

Lightning/surge arrester type 1/2 - VAL-MB-T1/T2 1000DC-PV/2+V-FM - 2905638

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Lightning/surge arrester for 2-pos. isolated 1000 V DC voltage systems, for DIN rail mounting, with remote indication contact, 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
- ✓ Plug-in signal connection for remote status signaling
- ✓ Compact design for space-saving installation



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 984577
GTIN	4046356984577

Technical data

Dimensions

Height	120 mm
Width	71.2 mm
Depth	65.5 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))

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Ambient conditions

Permissible humidity (operation)	5 % ... 95 %
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, remote indicator contact

Protective circuit DC voltage side (DC)

Maximum continuous operating voltage U_{CPV}	1000 V DC
Short-circuit current rating I_{SCPV}	2000 A
Continuous operating current I_{CPV}	< 70 μ A
Rated load current I_L	50 A
Residual current I_{PE}	\leq 70 μ A DC
	\leq 500 μ A AC
Standby power consumption P_C	\leq 70 mVA
Nominal discharge current (8/20) μ s	20 kA
Maximum discharge current I_{max} (8/20) μ s	40 kA
Impulse discharge current (10/350) μ s, charge	3.125 As
Impulse discharge current (10/350) μ s, specific energy	9.77 kJ/ Ω
Impulse discharge current (10/350) μ s, peak value I_{imp}	6.25 kA
Total discharge current I_{total} (8/20) μ s	40 kA
Total discharge current I_{total} (10/350) μ s	12.5 kA

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Protective circuit DC voltage side (DC)

Voltage protection level U_p	≤ 3.3 kV
Residual voltage U_{res}	≤ 3.3 kV (at I_n)
	≤ 2.5 kV (at 3 kA)
	≤ 2.7 kV (at 6.25 kA)
	≤ 2.9 kV (at 10 kA)
	≤ 3.1 kV (at 15 kA)
	≤ 4 kV (at 40 kA)
Response time t_A	≤ 25 ns
Insulation resistance R_{iso}	> 5 G Ω (at 500 V DC)

Indicator/remote signaling

Switching function	PDT contact
Operating voltage	5 V AC ... 250 V AC
	5 V DC ... 30 V DC
Operating current	5 mA AC ... 1.5 A AC
	5 mA DC ... 1 A DC
Connection method	Screw connection
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section flexible	0.14 mm ² ... 1.5 mm ²
Conductor cross section solid	0.14 mm ² ... 1.5 mm ²
Conductor cross section AWG	28 ... 16

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
Two conductors with the same cross section stranded, with ferrule and without plastic sleeve, minimum	2.5 mm ²
Two conductors with the same cross section stranded, with ferrule and without plastic sleeve, maximum	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

