

# VAL-SPP-T2-335-1+0-UT-R - Type 2 surge arrester



1466578

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Plug-in surge protective device, in accordance with type 2/class II, for 1-phase power supply networks with combined installation of PE and N in one conductor (2-conductor system: L, N/PEN), with remote indication contact.

## 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	1466578
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL1381
Product key	CL1381
GTIN	4063151857691
Weight per piece (including packing)	153.2 g
Weight per piece (excluding packing)	153.2 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
Product family	VAL-SPP
IEC test classification	II T2
EN type	T2
IEC power supply system	TN TT
Type	DIN rail module, two-section, divisible
Number of positions	1
Surge protection fault message	Optical, remote indicator contact

#### Insulation characteristics

Overvoltage category	III
Pollution degree	3

### Electrical properties

Maximum power dissipation for nominal condition	$\leq 150 \text{ mVA}$
Nominal frequency $f_N$	50 Hz (60 Hz)

#### 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 ( $\leq 2000 \text{ m (amsl)}$ at pollution degree 2) 5 V AC ... 150 V AC ( $\leq 5000 \text{ m (amsl)}$ )
AC operating current	5 mA AC ... 1 A AC
DC operating voltage	30 V DC ( $\leq 5000 \text{ m (amsl)}$ )
DC operating current	1 A DC
DC operating voltage	125 V DC ( $\leq 5000 \text{ m (amsl)}$ )
DC operating current	200 mA DC
Insulation type	The product has double/reinforced insulation between the main and auxiliary circuit.

### Connection data

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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 <sup>2</sup> ... 35 mm <sup>2</sup> (without ferrule) 2x 1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup> (2 conductors with the same cross-section)
Conductor cross-section rigid	1.5 mm <sup>2</sup> ... 50 mm <sup>2</sup> 2x 1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup> (2 conductors with the same cross-section)
Conductor cross-section AWG	15 ... 2
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross-section, flexible, with ferrule, with plastic sleeve	1.5 mm <sup>2</sup> ... 35 mm <sup>2</sup> 2x 1.5 mm <sup>2</sup> ... 10 mm <sup>2</sup> (2 conductors with the same cross-section)
Conductor cross-section flexible, with ferrule without plastic sleeve	1.5 mm <sup>2</sup> ... 25 mm <sup>2</sup> 2x 1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup> (2 conductors with the same cross-section)
Connection method	Fork-type cable lug
Conductor cross-section flexible	1.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>

## Remote fault indicator contact

Connection method	Push-in connection
Stripping length	8 mm
Conductor cross-section flexible	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section rigid	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 16
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section flexible, with ferrule without plastic sleeve	0.25 mm <sup>2</sup> ... 0.75 mm <sup>2</sup>

## Dimensions

Dimensional drawing	
Width	17.8 mm
Height	110.8 mm
Depth	71.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	1 Div.

## Material specifications

Color	gray (RAL 7042) light gray (RAL 7035)
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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-PEN
Nominal voltage $U_N$	240 V AC $\pm 10\%$ (TN) 240 V AC $\pm 10\%$ (TT)
Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous operating voltage $U_C$	335 V AC
Rated load current $I_L$	80 A (25 mm <sup>2</sup> )
Nominal discharge current $I_n$ (8/20) $\mu$ s	20 kA
Maximum discharge current $I_{max}$ (8/20) $\mu$ s	40 kA
Short-circuit current rating $I_{SCCR}$	50 kA
Voltage protection level $U_p$	$\leq 1.5$ kV
Residual voltage $U_{res}$	$\leq 1.5$ kV (at $I_n$ ) $\leq 1.3$ kV (at 10 kA) $\leq 1.2$ kV (at 5 kA) $\leq 1.1$ kV (at 3 kA)
TOV behavior at $U_T$	415 V AC (5 s / withstand mode) 460 V AC (120 min / safe failure mode)
Response time $t_A$	$\leq 25$ ns
Max. backup fuse with V-type through wiring	80 A (gG)
Max. backup fuse with branch wiring	315 A (gG)

## Additional technical data

Short-circuit current rating $I_{SCCR}$	100 kA
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## 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	$\leq 5000$ 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)

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## Standards and regulations

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

## Mounting

Mounting type	DIN rail: 35 mm
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# VAL-SPP-T2-335-1+0-UT-R - Type 2 surge arrester

