

VAL-SPP-T2-1500DC-PV-2+V-UT - Type 2 surge arrester



1466774

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Surge arrester, in accordance with type 2/Class II, for 2-pos. insulated and grounded 1500 V DC PV systems, for DIN rail mounting, 3-pos. base element, three pluggable temperature-monitored protective elements, status message on each plug.

Your advantages

- Easy and safe installation with forward-thinking handling and safety features
- Reliable system protection with maximum performance and endurance
- Can be used in a wide range of applications due to the optimized design and broad portfolio
- Simple planning due to comprehensive digital data and selectors

Commercial data

Item number	1466774
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL1389
Product key	CL1389
GTIN	4063151862602
Weight per piece (including packing)	345 g
Weight per piece (excluding packing)	316.3 g
Customs tariff number	85354000
Country of origin	DE

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Technical data

Notes

General

Note	Depending on the installation height, additional minimum lateral distances to grounded, conductive surfaces may need to be observed. See the table in the download area under the item Packing slip in the installation notes.
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Product properties

Product type	PV arrester
Product family	VAL-SPP
IEC test classification	PV II
	PV T2
EN type	T2
IEC power supply system	DC
Type	DIN rail module, two-section, divisible
Number of positions	3
Installation location	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

Insulation characteristics

Overvoltage category	III
Pollution degree	2

Connection data

Connection method	Screw connection
Screw thread	M5
Tightening torque	2.5 Nm ... 3 Nm
Stripping length	12 mm
Conductor cross section flexible	1.5 mm² ... 16 mm²
	2x 1.5 mm² ... 6 mm² (2 conductors with the same cross-section)
Conductor cross section rigid	1.5 mm² ... 25 mm²
	2x 1.5 mm² ... 6 mm² (2 conductors with the same cross-section)
Conductor cross section AWG	15 ... 4
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	1.5 mm² ... 6 mm²
Conductor cross section, flexible, with ferrule, with plastic sleeve	1.5 mm² ... 16 mm²
	2x 1.5 mm² ... 6 mm² (2 conductors with the same cross-section)
Conductor cross section flexible, with ferrule without plastic sleeve	1.5 mm² ... 16 mm²

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2x 1.5 mm² ... 6 mm² (2 conductors with the same cross-section)

Dimensions

Dimensional drawing	
Width	53.4 mm
Height	96.6 mm
Depth	71.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	3 Div.

Material specifications

Color	gray (RAL 7042) light gray (RAL 7035)
Flammability rating according to UL 94	V-0
CTI value of material	600
Insulating material	PA 6.6-FR 20 % GF PBT
Material group	I
Housing material	PA 6.6-FR 20 % GF PBT

Mechanical properties

Mechanical data

Open side panel	No
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Protective circuit

Mode of protection	(DC+) - (DC-) (DC+) - PE (DC-) - PE
Residual current I_{PE}	$\leq 350 \mu A$ AC $\leq 100 \mu A$ DC
Standby power consumption P_C	≤ 180 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	≤ 5.7 kV
Residual voltage U_{res}	≤ 5.7 kV (at I_n) ≤ 5 kV (at 10 kA) ≤ 4.8 kV (at 5 kA) ≤ 4.5 kV (at 3 kA)
Response time t_A	≤ 25 ns

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PV protective circuit

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

Protective circuit DC voltage side (DC)

Open circuit voltage U_{OCSTC}	1500 V DC
Maximum discharge current I_{max} (8/20) μs	40 kA
Response time t_A	≤ 25 ns
Total discharge current I_{Total} (8/20) μs	40 kA
Insulation resistance R_{iso}	> 5 M Ω (at 500 V DC)
Nominal discharge current I_n (8/20) μs	20 kA
Continuous operating current I_{CPV}	≤ 100 μA DC
Maximum continuous operating voltage U_{CPV}	1800 V DC
Short-circuit current rating I_{SCPV}	15000 A
Residual voltage U_{res}	≤ 5.7 kV (at I_n)
	≤ 5 kV (at 10 kA)
	≤ 4.8 kV (at 5 kA)
	≤ 4.5 kV (at 3 kA)
Residual current I_{PE}	≤ 350 μA AC
	≤ 100 μA DC
Voltage protection level U_p	≤ 5.7 kV
Standby power consumption P_C	≤ 180 mVA

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20C (Installed)
Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Ambient temperature (assembly)	-5 °C ... 50 °C
Altitude	≤ 4000 m (amsl)
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	25g (Half-sine / 11 ms / 3x $\pm X$, $\pm Y$, $\pm Z$)
Vibration (operation)	5g (5-500 Hz/2.5 h/XYZ)

