VAL-SPP-T1-1500DC-PV-2+V-UT - Surge arrester

1784479

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Surge arrester for 2-pos. insulated and grounded 1500 V DC PV systems, for DIN rail mounting, 3-pos. base element, three pluggable protective elements, two of them temperature monitored, status message on + and - plugs.

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	1784479
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL11E1
Product key	CL11E1
GTIN	4067923402218
Weight per piece (including packing)	551 g
Weight per piece (excluding packing)	485.31 g
Customs tariff number	85354000
Country of origin	DE

Technical data

Product properties

Product type	PV arrester
IEC test classification	PV I / II
EN type	PV T1 / T2
IEC power supply system	DC
Type	DIN rail module, two-section, divisible
Environment	Indoor
Installation location of the disconnect device	Internal
Accessibility	Accessible
End-of-life mode	OCFM (Open-Circuit Failure Mode)
Surge protection fault message	optical
Number of ports	One

Insulation characteristics

Overvoltage category	III
Pollution degree (Main circuit)	2

Electrical properties

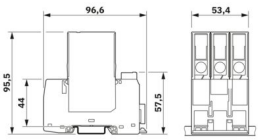
Maximum power dissipation for nominal condition	≤ 150 mVA

Connection data

protection circuit (DC+, DC-, PE)

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

Dimensions

Dimensional drawing	
Width	53.4 mm
Height	96.6 mm
Depth	95.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	3 HP

Material specifications

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

Mechanical properties

Mechanical data

Open side panel	No

Protective circuit

Mode of protection	(DC+) - (DC-)
	(DC+) - PE
	(DC-) - PE
Max. continuous voltage U_{CPV}	1500 V DC
Open-circuit voltage U_{OCSTC}	1250 V DC
Protective conductor current I_{PE}	≤ 700 µA AC
	≤ 100 µA DC
Continuous current I_{CPV}	≤ 100 µA DC
Maximum power dissipation for nominal condition	≤ 150 mVA
Nominal discharge current I_n (8/20) µs	20 kA
Max. discharge current I_{max} (8/20)µs	40 kA
Impulse discharge current I_{imp} (10/350) µs	6.25 kA (3.1 As / 9.8 kJ/Ω)
Total discharge current I_{Total} (8/20) µs	60 kA
Total discharge current I_{Total} (10/350) µs	12.5 kA
Short-circuit current rating I_{SCPV}	15000 A
Voltage protection level U_p	≤ 4.5 kV
Residual voltage U_{res}	≤ 4.5 kV (at I_n)
	≤ 3.9 kV (at 10 kA)

	≤ 3.6 kV (at 5 kA)
	≤ 3.3 kV (at 3 kA)
Response time t_A	≤ 25 ns

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20C (under touch protection cover)
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 ±X, ±Y, ±Z)
Vibration (operation)	5g (5-500 Hz/2.5 h/XYZ)

Standards and regulations

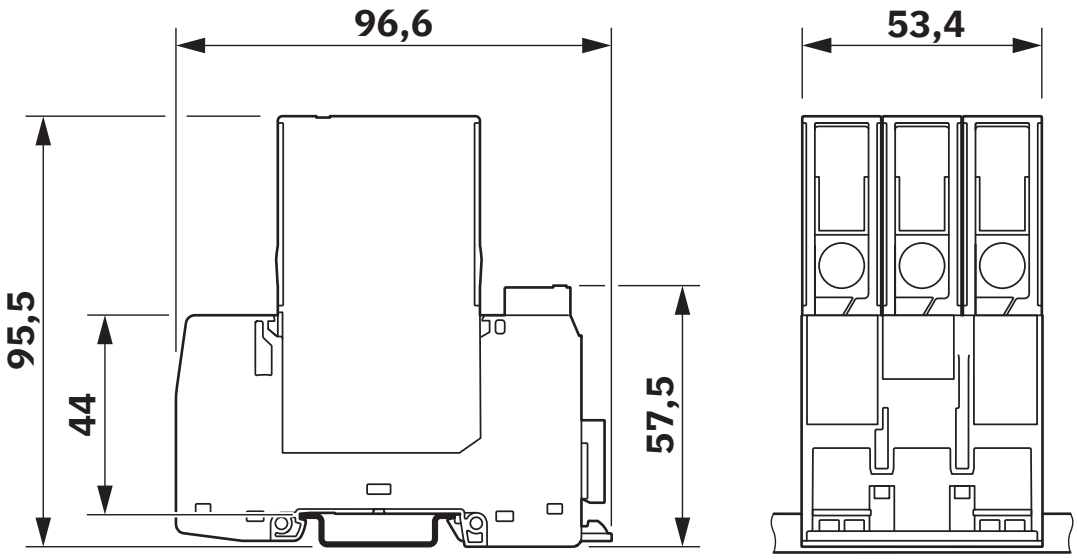
Standards/specifications	IEC 61643-31
Note	2018
Standards/specifications	EN 61643-31
Note	2019 + AC: 2022

Mounting

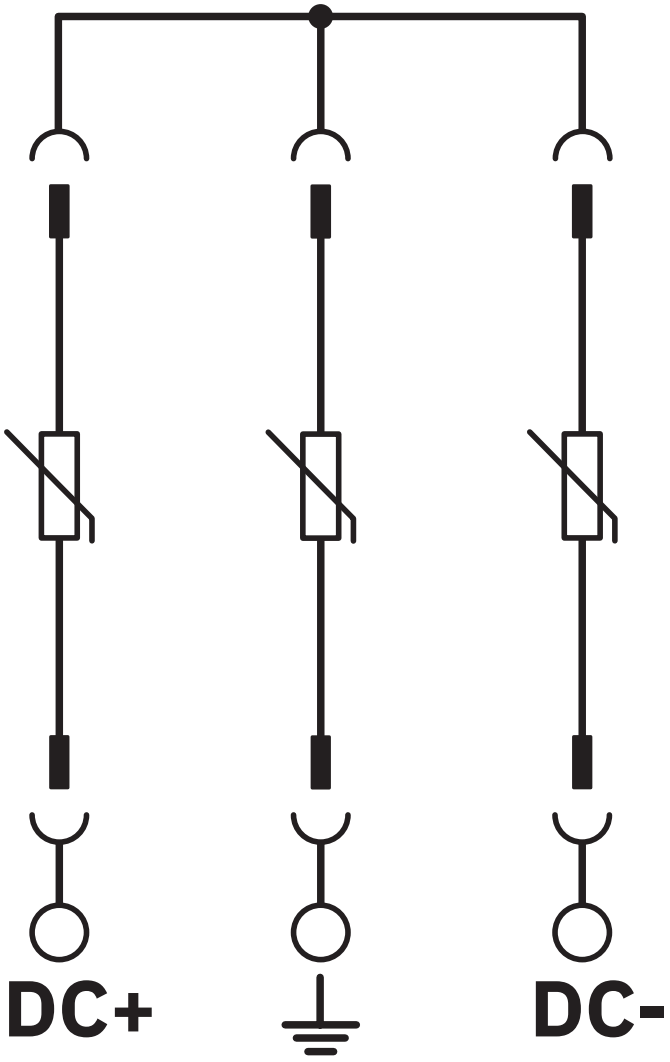
Mounting type	DIN rail: 35 mm

Drawings

Dimensional drawing



Circuit diagram



Approvals

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DEKRA
Approval ID: 31-172928

Classifications

ECLASS

ECLASS-13.0	27171401
ECLASS-15.0	27171401

ETIM

ETIM 10.0	EC000381

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%

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