

VAL-MB-T2 1000DC-PV/2+V - Type 2 surge arrester



2905645

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Surge arrester for 2-pos. isolated 1000 V DC voltage systems, for DIN rail mounting, temperature-monitored protective elements, status message on the module.

The figure shows the VAL-MB-T1/T2
1500DC-PV/2+V version

Your advantages

- Space-saving installation, thanks to the compact design
- 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

Commercial data

Item number	2905645
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	CL1341
GTIN	4046356984249
Weight per piece (including packing)	413.68 g
Weight per piece (excluding packing)	413.68 g
Country of origin	DE

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Technical data

Product properties

Product type	PV arrester
Product family	VALVETRAB MB
IEC test classification	PV T2
Type	DIN rail module, one-piece
Environment	Indoor
Installation location of the disconnect device	Internal
Accessibility	Accessible
Connection configuration	Y configuration
End-of-life mode	OCM (Open-Circuit Failure Mode)
Surge protection fault message	optical
Number of ports	One

Insulation characteristics

Pollution degree	2
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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
Conductor cross-section AWG	14 ... 2

Dimensions

Dimensional drawing	
Width	71.2 mm
Height	120 mm
Depth	65.5 mm
Horizontal pitch	4 Div.

Material specifications

Flammability rating according to UL 94	V-0
Insulating material	PA 6.6 PBT
Housing material	PA 6.6

Protective circuit

	(L+) - (L-)
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Mode of protection	(L+) - PE
	(L-) - PE
Direction of action	(L+)-PE & (L-)-PE & (L+)-(L-)
Rated load current I_L	50 A
Protective conductor current I_{PE}	$\leq 50 \mu\text{A DC}$
	$\leq 400 \mu\text{A AC}$
Standby power consumption P_C	$\leq 50 \text{ mVA}$
Nominal discharge current I_n (8/20) μs	20 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	$\leq 3.3 \text{ kV}$
Residual voltage U_{res}	$\leq 3.3 \text{ kV}$ (at I_n)
	$\leq 2.5 \text{ kV}$ (at 3 kA)
	$\leq 2.7 \text{ kV}$ (at 6.25 kA)
	$\leq 2.9 \text{ kV}$ (at 10 kA)
	$\leq 3.1 \text{ kV}$ (at 15 kA)
Response time t_A	$\leq 4 \text{ kV}$ (at 40 kA)
	$\leq 25 \text{ ns}$

PV protective circuit

Connection configuration	Y configuration
End-of-life mode	OCM (Open-Circuit Failure Mode)

Protective circuit DC voltage side (DC)

Maximum continuous operating voltage U_{CPV}	1000 V DC
Short-circuit current rating I_{SCPV}	2000 A
Open-circuit voltage U_{OCSTC}	$\leq 833 \text{ V DC}$
Maximum discharge current I_{max} (8/20) μs	40 kA
Response time t_A	$\leq 25 \text{ ns}$
Total discharge current I_{Total} (8/20) μs	40 kA
Insulation resistance R_{iso}	$> 5 \text{ G}\Omega$ (at 500 V DC)
Nominal discharge current I_n (8/20) μs	20 kA
Rated load current I_L	50 A
Continuous operating current I_{CPV}	$< 50 \mu\text{A}$
Maximum continuous operating voltage U_{CPV}	1000 V DC
Short-circuit current rating I_{SCPV}	2000 A
Residual voltage U_{res}	$\leq 3.3 \text{ kV}$ (at I_n)
	$\leq 2.5 \text{ kV}$ (at 3 kA)
	$\leq 2.7 \text{ kV}$ (at 6.25 kA)
	$\leq 2.9 \text{ kV}$ (at 10 kA)
	$\leq 3.1 \text{ kV}$ (at 15 kA)
Protective conductor current I_{PE}	$\leq 4 \text{ kV}$ (at 40 kA)
	$\leq 50 \mu\text{A DC}$
Voltage protection level U_p	$\leq 400 \mu\text{A AC}$
	$\leq 3.3 \text{ kV}$

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Standby power consumption P_C	≤ 50 mVA
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Environmental and real-life conditions

