

VAL-SPP-T2-335-3+0-UT-R - Type 2 surge arrester



1466599

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Plug-in surge arrester, in accordance with Type 2/Class II, for 3-phase power supply networks with combined PE and N installed in one conductor (4-conductor system: L1, L2, L3, 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	1466599
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL18
Product key	CL1381
GTIN	4063151859794
Weight per piece (including packing)	390.6 g
Weight per piece (excluding packing)	362.3 g
Customs tariff number	85363030
Country of origin	DE

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1466599

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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-C
Type	DIN rail module, two-section, divisible
Number of positions	3
End-of-life mode	OCM
Surge protection fault message	Optical, remote indicator contact
Number of ports	One

Insulation characteristics

Overvoltage category	III
Pollution degree	3

Electrical properties

Nominal frequency f_N	50 Hz (60 Hz)
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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

VAL-SPP-T2-335-3+0-UT-R - Type 2 surge arrester



1466599

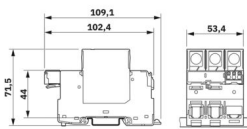
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Connection method	Screw connection
Screw thread	M5
Tightening torque	3 Nm ... 3.5 Nm
Stripping length	18 mm
Conductor cross-section flexible	1.5 mm ² ... 35 mm ² (without ferrule) 2x 1.5 mm ² ... 16 mm ² (2 conductors with the same cross-section)
Conductor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

Remote fault indicator contact

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

Dimensions

Dimensional drawing	
Width	53.4 mm
Height	109.1 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)
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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-PEN
Nominal voltage U_N	240/415 V AC $\pm 10\%$ (TN-C)
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 ²)
Standby power consumption P_C	≤ 450 mVA
Nominal discharge current I_n (8/20) μ s	20 kA
Maximum discharge current I_{max} (8/20) μ s	40 kA
Total discharge current I_{Total} (8/20) μ s	120 kA
Short-circuit current rating I_{SCCR}	50 kA
Voltage protection level U_p	≤ 1.5 kV
Residual voltage U_{res}	≤ 1.5 kV (at I_n) ≤ 1.3 kV (at 10 kA) ≤ 1.2 kV (at 5 kA) ≤ 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	≤ 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	≤ 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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1466599

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Approvals

UL specifications

Maximum continuous operating voltage MCOV (L-L)	640 V AC
Maximum continuous operating voltage MCOV (L-G)	320 V AC
Nominal discharge current I_n	20 kA
Mode of protection	L-L
	L-G
Nominal voltage	240/415 V AC (Wye)
	240 V AC (Delta)
Power distribution system	Wye
	Delta
Nominal frequency	50/60 Hz
Measured limiting voltage MLV (L-L)	2680 V
Measured limiting voltage MLV (L-G)	1340 V
SPD Type	4CA

UL indicator/remote signaling

Operating voltage	250 V AC
DC operating voltage	30 V DC
AC operating current	5 mA AC ... 1 A AC
DC operating current	1 A DC

UL connection data

Tightening torque	30 lb _f -in.
Conductor cross-section AWG	14 ... 2

Standards and regulations

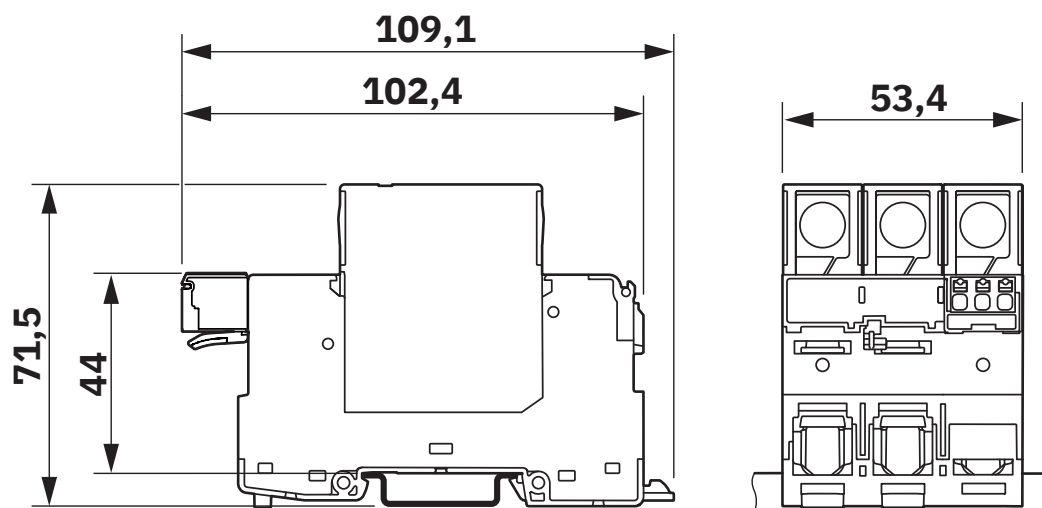
Standards/specifications	IEC 61643-11
Note	2011
Standards/specifications	EN 61643-11
Note	2012 + A11:2018

