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VAL-SPP-T2-385-3+1-UT - Type 2 surge arrester

1466609

https://www.phoenixcontact.com/gb/products/1466609

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Plug-in surge arrester, in accordance with Type 2/Class II, for 3-phase power supply networks with separate N and PE (5-conductor system: L1, L2, L3, 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	1466609
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL1381
Product key	CL1381
GTIN	4063151860844
Weight per piece (including packing)	478.1 g
Weight per piece (excluding packing)	447.9 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 ≥ 16 mm². No additional lateral distances are required for pollution degree 2.

Product properties

Product type	Surge arrester
Product family	VAL-SPP
IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN-S
	TT
Type	DIN rail module, two-section, divisible
Number of positions	4
Surge protection fault message	optical

Insulation characteristics

Overvoltage category	III
Pollution degree	3

Electrical properties

Nominal frequency f_N	50 Hz (60 Hz)

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-

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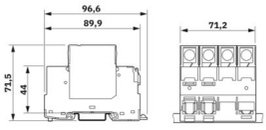
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	section)
Conductor cross section flexible, with ferrule without plastic sleeve	1.5 mm² ... 25 mm²
	2x 1.5 mm² ... 16 mm² (2 conductors with the same cross-section)
Connection method	Fork-type cable lug
Conductor cross section flexible	1.5 mm² ... 25 mm²

Dimensions

Dimensional drawing	
Width	71.2 mm
Height	96.6 mm
Depth	71.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	4 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)	385 V AC
Maximum continuous operating voltage U_C (L-PE)	385 V AC
Maximum continuous operating voltage U_C (N-PE)	305 V AC
Rated load current I_L	80 A (25 mm²)
Residual current I_{PE}	≤ 5 µA
Standby power consumption P_C	≤ 550 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)	≤ 1.8 kV
Voltage protection level U_p (L-PE)	≤ 2 kV
Voltage protection level U_p (N-PE)	≤ 1.5 kV
Residual voltage U_{res} (L-N)	≤ 1.8 kV (at I_n)
	≤ 1.6 kV (at 10 kA)
	≤ 1.4 kV (at 5 kA)
	≤ 1.3 kV (at 3 kA)
Residual voltage U_{res} (L-PE)	≤ 2 kV (at I_n)
	≤ 1.7 kV (at 10 kA)
	≤ 1.5 kV (at 5 kA)
	≤ 1.4 kV (at 3 kA)
Residual voltage U_{res} (N-PE)	≤ 0.5 kV (at I_n)
	≤ 0.4 kV (at 10 kA)
	≤ 0.3 kV (at 5 kA)
	≤ 0.1 kV (at 3 kA)
TOV behavior at U_T (L-N)	415 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)	≤ 25 ns
Response time t_A (L-PE)	≤ 100 ns
Response time t_A (N-PE)	≤ 100 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

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)

Approvals

UL specifications

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Maximum continuous operating voltage MCOV (L-L)	770 V AC
Maximum continuous operating voltage MCOV (L-N)	385 V AC
Maximum continuous operating voltage MCOV (N-G)	305 V AC
Nominal discharge current I_n	20 kA
Mode of protection	L-L
	L-N
	L-G
	N-G
Nominal voltage	277/480 V AC
Measured limiting voltage MLV (L-L)	3580 V
Measured limiting voltage MLV (L-N)	1610 V
Measured limiting voltage MLV (L-G)	2750 V
Measured limiting voltage MLV (N-G)	1140 V
SPD Type	4CA

