

VAL-SPP-T2-275-1+1-UT - Type 2 surge arrester



1466211

<https://www.phoenixcontact.com/de/produkte/1466211>

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Plug-in surge arrester, in accordance with Type 2/Class II, for 1-phase power supply networks with separate N and PE (3-conductor system: L1, N, PE).

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	1466211
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	K1 - Überspannungsschutz
Product key	CL1381
GTIN	4063151858193
Weight per piece (including packing)	251 g
Weight per piece (excluding packing)	226,6 g
Customs tariff number	85363030
Country of origin	DE

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Technical data

Notes

General

Note	For pollution degree 3 and wiring with fork cable lugs, an additional minimum lateral distance of 1 mm to earthed conductive surfaces must be maintained for cross-sections $\geq 16 \text{ mm}^2$. No additional lateral distances are required for pollution degree 2.
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Product properties

Product type	Surge arrester
IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN-S
	TT
Type	Base element, DIN rail mounting
Number of positions	2
Surge protection fault message	optical

Data management status

Article revision	01
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Insulation characteristics

Overvoltage category	III
Pollution degree	3

Electrical properties

Nominal frequency f_N	50 Hz (60 Hz)
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Connection data

Connection method	Screw connection
Screw thread	M5
Tightening torque	3 Nm ... 3.5 Nm
Stripping length	18 mm
Conductor cross section flexible	1.5 mm ² ... 35 mm ² (without ferrule) 2x 1.5 mm ² ... 16 mm ² (2 conductors with the same cross-section)
Conductor cross section rigid	1.5 mm ² ... 50 mm ² 2x 1.5 mm ² ... 16 mm ² (2 conductors with the same cross-section)
Conductor cross section AWG	15 ... 2
Conductor cross section, flexible, with ferrule, with plastic sleeve	1.5 mm ² ... 35 mm ² 2x 1.5 mm ² ... 10 mm ² (2 conductors with the same cross-section)

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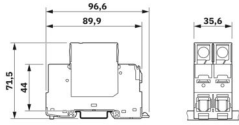


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	section)
Conductor cross section flexible, with ferrule without plastic sleeve	1.5 mm ² ... 25 mm ²
	2x 1.5 mm ² ... 16 mm ² (2 conductors with the same cross-section)
Connection method	Fork-type cable lug
Conductor cross section flexible	1.5 mm ² ... 25 mm ²

Dimensions

Dimensional drawing	
Width	35.6 mm
Height	96.6 mm
Depth	71.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	2 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

Protective circuit

Mode of protection	L-N
	L-PE
	N-PE
Nominal voltage U_N	240/415 V AC ± 10 % (TN-S)
	240/415 V AC ± 10 % (TT)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous operating voltage U_C (L-N)	275 V AC
Maximum continuous operating voltage U_C (L-PE)	275 V AC
Maximum continuous operating voltage U_C (N-PE)	305 V AC
Rated load current I_L	80 A (25 mm ²)
Residual current I_{PE}	$\leq 5 \mu A$
Standby power consumption P_C	≤ 120.00 mVA
Nominal discharge current I_n (8/20) μs	20 kA
Maximum discharge current I_{max} (8/20) μs	40 kA

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Total discharge current I_{total} (8/20) μs	40 kA
Follow current interrupt rating I_{fi} (N-PE)	100 A
Short-circuit current rating I_{SCCR}	50 kA
Voltage protection level U_{p} (L-N)	$\leq 1.35 \text{ kV}$
Voltage protection level U_{p} (L-PE)	$\leq 1.6 \text{ kV}$
Voltage protection level U_{p} (N-PE)	$\leq 1.5 \text{ kV}$
Residual voltage U_{res} (L-N)	$\leq 1.35 \text{ kV}$ (at I_{n})
	$\leq 1.1 \text{ kV}$ (at 10 kA)
	$\leq 1 \text{ kV}$ (at 5 kA)
	$\leq 0.9 \text{ kV}$ (at 3 kA)
Residual voltage U_{res} (L-PE)	$\leq 1.6 \text{ kV}$ (at I_{n})
	$\leq 1.3 \text{ kV}$ (at 10 kA)
	$\leq 1.1 \text{ kV}$ (at 5 kA)
	$\leq 1 \text{ kV}$ (at 3 kA)
Residual voltage U_{res} (N-PE)	$\leq 0.5 \text{ kV}$ (at I_{n})
	$\leq 0.4 \text{ kV}$ (at 10 kA)
	$\leq 0.3 \text{ kV}$ (at 5 kA)
	$\leq 0.1 \text{ kV}$ (at 3 kA)
TOV behavior at U_{T} (L-N)	350 V AC (5 s / withstand mode)
	460 V AC (120 min / safe failure mode)
TOV behavior at U_{T} (L-PE)	1464 V AC (200 ms/withstand mode)
TOV behavior at U_{T} (N-PE)	1200 V AC (200 ms / withstand mode)
Response time t_{A} (L-N)	$\leq 25 \text{ ns}$
Response time t_{A} (L-PE)	$\leq 100 \text{ ns}$
Response time t_{A} (N-PE)	$\leq 100 \text{ ns}$
Max. backup fuse with V-type through wiring	80 A (gG)
Max. backup fuse with branch wiring	315 A (gG)

