VAL-SPP-T2-440-3+0-VF-UT-R - Type 2 surge arrester

1466646

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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	1466646
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL1385
Product key	CL1385
GTIN	4063151861230
Weight per piece (including packing)	497.7 g
Weight per piece (excluding packing)	483.8 g
Customs tariff number	85363010
Country of origin	DE

Technical data

Notes

General

Note	For use in all low-voltage systems between L-PEN. Only for use in IT systems between L-PE if the exposed conductive parts of the equipment of the low-voltage electrical installation are connected to the grounding system of the transformer station (common grounding of the HV transformer station and the exposed conductive part of the LV load system). RE = RA according to VDE 0100-442:2013, Figure 44.A1 and Table 44.A1
	For pollution degree 3, additional minimum lateral distances to grounded, conductive surfaces may need to be observed. See the table in the download area under the item Packing slip in the installation notes. For pollution degree 2, no additional lateral distances are required.

Product properties

Product type	Surge arrester
Product family	VAL-SPP
IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN-C
	IT
Type	DIN rail module, two-section, divisible
Number of positions	2
Surge protection fault message	Optical, remote indicator contact

Insulation characteristics

Overvoltage category	III
Pollution degree	3

Electrical properties

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 (≤ 2000 m (amsl) at pollution degree 2)
	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.

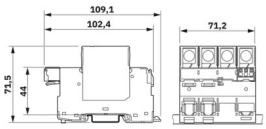
Connection data

Connection method	Screw connection
Screw thread	M5
Tightening torque	3 Nm ... 3.5 Nm
Stripping length	18 mm
Conductor cross section flexible	1.5 mm² ... 35 mm² (without ferrule)
	2x 1.5 mm² ... 16 mm² (2 conductors with the same cross-section)
Conductor cross section rigid	1.5 mm² ... 50 mm²
	2x 1.5 mm² ... 16 mm² (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 mm² ... 16 mm²
Conductor cross section, flexible, with ferrule, with plastic sleeve	1.5 mm² ... 35 mm²
	2x 1.5 mm² ... 10 mm² (2 conductors with the same cross-section)
Conductor cross section flexible, with ferrule without plastic sleeve	1.5 mm² ... 25 mm²
	2x 1.5 mm² ... 16 mm² (2 conductors with the same cross-section)
Connection method	Fork-type cable lug
Conductor cross section flexible	1.5 mm² ... 25 mm²

Remote fault indicator contact

Connection method	Push-in connection
Stripping length	8 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	71.2 mm

Height	109.1 mm
Depth	71.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	4 Div.

Material specifications

Color	gray (RAL 7042)
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-PE
	L-PEN
Nominal voltage U_N	400/690 V AC ±10 % (TN-C)
	400 V AC ±10 % (IT)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous voltage U_C	440 V AC
Residual current I_{PE}	≤ 5 µA
Standby power consumption P_C	≤ 3 mVA
Nominal discharge current I_n (8/20) µs	20 kA
Maximum discharge current I_{max} (8/20) µs	40 kA
Follow current interrupt rating I_{fi}	100 A
Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p	≤ 2.5 kV
Residual voltage U_{res}	≤ 2.1 kV (at I_n)
	≤ 1.9 kV (at 10 kA)
	≤ 1.6 kV (at 5 kA)
	≤ 1.4 kV (at 3 kA)
Impulse sparkover voltage at 6 kV (1.2/50) µs	≤ 2.5 kV
TOV behavior at U_T	762 V AC (5 s / withstand mode)
	762 V AC (120 min / safe failure mode)
Response time t_A	≤ 100 ns
Max. backup fuse with V-type through wiring	80 A (gG)
Max. backup fuse with branch wiring	250 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	≤ 5000 m (amsl)
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	25g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

Standards and regulations

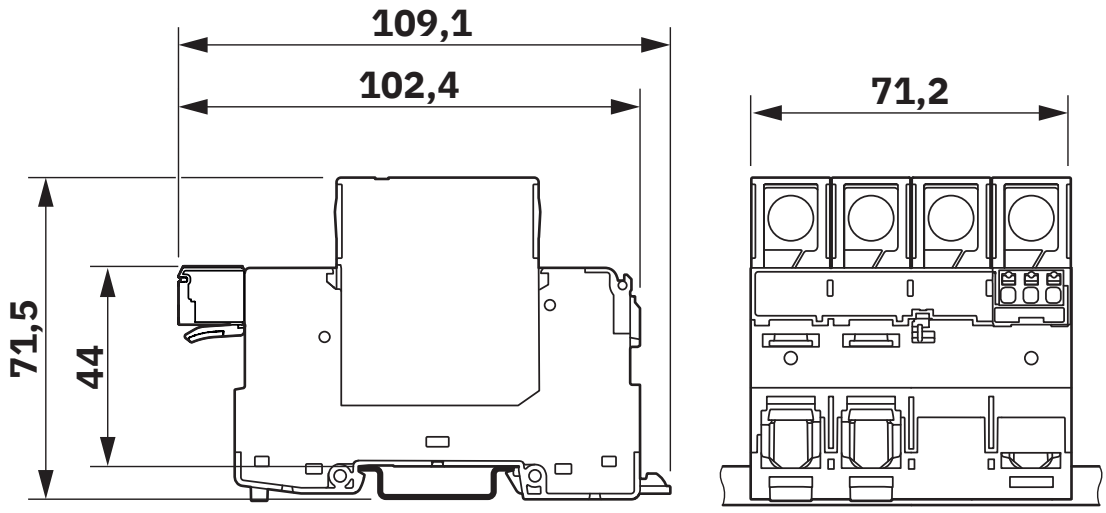
Standards/specifications	IEC 61643-11
Note	2011
Standards/specifications	EN 61643-11
Note	2012 + A11:2018