UL connection data

Tightening torque	27 lb_f-in. ... 31 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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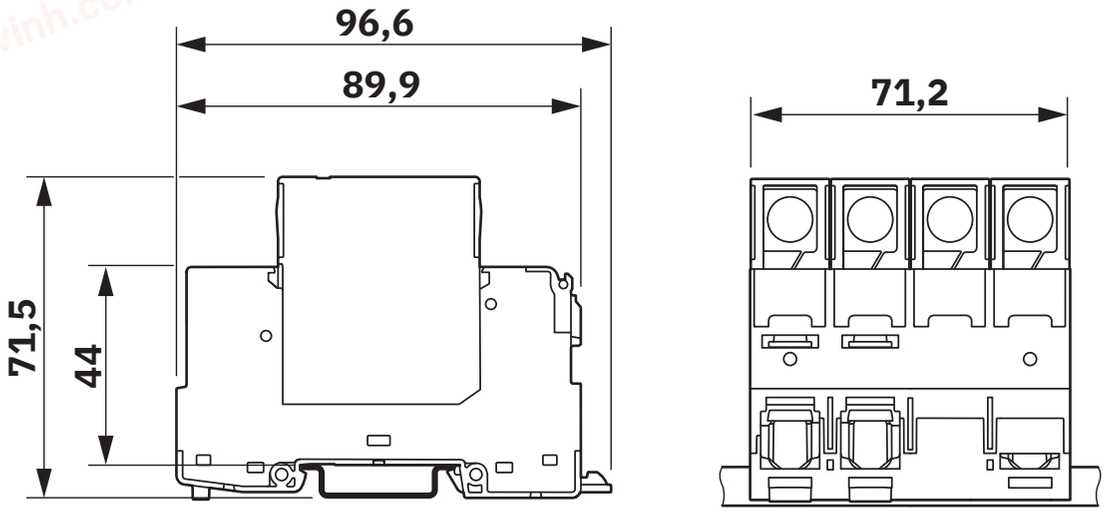
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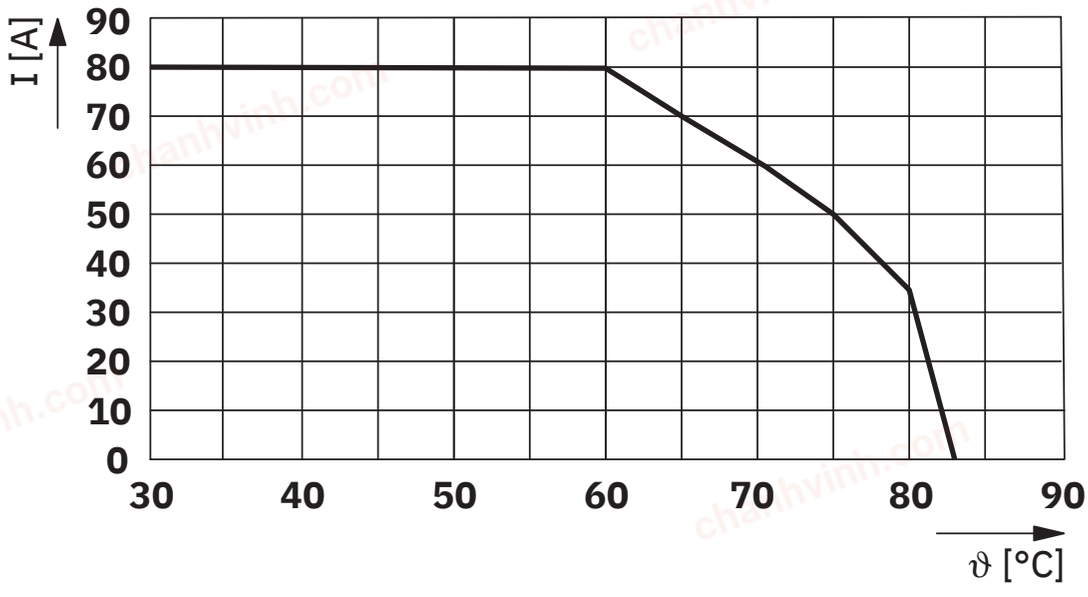
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Drawings

Dimensional drawing



Diagram



Max. permissible current in relation to the ambient temperature

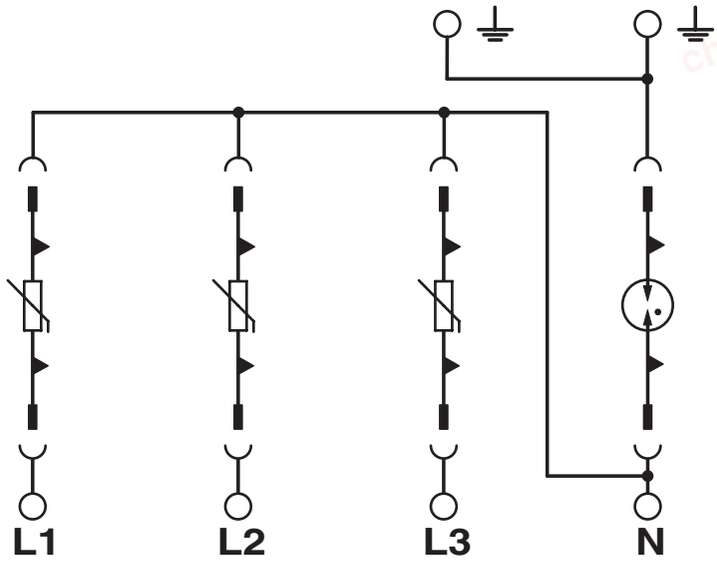
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Circuit diagram



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Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/gb/products/1466609

IECEE CB Scheme
Approval ID: NL-109184

CCA
Approval ID: NTR NL-8052

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

cULus Recognized
Approval ID: E330181

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Classifications

ECLASS

ECLASS-13.0	27171202

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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