

# Type 1/2 surge protection plug - VAL-MS-T1/T2 1000DC-PV-ST - 2801162


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



## Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 714310
GTIN	4046356714310

## 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 I / II
	PV T1 / T2

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## Technical data

### General

EN type	T1 / T2
SPD failure behavior	OCM (Open-circuit mode)
Installation location	Inside
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
Surge protection fault message	optical

### Protective circuit DC voltage side (DC)

Maximum continuous operating voltage $U_{CPV}$	525 V DC
Open circuit voltage $U_{OCSTC}$	$\leq 435$ V DC
Short-circuit current rating $I_{SCPV}$	1000 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
Impulse discharge current (10/350) $\mu$ s, charge	2.5 As
Impulse discharge current (10/350) $\mu$ s, specific energy	6.25 kJ/ $\Omega$
Impulse discharge current (10/350) $\mu$ s, peak value $I_{imp}$	5 kA
Voltage protection level $U_p$	$\leq 1.8$ kV
Residual voltage $U_{res}$	$\leq 1.8$ kV (at $I_n$ )
	$\leq 1.5$ kV (at 5 kA)
	$\leq 1.7$ kV (at 10 kA)
	$\leq 1.9$ kV (at 20 kA)
	$\leq 2.2$ kV (at 30 kA)
	$\leq 2.4$ kV (at 40 kA)
Response time $t_A$	$\leq 25$ ns
Insulation resistance $R_{iso}$	$> 5$ G $\Omega$ (at 500 V DC)

### UL specifications

SPD Type	4CA
Maximum continuous operating voltage MCOV (L+) - G	1050 V DC
Nominal voltage	875 V DC
Mode of protection	(L+) - G
Power distribution system	1
Measured limiting voltage MLV (L+) - G	1900 V

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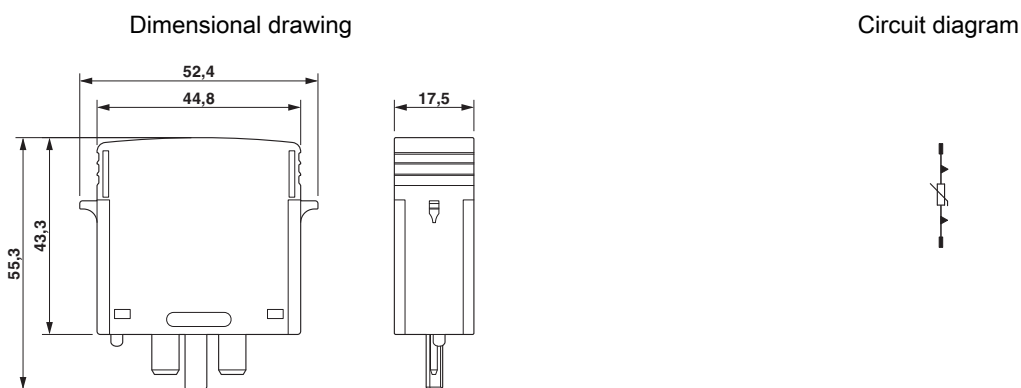
### UL specifications

Nominal discharge current $I_n$ (L+) - G	20 kA
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### Standards and Regulations

Standards/regulations	EN 50539-11 2013
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## Drawings



## Approvals

### Approvals

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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>	2171492.01
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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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cULus 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>	
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