

Lightning/surge arrester type 1/2 - VAL-MB-T1/T2 1500DC-PV/2+V - 2905641

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Lightning/surge arrester for 2-pos. isolated 1500 V DC voltage systems, for DIN rail mounting, temperature-monitored protective elements, status message on the module.

Your advantages

- ✓ Double terminal block for safe and easy equipotential bonding connection
- ✓ Screw shafts with raised domes to ensure safe working
- ✓ Main connections with extended insertion funnels for increased resistance to creepage
- ✓ Visual display for checking the status directly on the device
- ✓ Compact design for space-saving installation

Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 984393
GTIN	4046356984393

Technical data

Dimensions

Height	120 mm
Width	71.2 mm
Depth	65.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	4 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	≤ 6000 m (amsl (above mean sea level))
Permissible humidity (operation)	5 % ... 95 %

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Ambient conditions

Shock (operation)	50g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	5g (5 - 500 Hz/2.5 h/X, Y, Z)

General

IEC test classification	PV I / II
	PV T1 / T2
EN type	T1 / T2
IEC power supply system	DC
SPD failure behavior	OCM (Open-circuit mode)
Connection configuration	Y configuration
Installation location	Interior
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	traffic grey A RAL 7042
Housing material	PA 6.6
Degree of pollution	2
Flammability rating according to UL 94	V-0
Type	DIN rail module, one-piece
Surge protection fault message	optical

Additional descriptions

Note	The product is also suitable for applications in PV systems with a max. short-circuit current $I_{SCPV} = 15 \text{ kA}$ (according to EN 50539-11:2013).
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Protective circuit DC voltage side (DC)

Maximum continuous operating voltage U_{CPV}	1500 V DC
Short-circuit current rating I_{SCPV}	2000 A
Continuous operating current I_{CPV}	< 100 μA
Rated load current I_L	50 A
Residual current I_{PE}	$\leq 100 \mu\text{A DC}$
	$\leq 540 \mu\text{A AC}$
Standby power consumption P_C	$\leq 150 \text{ mVA}$
Nominal discharge current (8/20) μs	20 kA
Maximum discharge current I_{max} (8/20) μs	40 kA
Impulse discharge current (10/350) μs , charge	3.125 As
Impulse discharge current (10/350) μs , specific energy	9.77 kJ/ Ω
Impulse discharge current (10/350) μs , peak value I_{imp}	6.25 kA

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Protective circuit DC voltage side (DC)

Total discharge current $I_{total} (8/20) \mu s$	40 kA
Total discharge current $I_{total} (10/350) \mu s$	12.5 kA
Voltage protection level U_p	≤ 4.5 kV
Residual voltage U_{res}	≤ 4.5 kV (at I_n)
	≤ 3.3 kV (at 3 kA)
	≤ 3.6 kV (at 6.25 kA)
	≤ 3.8 kV (at 10 kA)
	≤ 4.2 kV (at 15 kA)
	≤ 5.4 kV (at 40 kA)
Response time t_A	≤ 25 ns
Insulation resistance R_{iso}	> 5 G Ω (at 500 V DC)

Connection data

Connection method	Screw connection
Screw thread	M5
Tightening torque	3 Nm
Stripping length	16 mm
Conductor cross section flexible	2.5 mm ² ... 35 mm ²
2 conductors with same cross section, stranded, ferrules without plastic sleeve, min.	2.5 mm ²
2 conductors with same cross section, stranded, ferrules without plastic sleeve, max.	10 mm ²
Conductor cross section AWG	14 ... 2

Standards and Regulations

Standards/regulations	EN 50539-11 2013
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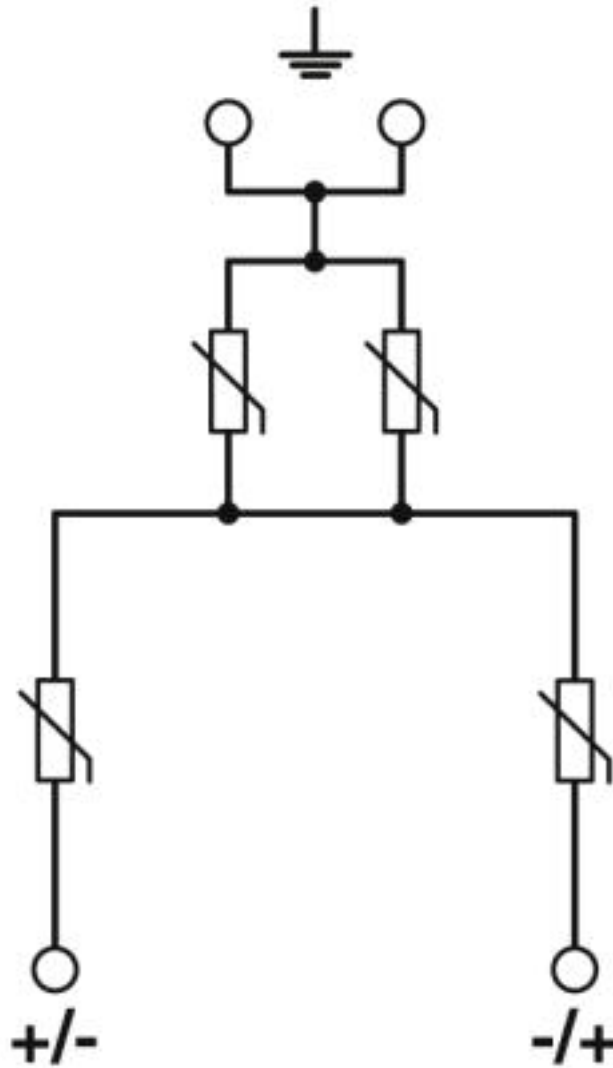
Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

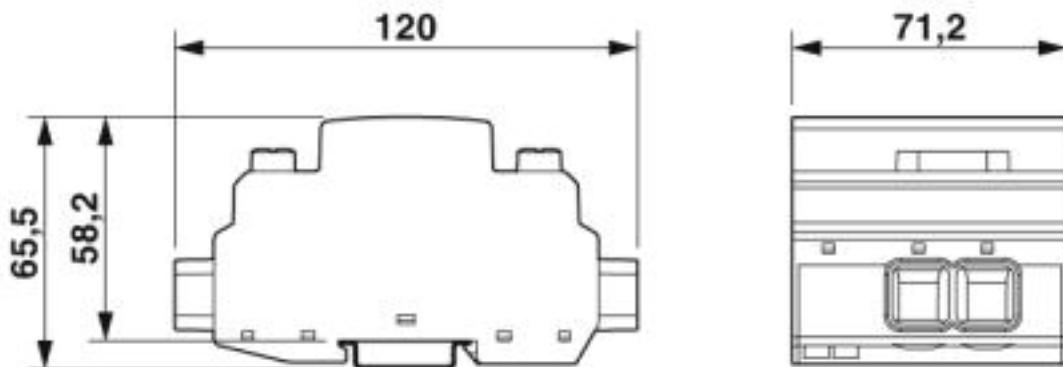
Drawings

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Circuit diagram



Dimensional drawing



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Approvals

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CCA / KEMA-KEUR

Ex Approvals

Approval details

CCA			NTR-NL 7422
KEMA-KEUR		http://www.dekra-certification.com	2181728.01

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