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years

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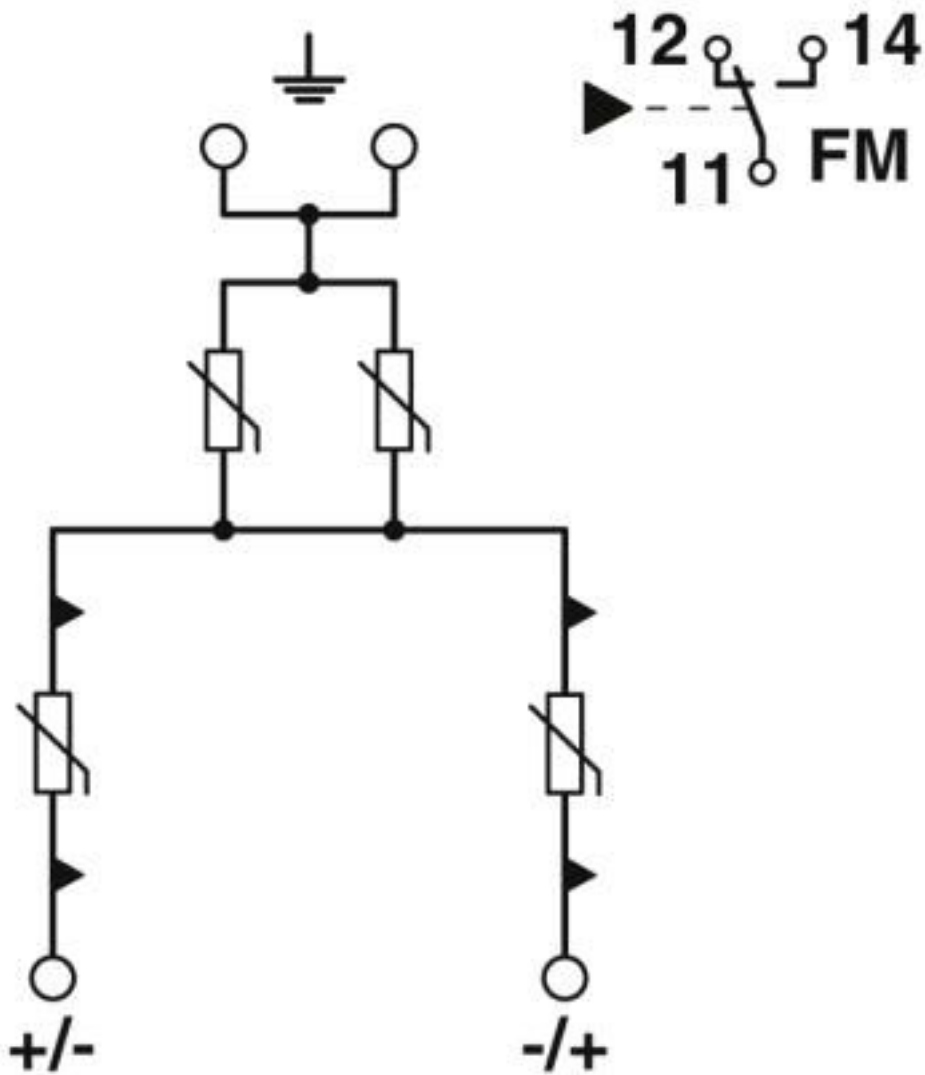
Technical data

Environmental Product Compliance

	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"
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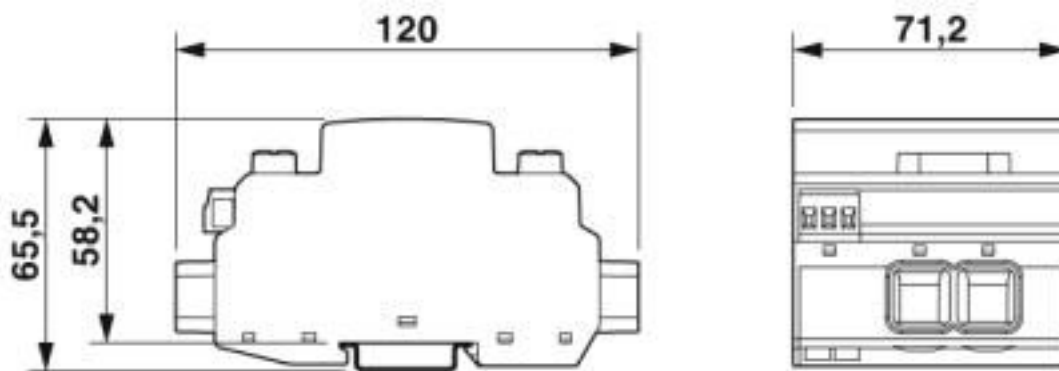
Drawings

Circuit diagram



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Dimensional drawing



Classifications

eCl@ss

eCl@ss 10.0.1	27130802
eCl@ss 4.0	27130800
eCl@ss 4.1	27130800
eCl@ss 5.0	27130800
eCl@ss 5.1	27130800
eCl@ss 6.0	27130800
eCl@ss 7.0	27130802
eCl@ss 8.0	27130802
eCl@ss 9.0	27130802

ETIM

ETIM 3.0	EC000941
ETIM 4.0	EC000381
ETIM 5.0	EC000381
ETIM 6.0	EC000381
ETIM 7.0	EC000381

UNSPSC

UNSPSC 13.2	39121620
UNSPSC 18.0	39121620
UNSPSC 19.0	39121620
UNSPSC 20.0	39121620
UNSPSC 21.0	39121620

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

Accessories

Accessories

Marker pen

Marker pen - X-PEN 0,35 - 0811228



Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

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