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VAL-SPP-T2-1000DC-PV-2+V-UT-R - Type 2 surge arrester

1466773

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Surge arrester, in accordance with type 2/Class II, for 2-pos. insulated and grounded 1000 V DC PV systems, for DIN rail mounting, 3-pos. base element with remote indication contact, 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	1466773
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL1389
Product key	CL1389
GTIN	4063151861568
Weight per piece (including packing)	338.5 g
Weight per piece (excluding packing)	309.8 g
Customs tariff number	85363010
Country of origin	DE

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Technical data

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, remote indicator contact

Insulation characteristics

Overvoltage category	III
Pollution degree	2

Electrical properties

Indicator/remote signaling

Connection name	Remote fault indicator contact
Switching function	Changeover contact
Max. required back-up fuse	1 A (gG)
AC operating voltage	5 V AC ... 250 V AC (≤2000 m (amsl))
	5 V AC ... 150 V AC (≤ ⏚⬇⬇⬇ m (amsl))
AC operating current	5 mA AC ... 1 A AC
DC operating voltage	30 V DC (≤ ⏚⬇⬇⬇ m (amsl))
DC operating current	1 A DC
DC operating voltage	125 V DC (≤ ⏚⬇⬇⬇ m (amsl))
DC operating current	200 mA DC
Insulation type	The product has double/reinforced insulation between the main and auxiliary circuit.

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)

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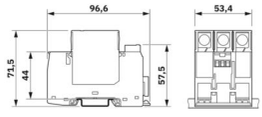
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Conductor cross section rigid	1.5 mm² ... 25 mm²
	2x 1.5 mm² ... 6 mm² (2 conductors with the same cross-section)
Conductor cross section AWG	15 ... 4
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	1.5 mm² ... 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
	2x 1.5 mm² ... 6 mm² (2 conductors with the same cross-section)

Remote fault indicator contact

Connection method	Screw connection
Screw thread	M3
Tightening torque	0.5 Nm ... 0.6 Nm
Stripping length	7 mm
Conductor cross section flexible	0.25 mm² ... 1.5 mm²
Conductor cross section rigid	0.25 mm² ... 1.5 mm²
Conductor cross section AWG	24 ... 16
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 1.5 mm²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm² ... 0.75 mm²

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

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Mechanical data

Open side panel	No

Protective circuit

Mode of protection	(DC+) - (DC-)
	(DC+) - PE
	(DC-) - PE
Residual current I_{PE}	≤ 350 µA AC
	≤ 100 µA DC
Standby power consumption P_C	≤ 120 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	≤ 4.2 kV
Residual voltage U_{res}	≤ 4.2 kV (at I_n)
	≤ 3.6 kV (at 10 kA)
	≤ 3.2 kV (at 5 kA)
	≤ 3 kV (at 3 kA)
Response time t_A	≤ 25 ns

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}	1000 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 MΩ (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}	1200 V DC
Short-circuit current rating I_{SCPV}	15000 A
Residual voltage U_{res}	≤ 4.2 kV (at I_n)
	≤ 3.6 kV (at 10 kA)
	≤ 3.2 kV (at 5 kA)
	≤ 3 kV (at 3 kA)
Residual current I_{PE}	≤ 350 µA AC
	≤ 100 µA DC
Voltage protection level U_p	≤ 4.2 kV
Standby power consumption P_C	≤ 120 mVA

Environmental and real-life conditions

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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	≤ 5000 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	EN 61643-31
Note	2019
Standards/specifications	IEC 61643-31
Note	2018

Mounting

Mounting type	DIN rail: 35 mm

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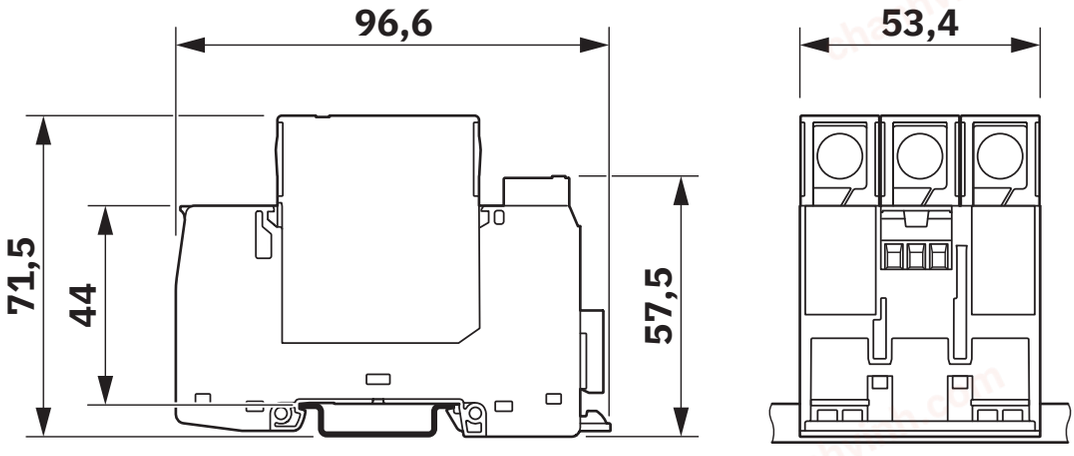
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Drawings

