

## Type 2 surge protection device - VAL-MS 1000DC-PV/2+V - 2800628

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Surge arrester for 2-pos. isolated 1000 V DC voltage systems, for DIN rail mounting, 3-pos. base element, three plug-in temperature-monitored protective elements, status message on each plug.

### Product Features

- ✓ 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
- ✓ Optimized maintenance planning, thanks to remote signaling
- ✓ 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 pc
Weight per Piece (excluding packing)	320.0 GRM
Custom tariff number	85363030
Country of origin	Germany

### Technical data

#### Dimensions

Height	99 mm
Width	53.4 mm
Depth	65.5 mm
Horizontal pitch	3 Div.

#### Ambient conditions

Degree of protection	IP20
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### Technical data

#### Ambient conditions

Ambient temperature (operation)	-40 °C ... 80 °C
Altitude	≤ 2000 m
Permissible humidity (operation)	5 % ... 95 %

#### General

Standards/specifications	EN 50539-11 2013
IEC test classification	PV T2
	PV T2
Number of ports	One
SPD failure behavior	Open circuit mode (OCM)
Connection configuration	Y configuration
SPD design	Voltage-limiting type
Installation location	Inside
Accessibility	Accessible
Installation location of the disconnect device	Internal
Mounting type	DIN rail: 35 mm
Color	jet black RAL 9005
Housing material	PBT / PA
Pollution degree	2
Inflammability class according to UL 94	V-0
Surge protection fault message	Optical

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

Maximum continuous operating voltage $U_{CPV}$	1170 V DC
Open circuit voltage $U_{OCSTC}$	≤ 970 V DC
Short-circuit current rating $I_{SCPV}$	300 A
Rated load current $I_L$	80 A DC
Residual current $I_{PE}$	≤ 20 μA
	≤ 250 μA
Standby power consumption $P_C$	≤ 25 mVA
Nominal discharge current (8/20) μs	15 kA
Maximum discharge current $I_{max}$ (8/20) μs	40 kA
Total discharge current $I_{Total}$ (8/20) μs	40 kA
Voltage protection level $U_p$ (L+) - (L-)	≤ 3.7 kV
Voltage protection level $U_p$ (L+/L-) - PE	≤ 3.7 kV
Response time $t_A$	≤ 25 ns
Max. required backup fuse with branch wiring	Not required

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### Technical data

#### Connection data

Connection method	Screw connection
Conductor cross section stranded min.	1.5 mm <sup>2</sup>
Conductor cross section stranded max.	25 mm <sup>2</sup>
Conductor cross section solid min.	1.5 mm <sup>2</sup>
Conductor cross section solid max.	35 mm <sup>2</sup>
AWG conductor cross section	15 ... 2
	10 ... 2 (UL)
Screw thread	M5
Tightening torque	4.5 Nm
	30 lb <sub>r</sub> -in. (UL)
Stripping length	16 mm
Connection method	Biconnect terminal blocks
Conductor cross section stranded min.	1.5 mm <sup>2</sup>
Conductor cross section stranded max.	16 mm <sup>2</sup>
Screw thread	M5

### 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	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

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## Classifications

### UNSPSC

UNSPSC 13.2	39121620
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## Approvals

### Approvals

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#### Approvals

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

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#### Ex Approvals


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#### Approvals submitted

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## Approval details

UL Recognized 

KEMA-KEUR 

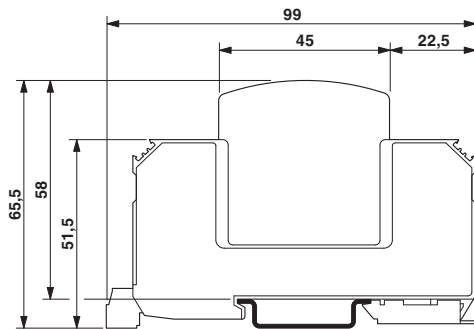
cUL Recognized 

cULus Recognized 

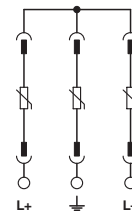
## Drawings

## Type 2 surge protection device - VAL-MS 1000DC-PV/2+V - 2800628

Dimensioned drawing



Circuit diagram



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