

VAL-MS 1000DC-PV-ST/4 - Type 2 surge protection plug



1019121

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



Your advantages

- Increased safety, thanks to compliance with standard EN 50539-11
- Reliable contact, thanks to integrated rotating latch
- Easy replacement, thanks to plug-in arresters
- Optimum inverter protection, thanks to low protection level
- Efficient replacement of defective plugs, thanks to visual status indicator
- Protection against mismatching, thanks to keyed plugs and base elements

Commercial data

Item number	1019121
Packing unit	4 pc
Minimum order quantity	4 pc
Sales key	CL1324
Product key	CL1324
GTIN	4055626504889
Weight per piece (including packing)	54.675 g
Weight per piece (excluding packing)	51.2 g
Customs tariff number	85363090
Country of origin	CN

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Technical data

Product properties

IEC test classification	PV II
	PV T2
EN type	T2
IEC power supply system	DC
Type	Male
Product type	Replacement plug
Product family	VALVETRAB MS
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

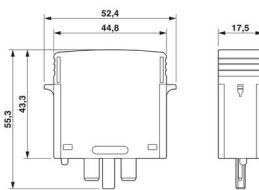
Insulation characteristics

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	black (RAL 9005)
	light grey (RAL 7035)
Flammability rating according to UL 94	V-0
CTI value of material	600
Insulating material	PA 6.6-FR
Material group	I
Housing material	PA 6.6-FR

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Protective circuit

Standby power consumption P_C	≤ 25.00 mVA
Nominal discharge current I_n (8/20) μs	15 kA
Maximum discharge current I_{max} (8/20) μs	40 kA
Voltage protection level U_p	≤ 1.9 kV
Residual voltage U_{res}	≤ 1.9 kV (at I_n)
	≤ 1.5 kV (at 5 kA)
	≤ 1.7 kV (at 10 kA)
	≤ 2 kV (at 20 kA)
	≤ 2.3 kV (at 30 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) μs	40 kA
Response time t_A	≤ 25 ns
Insulation resistance R_{iso}	> 5 G Ω (at 500 V DC)
Nominal discharge current I_n (8/20) μs	15 kA
Continuous operating current I_{CPV}	< 20 μA
Maximum continuous operating voltage U_{CPV}	585 V DC
Short-circuit current rating I_{SCPV}	2000 A
Residual voltage U_{res}	≤ 1.9 kV (at I_n)
	≤ 1.5 kV (at 5 kA)
	≤ 1.7 kV (at 10 kA)
	≤ 2 kV (at 20 kA)
	≤ 2.3 kV (at 30 kA)
Voltage protection level U_p	≤ 1.9 kV
Standby power consumption P_C	≤ 25.00 mVA

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)
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	60g (Half-sine / 11 ms / 3x $\pm X$, $\pm Y$, $\pm Z$)
Vibration (operation)	7.5g (5-500 Hz/2.5 h/XYZ)

Approvals

UL specifications

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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
Note	2019
Standards/specifications	IEC 61643-31
Note	2018

Mounting

Mounting type	on base element
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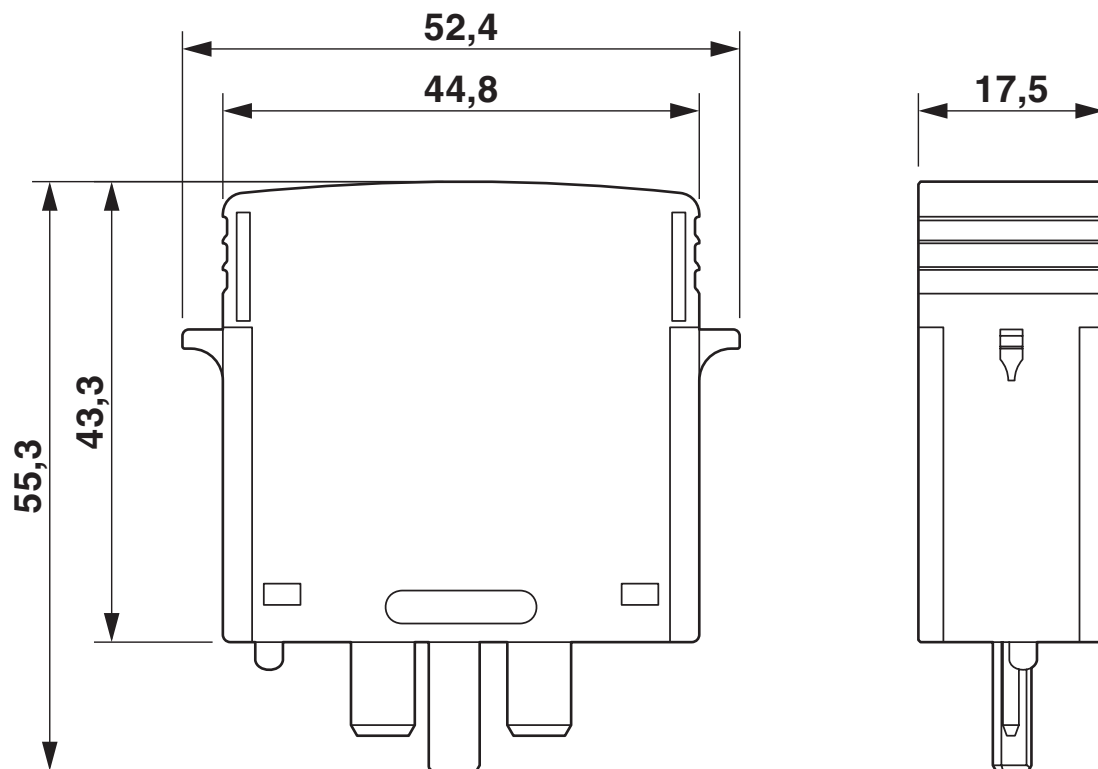
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Drawings

Circuit diagram



Dimensional drawing



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Classifications

ECLASS

ECLASS-11.0	27130890
ECLASS-13.0	27171492

ETIM

ETIM 9.0	EC002496
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Accessories

ZBN 18 CUS - Zack marker strip

0825059

<https://www.phoenixcontact.com/gb/products/0825059>



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, 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

ZBN 18,LGS:ERDE - Marker for terminal blocks

2749589

<https://www.phoenixcontact.com/gb/products/2749589>



Marker for terminal blocks, Strip, white, labeled, horizontal: Grounding symbol, mounting type: snapped, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

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

2749576

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Marker for terminal blocks, Strip, white, labeled, horizontal: L1, L2, L3, N, GND, mounting type: snapped, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

ZBN 18:UNBEDRUCKT - Zack marker strip

2809128

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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

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B-STIFT - Marker pen

1051993

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

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