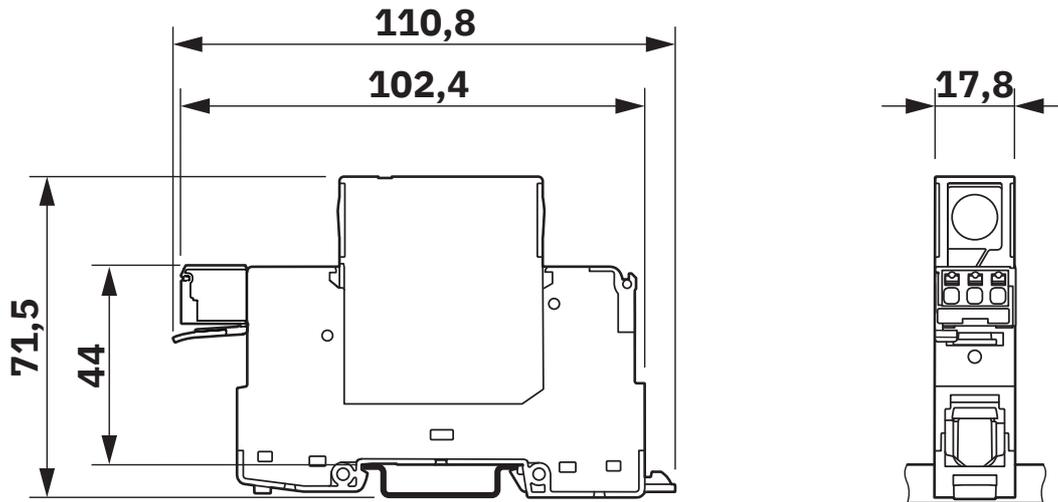


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## Drawings

Dimensional drawing



Schematic diagram

Pollution degree	Conductor cross section	2		3	
		Altitude		Altitude	
		≤4000 m	5000 m	≤4000 m	5000 m
	≥50 mm <sup>2</sup>	-	-	-	-
	≥35 mm <sup>2</sup>	-	-	-	-
	≥25 mm <sup>2</sup>	-	-	-	-
	≥16 mm <sup>2</sup>	-	1 mm	1 mm	1 mm

Minimum lateral distance to active and grounded conductive parts

Schematic diagram

Pollution degree	2	3
	>2000 m ... ≤5000 m	≤5000 m
Rated voltage	5 V ... 150 V AC 5 V ... 30 V DC (5 mA ... 1 A DC) 30 V DC ... 125 V DC (5 mA ... 200 mA DC)	5 V ... 150 V AC 5 V ... 30 V DC (5 mA ... 1 A DC) 30 V DC ... 125 V DC (5 mA ... 200 mA DC)
Insulation type between main and auxiliary circuit	Double / Reinforced insulation	

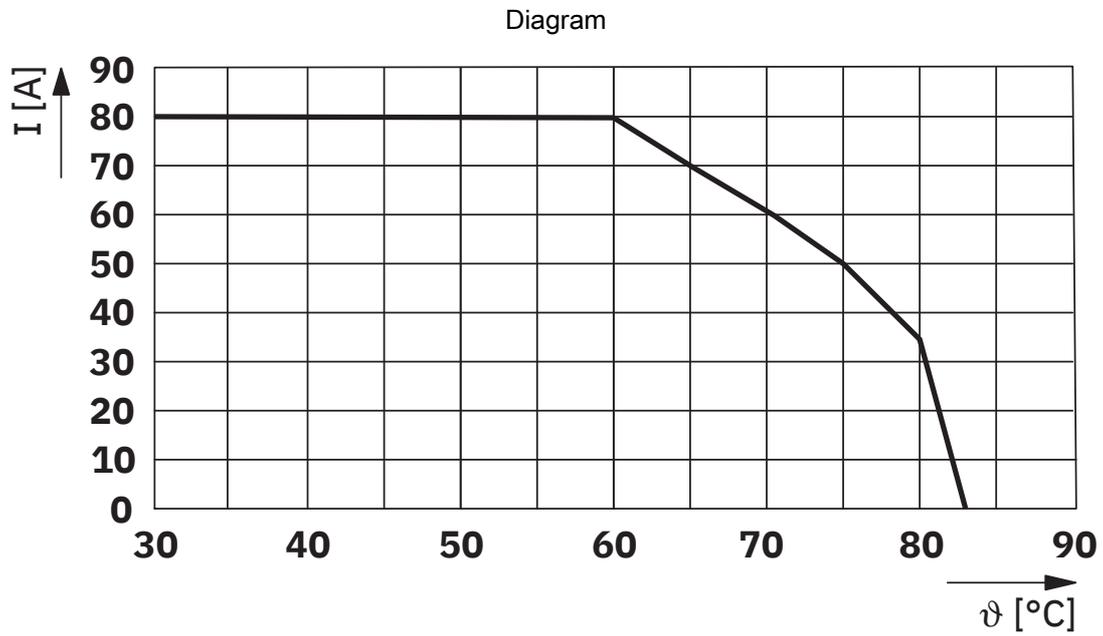
Technical data for remote fault indicator contact

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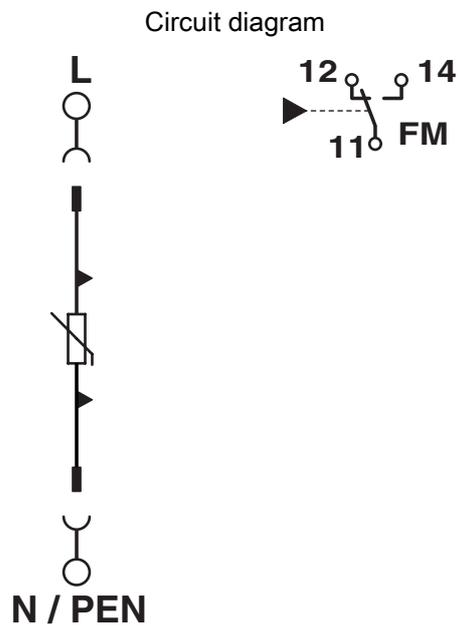


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Max. permissible current in relation to the ambient temperature



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## Approvals

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### DNV

Approval ID: TAE0000501



### IECEE CB Scheme

Approval ID: NL-118261

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## Classifications

### ECLASS

ECLASS-13.0	27171202
ECLASS-15.0	27171202

### 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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