

# Type 2 surge protection plug - VAL-MS 1000DC-PV-ST - 2800624


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



## Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 615099
GTIN	4046356615099

## Technical data

### Dimensions

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

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

### General

IEC test classification	PV II
	PV T2
EN type	T2
SPD failure behavior	OCM (Open-circuit mode)

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## Technical data

### General

Installation location	Interior
Accessibility	Accessible
Installation location of the disconnect device	Internal
Mounting type	on base element
Color	jet black RAL 9005
Housing material	PA 6.6-FR
Degree of pollution	2
Flammability rating according to UL 94	V-0
Type	Male
Surge protection fault message	optical

### Protective circuit DC voltage side (DC)

Maximum continuous operating voltage $U_{CPV}$	585 V DC
Short-circuit current rating $I_{SCPV}$	2000 A
Continuous operating current $I_{CPV}$	< 20 $\mu$ A
Standby power consumption $P_C$	$\leq$ 25 mVA
Nominal discharge current (8/20) $\mu$ s	15 kA
Maximum discharge current $I_{max}$ (8/20) $\mu$ s	40 kA
Voltage protection level $U_p$	$\leq$ 1.9 kV
Residual voltage $U_{res}$	$\leq$ 1.9 kV (at $I_n$ )
	$\leq$ 1.5 kV (at 5 kA)
	$\leq$ 1.7 kV (at 10 kA)
	$\leq$ 2 kV (at 20 kA)
	$\leq$ 2.3 kV (at 30 kA)
	$\leq$ 2.5 kV (at 40 kA)
Response time $t_A$	$\leq$ 25 ns
Insulation resistance $R_{iso}$	> 5 $\Omega$ (at 500 V DC)

### Connection data

Connection method	pluggable
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### UL specifications

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

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## Technical data

### Standards and Regulations

Standards/regulations	EN 50539-11 2013
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### Environmental Product Compliance

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

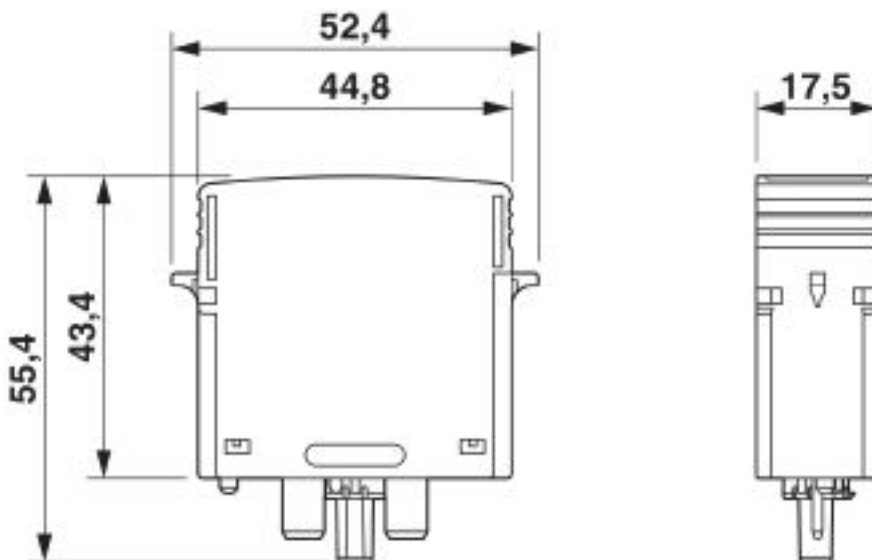
## Drawings

Circuit diagram



# Type 2 surge protection plug - VAL-MS 1000DC-PV-ST - 2800624

Dimensional drawing



## Classifications

### eCl@ss

eCl@ss 10.0.1	27130890
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	27130890
eCl@ss 9.0	27130890

### ETIM

ETIM 3.0	EC000941
ETIM 4.0	EC000941
ETIM 5.0	EC002496
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

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## Classifications

### UNSPSC

UNSPSC 18.0	39121620
UNSPSC 19.0	39121620
UNSPSC 20.0	39121620
UNSPSC 21.0	39121620

## Approvals

### Approvals

#### Approvals

UL Recognized / KEMA-KEUR / cUL Recognized / EAC / cULus Recognized

#### Ex Approvals

### Approval details

UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 330181
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KEMA-KEUR		<a href="http://www.dekra-certification.com">http://www.dekra-certification.com</a>	71-102960 REV.1
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cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 330181
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EAC			RU C- DE.*09.B.00169
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cULus Recognized			
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## Accessories

### Accessories

### Device marking

## Type 2 surge protection plug - VAL-MS 1000DC-PV-ST - 2800624

### Accessories

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

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### 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

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### 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

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