

Type 2 surge protection device - VAL-MS 1000DC/2+V-FM-UD - 2805567

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Surge arrester for 2-pos. isolated and grounded DC voltage systems 1000 V DC, for DIN rail mounting, 3-pos. base element (L+, L-, ground) with remote indication contact, three pluggable temperature-monitored varistors, status message on each connector.

Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	360.0 GRM
Custom tariff number	85363010
Country of origin	Germany

Technical data

Dimensions

Height	99 mm
Width	53.4 mm
Depth	65.5 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 80 °C

General

Housing material	PBT / PA
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	DIN EN 60664-1 DIN EN 61643-11
Mounting type	DIN rail: 35 mm
Type	DIN rail module, two-section, divisible
Number of positions	3
Surge protection fault message	Optical, remote indicator contact
Direction of action	(L+)-PE & (L-)-PE & (L+)-(L-)

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Technical data

Protective circuit

IEC test classification	II
	T2
EN type	T2
Nominal voltage U_N	1000 V DC (Non-load voltage U_{OC})
Maximum continuous operating voltage U_C	1000 V DC
Rated load current I_L	≤ 80 A DC
Residual current I_{PE}	≤ 20 μ A
Standby power consumption P_C	≤ 20 mW
Max. discharge current I_{max} (8/20) μ s	30 kA
Nominal discharge current I_n (8/20) μ s	15 kA
Voltage protection level U_p	≤ 5 kV
Voltage protection level U_p (L+) - (L-)	≤ 5 kV
Voltage protection level U_p (L+/L-) - PE	≤ 5 kV
Residual voltage	≤ 5 kV
	≤ 4.5 kV (at 10 kA)
	≤ 4 kV (at 5 kA)
Residual voltage (L+) - (L-)	≤ 5 kV
	≤ 4.5 kV (at 10 kA)
	≤ 4 kV (at 5 kA)
Residual voltage (L+/L-) - PE	≤ 5 kV
	≤ 4.5 kV (at 10 kA)
	≤ 4 kV (at 5 kA)
Response time	≤ 25 ns

PV protective circuit DC side

Short-circuit current rating I_{SCPV}	80 A
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Connection, protective circuit

Connection method	Screw connection
Connection type IN	Biconnect screw terminal block
Connection type OUT	Biconnect screw terminal block
Connection method	Biconnect terminal block
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	16 mm
Conductor cross section stranded min.	1.5 mm ²
Conductor cross section stranded max.	25 mm ²
Conductor cross section solid min.	1.5 mm ²

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Connection, protective circuit

Conductor cross section solid max.	35 mm ²
Conductor cross section AWG/kcmil min.	15
Conductor cross section AWG/kcmil max	2

Remote indicator contact

Switching function	PDT, 1-pos.
Connection method	MC 1,5/3
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section stranded min.	0.14 mm ²
Conductor cross section stranded max.	1.5 mm ²
Conductor cross section solid min.	0.14 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section AWG/kcmil min.	28
Conductor cross section AWG/kcmil max	16
Maximum operating voltage U _{max} AC	250 V AC
Max. operating current I _{max}	1.5 A AC (250 V AC)
	1 A DC (30 V DC)

Standards and Regulations

Standards/regulations	DIN EN 61643-11 2002
	IEC 61643-1 2005
	IEC 60364-7-712 2002

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 2.0	EC000941
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Classifications

ETIM

ETIM 3.0	EC000941
ETIM 4.0	EC000942
ETIM 5.0	EC000942

UNSPSC

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