

VAL-MB-T2-750DC-2+V-R - Type 2 surge arrester



1376160

<https://www.phoenixcontact.com/us/products/1376160>

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Surge protective device, acc. to type 2/class II, for grounded, unipolar DC supply systems up to 800 V DC, for DIN rail mounting, with remote indication contact.

Your advantages

- Safe operation of DC voltage supply systems thanks to reliable protection against surge voltages
- For use in grounded, unipolar DC supply systems
- Highly versatile with a maximum altitude up to 6000 m (amsl)
- Space-saving installation, thanks to the compact design
- Excellent level of information provided by mechanical/visual status indicator and remote indication contact

Commercial data

Item number	1376160
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	CL1391
GTIN	4063151740313
Weight per piece (including packing)	451 g
Weight per piece (excluding packing)	451 g
Country of origin	DE

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Technical data

Product properties

Product type	Surge arrester
IEC test classification	T2
EN type	T2
IEC power supply system	DC
Type	DIN rail module, one-piece
Number of positions	2
Surge protection fault message	Optical, remote indicator contact
Number of ports	One

Insulation characteristics

Overvoltage category	III
Pollution degree	2

Electrical properties

Indicator/remote signaling

Connection name	Remote fault indicator contact
Switching function	Changeover contact
Operating voltage	5 V AC ... 250 V AC (Altitude ≤ 2000 m (amsll)) 5 V DC ... 30 V DC (200 mA DC)
Operating current	5 mA AC ... 1.5 A AC 5 mA DC ... 1 A 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
Conductor cross-section AWG	14 ... 2

Remote fault indicator contact

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 rigid	0.14 mm ² ... 1.5 mm ²
Conductor cross-section AWG	28 ... 16

Dimensions

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Dimensional drawing	
Width	71.2 mm
Height	120 mm
Depth	65.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	4 Div.

Material specifications

Color	gray (RAL 7042)
Flammability rating according to UL 94	V-0
CTI value of material	600
Insulating material	PA 6.6 PBT
Housing material	PA 6.6

Protective circuit

Mode of protection	(DC+) - (DC-) (DC+/DC-) - PE
Direction of action	(L+)-PE & (L-)-PE & (L+)-(L-)
Nominal voltage U_N	750 V DC
Maximum continuous operating voltage U_C	800 V DC
Rated load current I_L	40 A
Protective conductor current I_{PE}	$\leq 70 \mu\text{A DC}$ $\leq 500 \mu\text{A AC}$
Standby power consumption P_C	$\leq 70 \text{ mVA}$
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
Short-circuit current rating I_{SCCR}	min. 1 kA DC (with maximum backup fuse 40 A gG/1200 V DC) max. 4 kA DC (with maximum backup fuse 40 A gG/1200 V DC)
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) $\leq 4 \text{ kV}$ (at 40 kA)
Response time t_A	$\leq 25 \text{ ns}$
Max. backup fuse with branch wiring	40 A (gG / 1200 V DC)

Environmental and real-life conditions

Ambient conditions

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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 ±X, ±Y, ±Z)
Vibration (operation)	5g (5 - 500 Hz/2.5 h/X, Y, Z)

Standards and regulations

Standards/specifications	IEC 61643-31
Note	2018
Standards/specifications	EN 61643-31
Note	2019

Mounting

Mounting type	DIN rail: 35 mm
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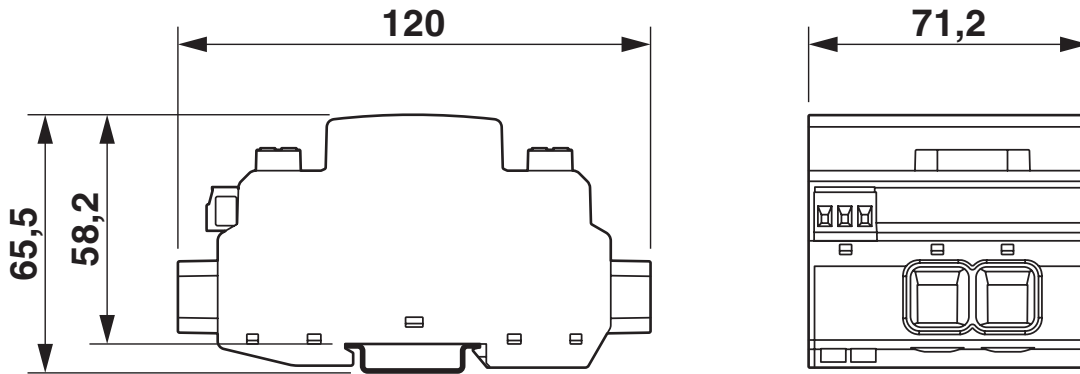