Mounting

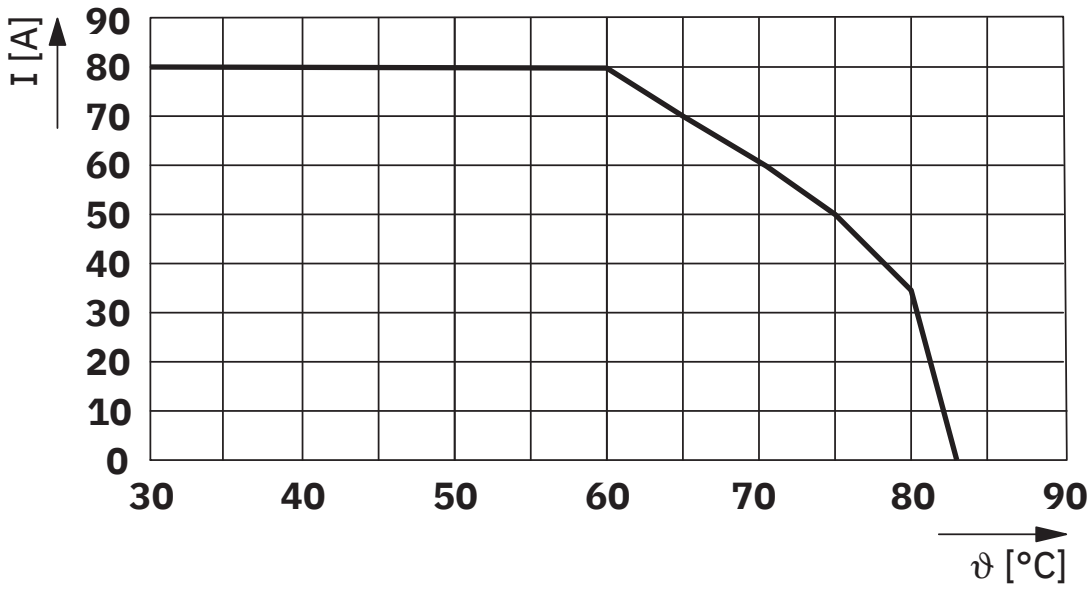
Mounting type	DIN rail: 35 mm

Drawings

Dimensional drawing

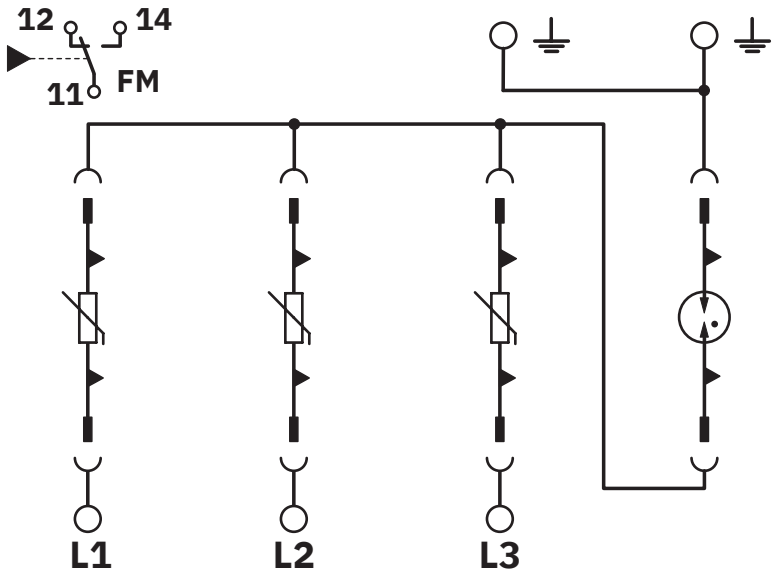


Diagram



Max. permissible current in relation to the ambient temperature

Circuit diagram



Approvals

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IECEE CB Scheme
Approval ID: NL-109184

CCA
Approval ID: NTR NL-8052

KEMA-KEUR
Approval ID: 71-138153 REV.2

Classifications

ECLASS

ECLASS-13.0	27171202

ETIM

ETIM 9.0	EC000941

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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