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)
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	50g (Half-sine / 11 ms / 3x $\pm X$, $\pm Y$, $\pm Z$)
Vibration (operation)	5g (5 - 500 Hz/2.5 h/X, Y, Z)

Standards and regulations

Standards/specifications	EN 50539-11
Note	2013

Mounting

Mounting type	DIN rail: 35 mm
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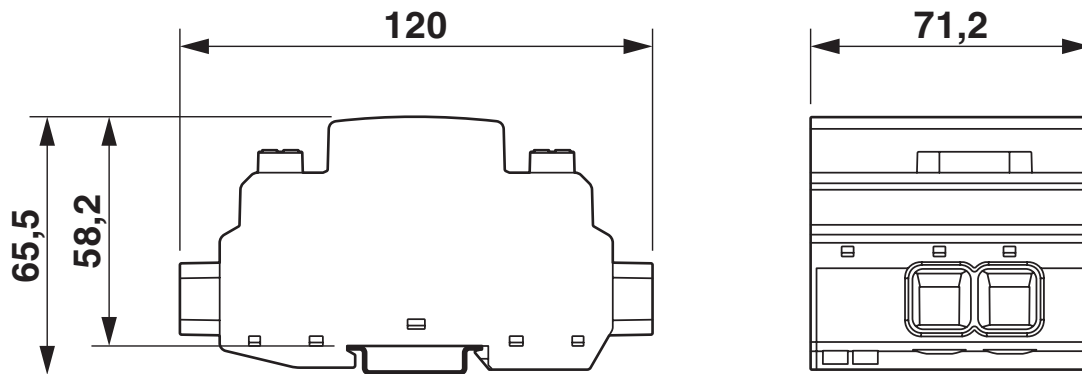


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Drawings

Dimensional drawing



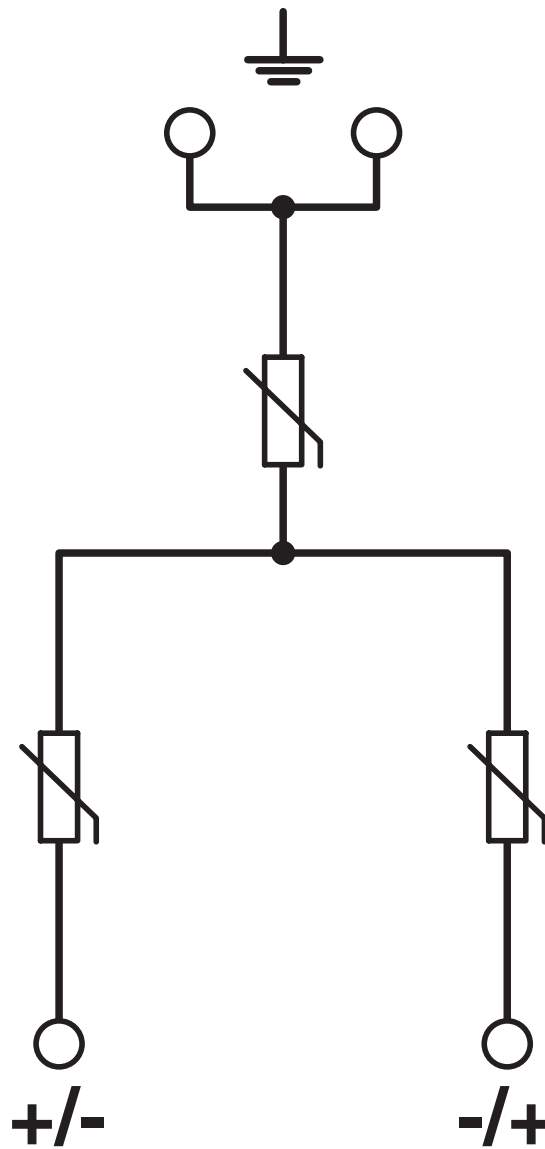
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Circuit diagram



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Environmental product compliance

EU REACH SVHC

REACH candidate substance (CAS No.)	
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	No substance above 0.1 wt%
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