

VAL-MB-T2 1500DC-PV/2+V - Type 2 surge arrester



2905647

<https://www.phoenixcontact.com/us/products/2905647>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Surge protective device for 2-pos. isolated and grounded 1,500 V DC PV voltage systems, for DIN rail mounting, temperature-monitored protective elements, status message on the module.

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	2905647
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	CL1341
GTIN	4046356984225
Weight per piece (including packing)	383.6 g
Weight per piece (excluding packing)	383.6 g
Country of origin	DE

VAL-MB-T2 1500DC-PV/2+V - Type 2 surge arrester



2905647

<https://www.phoenixcontact.com/us/products/2905647>

Technical data

Notes

General

Note	The product is also suitable for use in photovoltaic systems with max. short-circuit current $I_{SCPV} = 15 \text{ kA}$ (in accordance with EN 50539-11: 2013).
------	---

Product properties

Product type	PV arrester
Product family	VALVETRAB MB
IEC test classification	PV II PV T2
EN type	T2
IEC power supply system	DC
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	OCFM (Open-Circuit Failure Mode)
Surge protection fault message	optical
Number of ports	One

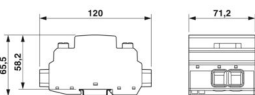
Insulation characteristics

Pollution degree	2
------------------	---

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 (incl. DIN rail 7.5 mm)
Horizontal pitch	4 Div.

VAL-MB-T2 1500DC-PV/2+V - Type 2 surge arrester



2905647

<https://www.phoenixcontact.com/us/products/2905647>

Material specifications

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

Mechanical properties

Mechanical data

Open side panel	No
-----------------	----

Protective circuit

Mode of protection	(L+) - (L-)
	(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}	$\leq 55 \mu\text{A DC}$
	$\leq 430 \mu\text{A AC}$
Standby power consumption P_C	$\leq 85 \text{ mVA}$
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	$\leq 4.5 \text{ kV}$
Residual voltage U_{res}	$\leq 4.5 \text{ kV}$ (at I_n)
	$\leq 3.3 \text{ kV}$ (at 3 kA)
	$\leq 3.6 \text{ kV}$ (at 6.25 kA)
	$\leq 3.8 \text{ kV}$ (at 10 kA)
	$\leq 4.2 \text{ kV}$ (at 15 kA)
	$\leq 5.4 \text{ kV}$ (at 40 kA)
Response time t_A	$\leq 25 \text{ ns}$

PV protective circuit

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

Protective circuit DC voltage side (DC)

Maximum continuous operating voltage U_{CPV}	1500 V DC
Short-circuit current rating I_{SCPV}	2000 A
Open-circuit voltage U_{OCSTC}	$\leq 1250 \text{ V DC}$
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

VAL-MB-T2 1500DC-PV/2+V - Type 2 surge arrester



2905647

<https://www.phoenixcontact.com/us/products/2905647>

Insulation resistance R_{iso}	> 5 G Ω (at 500 V DC)
Nominal discharge current I_n (8/20) μ s	20 kA
Rated load current I_L	50 A
Continuous operating current I_{CPV}	< 55 μ A
Maximum continuous operating voltage U_{CPV}	1500 V DC
Short-circuit current rating I_{SCPV}	2000 A
Residual voltage U_{res}	\leq 4.5 kV (at I_n) \leq 3.3 kV (at 3 kA) \leq 3.6 kV (at 6.25 kA) \leq 3.8 kV (at 10 kA) \leq 4.2 kV (at 15 kA) \leq 5.4 kV (at 40 kA)
Protective conductor current I_{PE}	\leq 55 μ A DC \leq 430 μ A AC
Voltage protection level U_p	\leq 4.5 kV
Standby power consumption P_C	\leq 85 mVA

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	\leq 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 61643-31
Note	2019
Standards/specifications	IEC 61643-31
Note	2018