Mounting

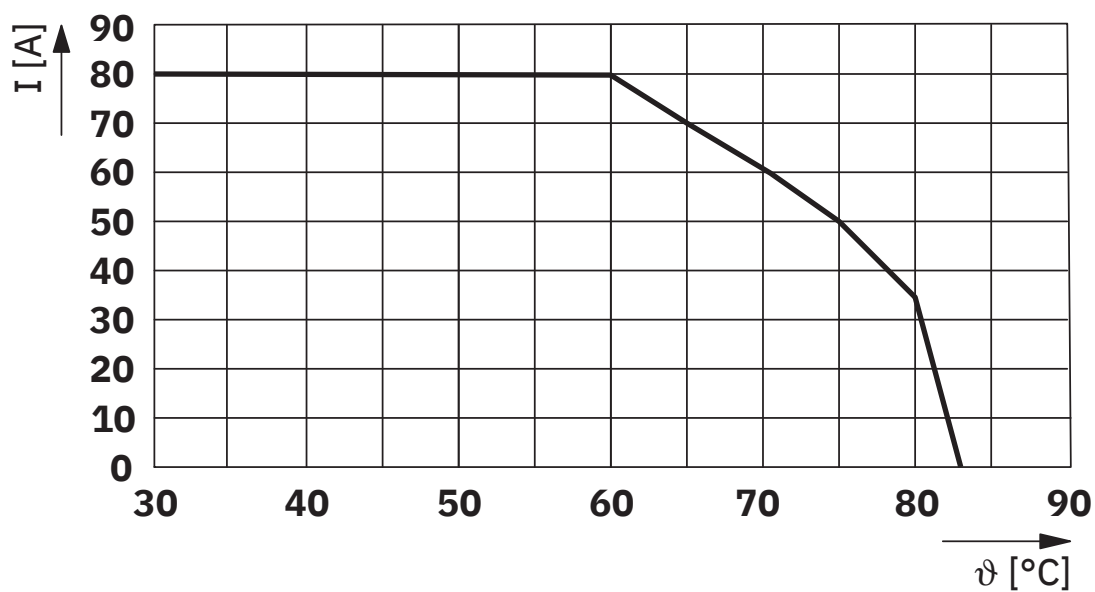
Mounting type	DIN rail: 35 mm
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Drawings

Dimensional drawing



Diagram



Max. permissible current in relation to the ambient temperature

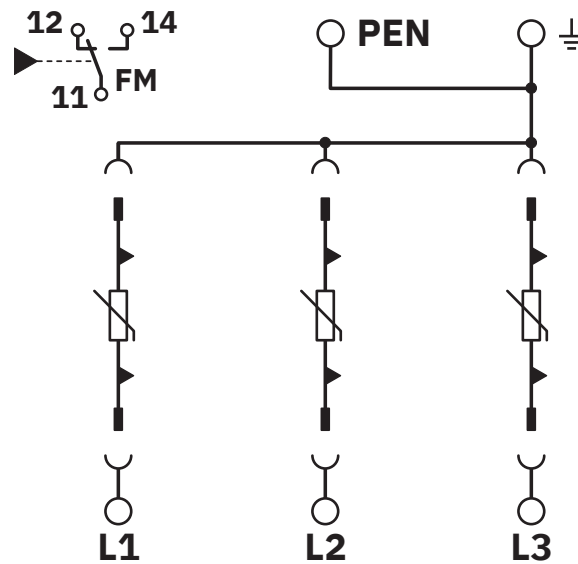
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Circuit diagram



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Approvals

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IECEE CB Scheme

Approval ID: NL-109184

CCA

Approval ID: NTR NL-8052

DNV

Approval ID: TAE0000501



IECEE CB Scheme

Approval ID: NL-118261



cULus Recognized

Approval ID: E330181-20240717

DEKRA

Approval ID: 71-161244

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Classifications

ECLASS

ECLASS-13.0	27171202
ECLASS-15.0	27171202

ETIM

ETIM 10.0	EC000941
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UNSPSC

UNSPSC 21.0	39121600
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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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