Standards and regulations

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

Mounting

Mounting type	DIN rail: 35 mm
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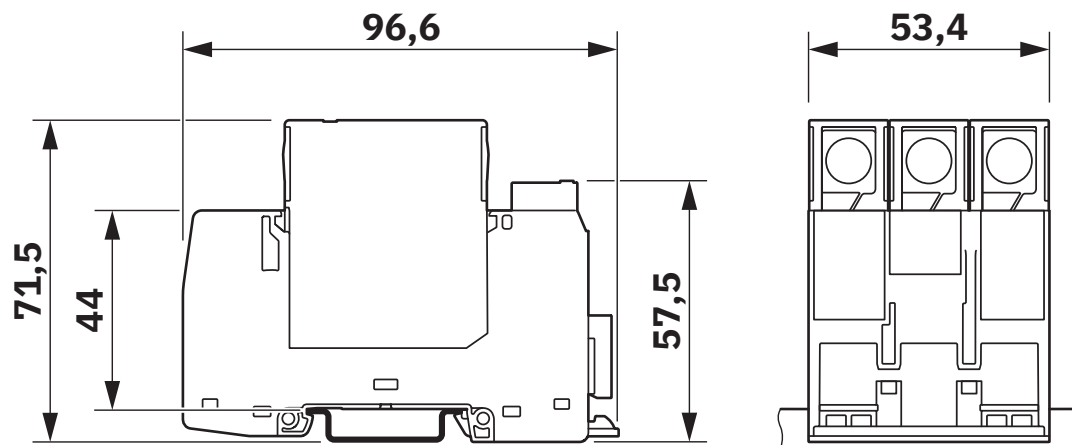
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Drawings

Dimensional drawing

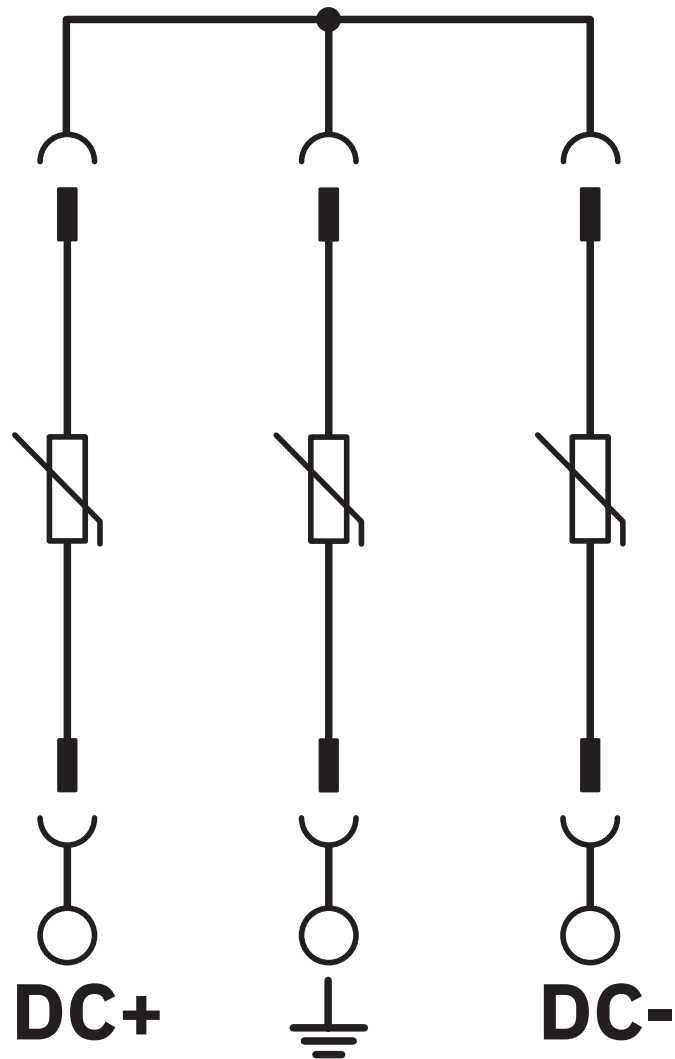


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Circuit diagram



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Approvals

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IECEE CB Scheme

Approval ID: NL-109183

CCA

Approval ID: NTR NL-8030



KEMA-KEUR

Approval ID: 71-133324

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Classifications

ECLASS

ECLASS-13.0	27171402
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ETIM

ETIM 9.0	EC000941
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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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