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# 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 STK
GTIN	 4 046356 615099

## 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

Standards/specifications	EN 50539-11 2013
IEC test classification	PV T2
	PV T2
SPD failure behavior	OCM (Open-circuit mode)
SPD design	Voltage-limiting type
Installation location	Inside
Accessibility	Accessible
Installation location of the disconnect device	Internal

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### Technical data

#### General

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 $U_{CPV}$	585 V DC
Open circuit voltage $U_{OCSTC}$	$\leq 485$ 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
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 $R_{iso}$	$> 5$ G $\Omega$ (at 500 V DC)

#### UL specifications

SPD Type	4CA
Maximum continuous operating voltage MCOV (L+) - G	1170 V DC
Nominal voltage	970 V DC
Mode of protection	(L+) - G
Power distribution system	1
Measured limiting voltage MLV (L+) - G	1980 V
Nominal discharge current $I_n$ (L+) - G	10 kA

#### Classifications

##### eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801

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## Classifications

### eCl@ss

eCl@ss 6.0	27130805
eCl@ss 7.0	27130805
eCl@ss 8.0	27130805

### ETIM

ETIM 3.0	EC000941
ETIM 4.0	EC000941
ETIM 5.0	EC000941

### UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

## Approvals

### Approvals

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#### Approvals

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

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#### Ex Approvals

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#### Approvals submitted

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### Approval details

UL Recognized
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KEMA-KEUR
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cUL Recognized
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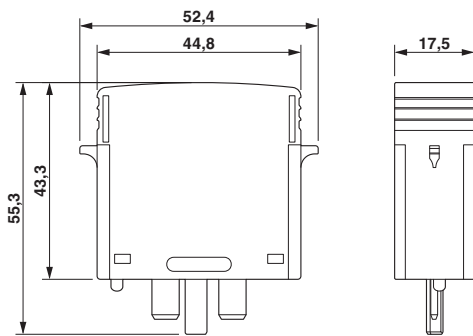
## Approvals

EAC

cULus Recognized  US

## Drawings

Dimensional drawing



Circuit diagram



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