



**Automatización Eléctrica**  
Especialistas en Automatización

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## Type 2 surge arrester - VAL-MS 600DC-PV/2+V - 2800642

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Surge arrester for 2-pos. isolated 600 V DC voltage systems, for DIN rail mounting, 3-pos. base element, three plug-in temperature-monitored protective elements, status message on each plug.

### Why buy this product

- 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
- Always the right arrester, thanks to universal type 1/type 2 protective components



### Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 614979

### Technical data

#### Dimensions

Height	90 mm
Width	53.4 mm
Depth	65.5 mm
Horizontal pitch	3 Div.

#### Ambient conditions

Degree of protection	IP20 (only when all terminal points are used)
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 2000 m (amsl (above mean sea level))

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## Technical data

### Ambient conditions

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
Number of ports	One
SPD failure behavior	OCM (Open-circuit mode)
Connection configuration	Y configuration
SPD design	Voltage-limiting type
Installation location	Inside
Accessibility	Accessible
Installation location of the disconnect device	Internal
Mode of protection	(L+) - (L-)
	(L+) - PE
	(L-) - PE
Mounting type	DIN rail: 35 mm
Color	jet black RAL 9005
Housing material	PA 6.6-FR
	PBT-FR
Degree of pollution	2
Distance between live and grounded parts	8 mm
Flammability rating according to UL 94	V-0
Type	DIN rail module, two-section, divisible
Surge protection fault message	optical

### Additional descriptions

Note	The device is intended for touch proof installation in a housing. Ensure that there is a gap of at least 8 mm between the active and grounded parts in the connection area.
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### Protective circuit DC voltage side (DC)

Maximum continuous operating voltage $U_{CPV}$	800 V DC
Open circuit voltage $U_{OCSTC}$	$\leq 670$ V DC
Short-circuit current rating $I_{SCPV}$	1000 A
Continuous operating current $I_{CPV}$	20 $\mu$ A
Rated load current $I_L$	80 A
Residual current $I_{PE}$	$\leq 20$ $\mu$ A DC
	$\leq 300$ $\mu$ A AC
Standby power consumption $P_C$	$\leq 20$ mVA
Nominal discharge current (8/20) $\mu$ s	15 kA

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### Technical data

#### Protective circuit DC voltage side (DC)

Maximum discharge current $I_{max}$ (8/20) $\mu$ s	40 kA
Total discharge current $I_{Total}$ (8/20) $\mu$ s	40 kA
Voltage protection level $U_p$	$\leq 2.7$ kV
Residual voltage $U_{res}$	$\leq 2.7$ kV (at $I_n$ )
	$\leq 2.2$ kV (at 5 kA)
	$\leq 2.5$ kV (at 10 kA)
	$\leq 2.9$ kV (at 20 kA)
	$\leq 3.4$ kV (at 30 kA)
	$\leq 3.8$ kV (at 40 kA)
Response time $t_A$	$\leq 25$ ns
Insulation resistance $R_{iso}$	$> 5$ G $\Omega$ (at 500 V DC)

#### Connection data

Connection method	Screw connection
Conductor cross section flexible	1.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>
Conductor cross section solid	1.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Conductor cross section AWG	15 ... 2
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	16 mm
Connection method	Biconnect terminal blocks
Conductor cross section flexible	1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Screw thread	M5

#### UL specifications

SPD Type	4CA
Maximum continuous operating voltage MCOV (L+) - (L-)	800 V DC
Maximum continuous operating voltage MCOV (L+) - G	800 V DC
Maximum continuous operating voltage MCOV (L-) - G	800 V DC
Nominal voltage	670 V DC
Mode of protection	(L+) - (L-)
	(L+) - G
	(L-) - G
Power distribution system	1
Measured limiting voltage MLV (L+) - (L-)	3090 V
Measured limiting voltage MLV (L+) - G	3040 V
Measured limiting voltage MLV (L-) - G	3070 V
Nominal discharge current $I_n$ (L+) - (L-)	20 kA
Nominal discharge current $I_n$ (L+) - G	20 kA
Nominal discharge current $I_n$ (L-) - G	20 kA

#### UL connection data

# Type 2 surge arrester - VAL-MS 600DC-PV/2+V - 2800642

## Technical data

### UL connection data

Conductor cross section AWG	10 ... 2
Tightening torque	30 lb <sub>F</sub> -in.

## Classifications

### eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130805
eCl@ss 7.0	27130805
eCl@ss 8.0	27130806
eCl@ss 9.0	27130806

### 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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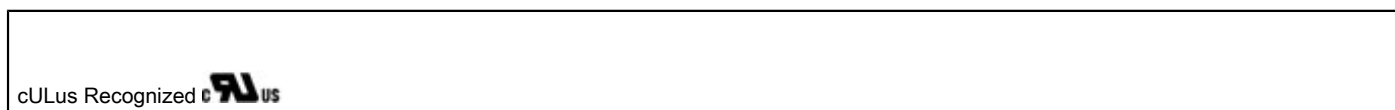
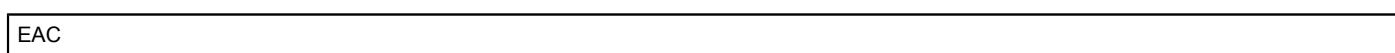
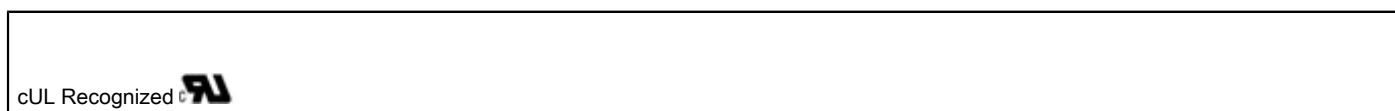
#### Approvals submitted

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### Approval details

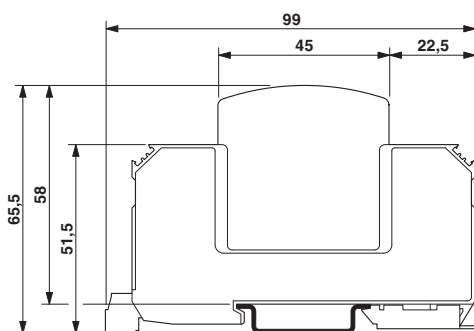
# Type 2 surge arrester - VAL-MS 600DC-PV/2+V - 2800642

## Approvals

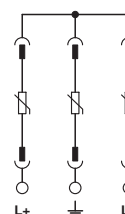


## Drawings

Dimensional drawing



Circuit diagram



The illustration shows the dimensional drawing for a version with remote indicator contact



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Product	Code	Reference	Product link
Surge arrester for 2-pos. isolated 600 V DC voltage systems, for DIN rail mounting, 3-pos. base element, three plug-in temperature-monitored protective elements, status message on each plug.	2800642	VAL-MS 600DC-PV/2 +V	<a href="#">Buy on EAN</a>