Mounting

Mounting type	DIN rail: 35 mm
---------------	-----------------

VAL-MB-T2 1500DC-PV/2+V - Type 2 surge arrester

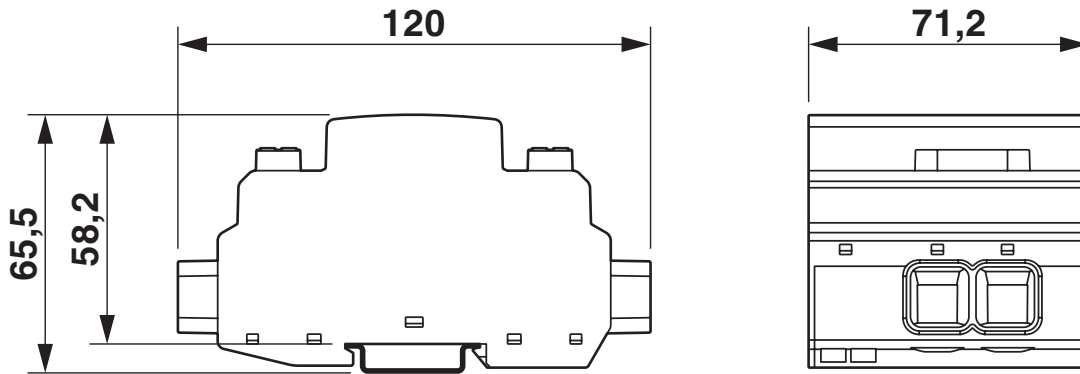


2905647

<https://www.phoenixcontact.com/us/products/2905647>

Drawings

Dimensional drawing



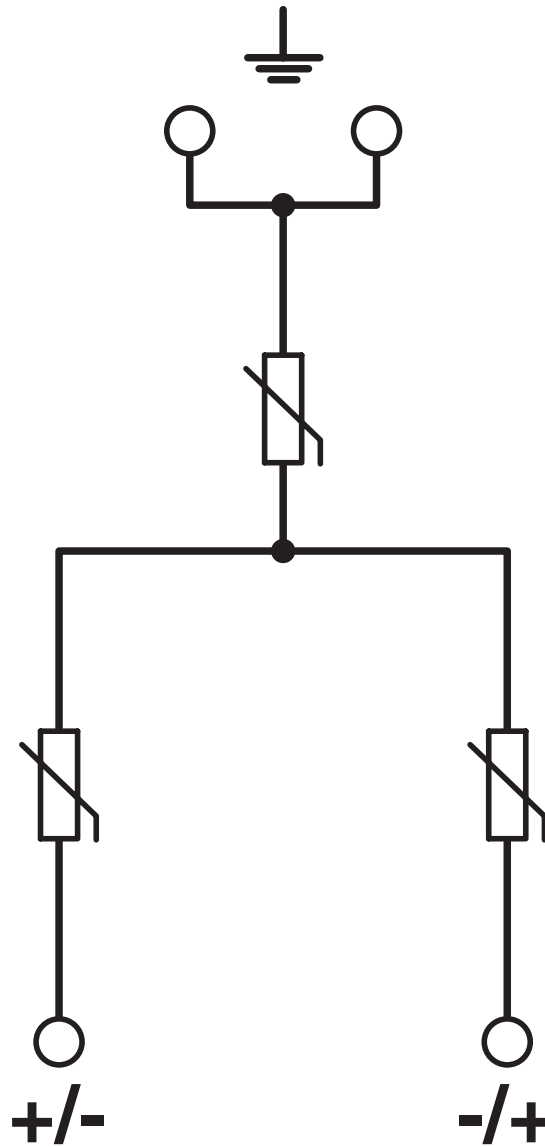
VAL-MB-T2 1500DC-PV/2+V - Type 2 surge arrester

2905647

<https://www.phoenixcontact.com/us/products/2905647>



Circuit diagram



VAL-MB-T2 1500DC-PV/2+V - Type 2 surge arrester



2905647

<https://www.phoenixcontact.com/us/products/2905647>

Approvals

🔗 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2905647>



IECEE CB Scheme

Approval ID: NL-81007

CCA

Approval ID: NTR-NL 7938



KEMA-KEUR

Approval ID: 71-127691

VAL-MB-T2 1500DC-PV/2+V - Type 2 surge arrester



2905647

<https://www.phoenixcontact.com/us/products/2905647>

Classifications

ECLASS

ECLASS-13.0

27171402

ETIM

ETIM 9.0

EC000941

UNSPSC

UNSPSC 21.0

39121600

VAL-MB-T2 1500DC-PV/2+V - Type 2 surge arrester



2905647

<https://www.phoenixcontact.com/us/products/2905647>

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
---	--------------------

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%
-------------------------------------	----------------------------

Phoenix Contact 2026 © - all rights reserved
<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com