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	$\leq 5000 \text{ m}$ (amsl)
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	25g (Half-sine / 11 ms / 3x $\pm X$, $\pm Y$, $\pm Z$)
Vibration (operation)	5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

Standards and regulations

Standards/specifications	IEC 61643-11
Note	2011
Standards/specifications	EN 61643-11
Note	2012 + A11:2018

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Mounting

Mounting type	DIN rail: 35 mm
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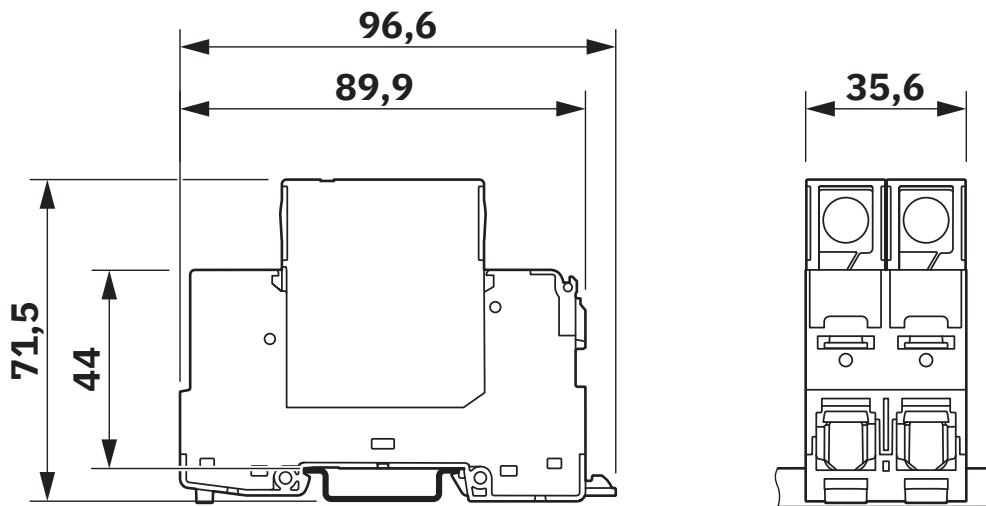
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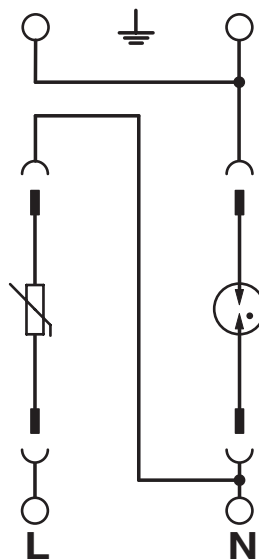
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Drawings

Dimensional drawing



Circuit diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/de/produkte/1466211>



IECEE CB Scheme

Approval ID: NL-109184

CCA

Approval ID: NTR NL-8052



KEMA-KEUR

Approval ID: 71-138153 REV.2

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Classifications

ECLASS

ECLASS-11.0	27130805
ECLASS-13.0	27171202

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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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Accessories

EMG-GKS 12 - Marking material

2947035

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Device marking label, width: 12 mm, area: 12 x 8 mm, e.g. for EML(10x7) R adhesive marking material

EML (10X7)R - Label

0816663

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Label, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, lettering field size: 10 x 7 mm, Number of individual labels: 10000

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SPP-R-2 - Remote signaling module

1466699

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Optional remote signaling module for 2-pos. SPDs and base elements from the VALVETRAB SPP product family.

VAL-SPP-T2-275-P - Type 2 surge protection plug

1466685

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Type 2 surge protection plug for VAL-SPP base element, thermally monitored, optical red/green status indicator.

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VAL-SPP-T2-NPE-P - Type 2 surge protection plug

1466689

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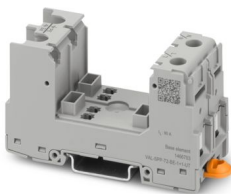


Type 2 surge protection plug, with N-PE total current spark gap for VAL-SPP base element, thermal monitoring, optical red/green status indicator.

VAL-SPP-T2-BE-1+1-UT - Type 2 surge protection base element

1466703

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Base element for type 2 arresters from the VAL-SPP product family. Version for 1-phase power supplies with separate cable routing of N and PE.

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