Dimensional drawing



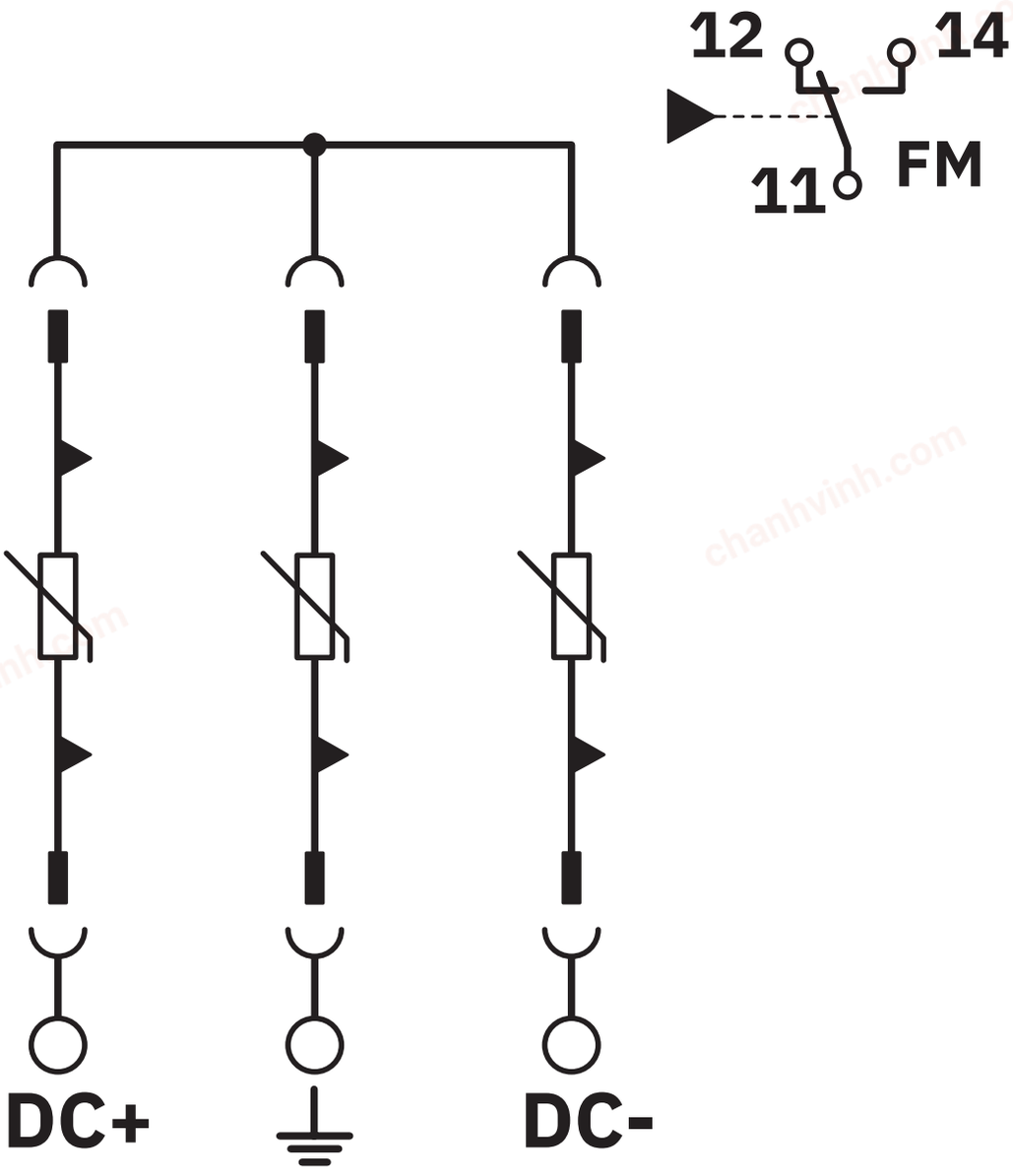
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Circuit diagram



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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

ETIM

ETIM 9.0	EC000941

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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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