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Drawings

Dimensional drawing



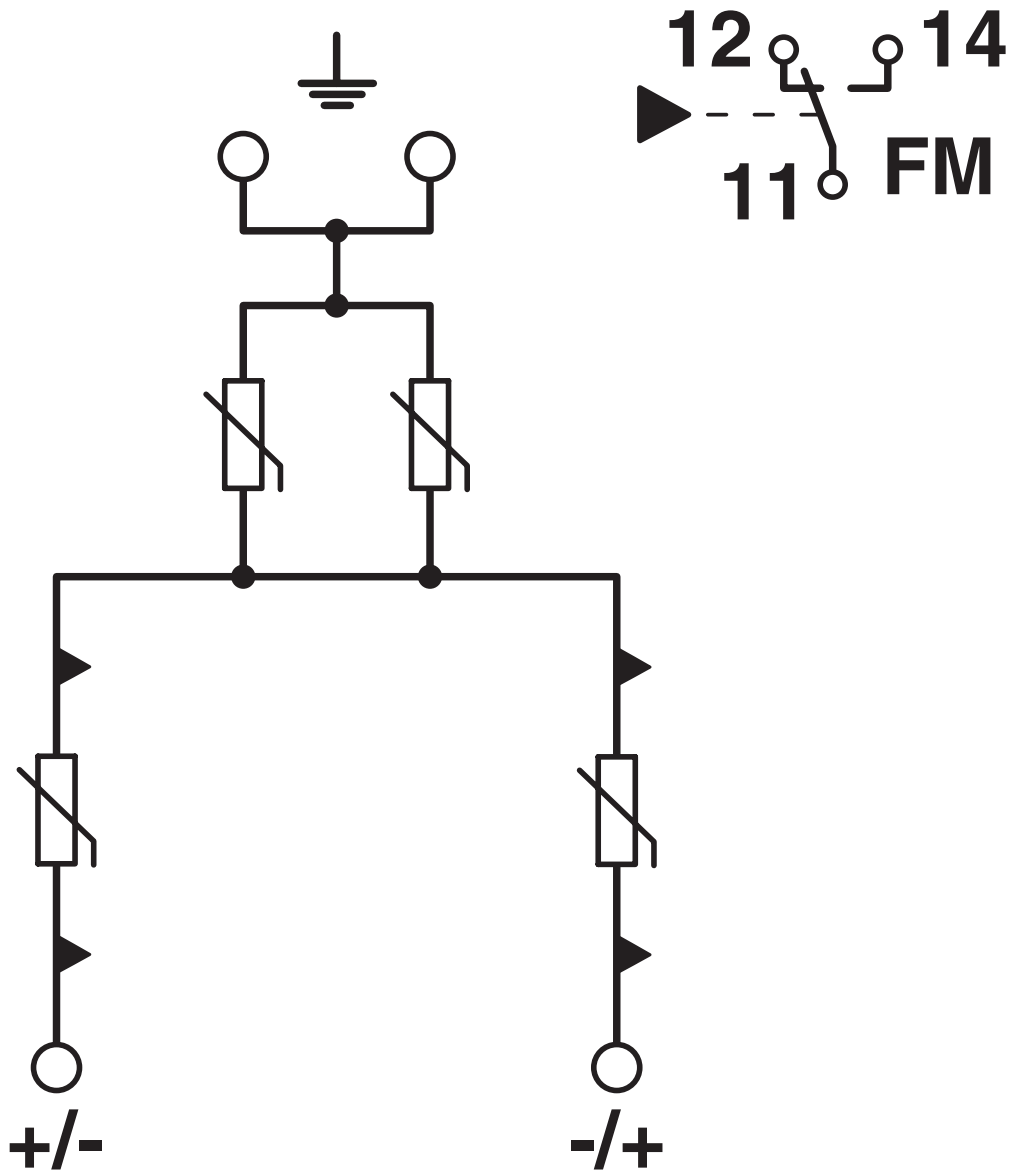
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Circuit diagram



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Classifications

ECLASS

ECLASS-13.0	27171302
ECLASS-15.0	27171302

ETIM

ETIM 10.0	EC000941
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UNSPSC

UNSPSC 21.0	39121600
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

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