPD failure behavior	OCFM (Open-Circuit Failure Mode)
Surge protection fault message	optical

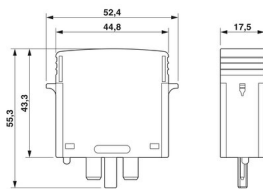
Insulation characteristics

Overvoltage category	III
Pollution degree	2

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
Insulating material	PA 6.6-FR
Material group	I

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Housing material	PA 6.6-FR
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Protective circuit

Direction of action	(L+)-PE & (L-)-PE & (L+)-(L-)
Standby power consumption P_C	≤ 25 mVA
Nominal discharge current I_n (8/20) μ s	15 kA
Maximum discharge current I_{max} (8/20) μ s	40 kA
Impulse discharge current (10/350) μ s, charge	2.5 As
Impulse discharge current (10/350) μ s, specific energy	6.25 kJ/ Ω
Impulse discharge current (10/350) μ s, peak value I_{imp}	5 kA
Voltage protection level U_p	≤ 1.8 kV
Residual voltage U_{res}	≤ 1.8 kV (at I_n)
	≤ 1.5 kV (at 5 kA)
	≤ 1.7 kV (at 10 kA)
	≤ 1.9 kV (at 20 kA)
	≤ 2.2 kV (at 30 kA)
	≤ 2.4 kV (at 40 kA)
Response time t_A	≤ 25 ns

Protective circuit DC voltage side (DC)

Open circuit voltage U_{OCSTC}	≤ 487.5 V DC
Maximum discharge current I_{max} (8/20) μ s	40 kA
Response time t_A	≤ 25 ns
Impulse discharge current (10/350) μ s, charge	2.5 As
Impulse discharge current (10/350) μ s, specific energy	6.25 kJ/ Ω
Impulse discharge current (10/350) μ s, peak value I_{imp}	5 kA
Insulation resistance R_{iso}	> 5 G Ω (at 500 V DC)
Nominal discharge current I_n (8/20) μ s	15 kA
Continuous operating current I_{CPV}	< 20 μ A
Maximum continuous operating voltage U_{CPV}	585 V DC
Short-circuit current rating I_{SCPV}	2000 A
Residual voltage U_{res}	≤ 1.8 kV (at I_n)
	≤ 1.5 kV (at 5 kA)
	≤ 1.7 kV (at 10 kA)
	≤ 1.9 kV (at 20 kA)
	≤ 2.2 kV (at 30 kA)
	≤ 2.4 kV (at 40 kA)
Voltage protection level U_p	≤ 1.8 kV
Standby power consumption P_C	≤ 25 mVA

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
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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)	60g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	7.5g (5-500 Hz/2.5 h/XYZ)

Approvals

UL specifications

Maximum continuous operating voltage MCOV	1170 V DC
Short-circuit current rating (SCCR)	50 kA
Voltage protection rating VPR	3 kV
Nominal discharge current I_n	10 kA
Mode of protection	(L+) - (L-) (L+) - G (L-) - G
Nominal voltage	1170 V DC
Power distribution system	DC PV
SPD Type	1CA

Standards and regulations

Standards/specifications	EN 61643-31
Standards/specifications	IEC 61643-31

Mounting

Mounting type	on base element
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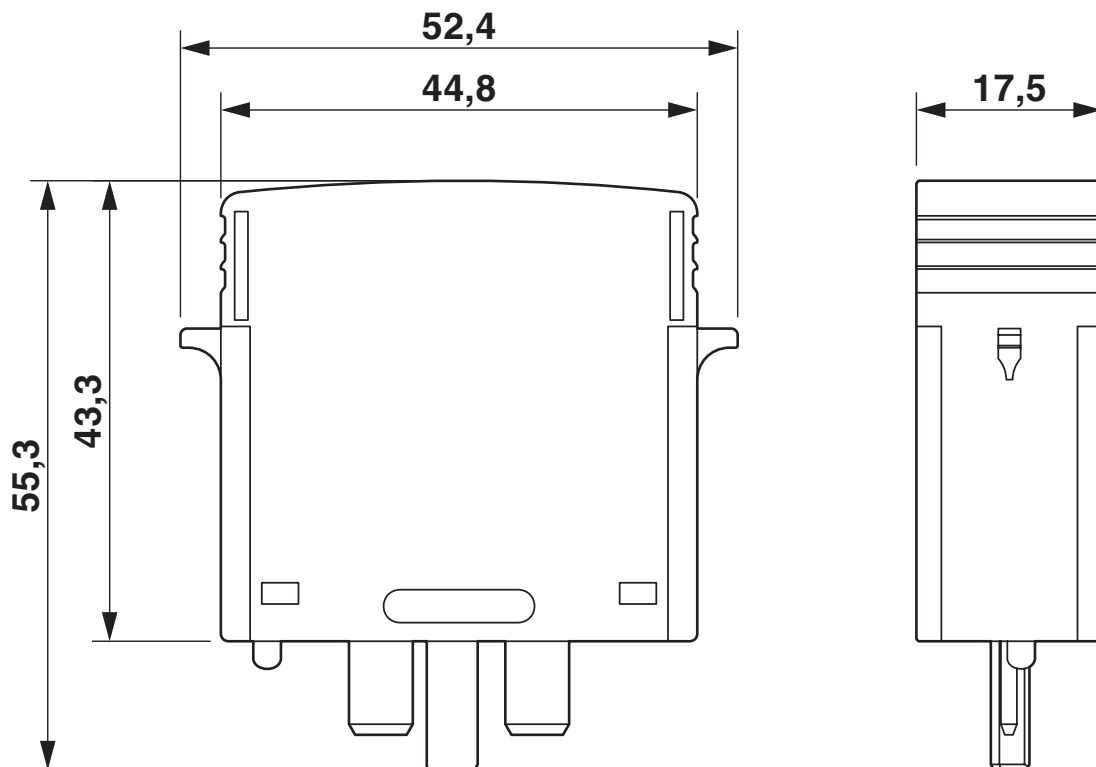
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Drawings

Circuit diagram



Dimensional drawing



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Approvals



cUL Recognized
Approval ID: FILE E 330181



UL Recognized
Approval ID: FILE E 330181



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



KEMA-KEUR
Approval ID: 71-123544 REV.2



IECEE CB Scheme
Approval ID: NL-81006/A1

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Classifications

ECLASS

ECLASS-11.0	27130890
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ETIM

ETIM 8.0	EC002496
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UNSPSC

UNSPSC 21.0	39121620
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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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Accessories

ZBN 18:UNBEDRUCKT - Zack marker strip

2809128

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



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

B-STIFT - Marker pen

1051993

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



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

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DK-BIC-35 - Feed-through terminal block

2749880

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Feed-through terminal block for VAL and FLT applications



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