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

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	CL18
Product key	CL1381
GTIN	4063151858193
Weight per piece (including packing)	249 g
Weight per piece (excluding packing)	226.6 g
Customs tariff number	85363030
Country of origin	DE

Technical data

Product properties

Product type	Surge arrester
IEC test classification	II
EN type	T2
IEC power supply system	TN-S
	TT
Type	DIN rail module, two-section, divisible
Environment	Indoor
Accessibility	Accessible
End-of-life mode	OCM
Surge protection fault message	optical, remote signaling via optional module
Number of ports	One

Insulation characteristics

Overvoltage category	III
Pollution degree (Main circuit)	2 (For pollution degree 3, see Table 1)

Electrical properties

Maximum power dissipation for nominal condition	≤ 110 mVA

Connection data

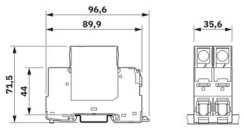
protection circuit (L, N, PE)

Connection method	Screw connection
Screw thread	M5
Stripping length	18 mm
Conductor cross-section rigid	1.5 mm² ... 50 mm²
Conductor cross-section flexible	1.5 mm² ... 35 mm²
Conductor cross-section AWG	14 ... 2
Conductor cross-section, flexible, with ferrule, without plastic sleeve	1.5 mm² ... 25 mm²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	1.5 mm² ... 35 mm²
2 conductors with same cross section, rigid	1.5 mm² ... 16 mm²
2 conductors with same cross section, flexible	1.5 mm² ... 16 mm²
2 conductors with same cross section, flexible, with ferrule without plastic sleeve	1.5 mm² ... 16 mm²
2 conductors with the same cross section, flexible, with ferrule with plastic sleeve	1.5 mm² ... 10 mm²
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	1.5 mm² ... 16 mm²
Drive size	PZSL 2
	PZ/S 2
Tightening torque	3 Nm ... 3.5 Nm

Biconnect terminal block

Connection method	Fork-type cable lug
Conductor cross-section flexible	1.5 mm² ... 25 mm²

Dimensions

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

Material specifications

Color	gray (RAL 7042)
	light gray (RAL 7035)
Material Housing	PA 6.6-FR 20 % GF
	PBT
Flammability rating according to UL 94	V-0
Insulating material	PA 6.6-FR 20 % GF
	PBT

Protective circuit

Mode of protection	L-N
	L-PE
	N-PE
Nominal voltage U_N	240 V AC ±10 % (TN-S)
	240 V AC ±10 % (TT)
Nominal frequency	50/60 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 mm²)
Protective conductor current I_{PE}	≤ 5 µA
Continuous current I_C (L-N)	≤ 0.4 mA
Continuous current I_C (L-PE)	≤ 5 µA
Continuous current I_C (N-PE)	≤ 5 µA
Maximum power dissipation for nominal condition	≤ 110 mVA
Nominal discharge current I_n (8/20) µs	20 kA
Max. discharge current I_{max} (8/20)µs	40 kA
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)	≤ 1.35 kV
Voltage protection level U_p (L-PE)	≤ 1.6 kV
Voltage protection level U_p (N-PE)	≤ 1.5 kV
Front-of-wave sparkover voltage at 6 kV (1.2/50) µs (L-PE)	≤ 1.6 kV
Front-of-wave sparkover voltage at 6 kV (1.2/50) µs (N-PE)	≤ 1.5 kV
Residual voltage U_{res} (L-N)	≤ 1.35 kV (at I_n)
	≤ 1.1 kV (at 10 kA)
	≤ 1 kV (at 5 kA)
	≤ 0.9 kV (at 3 kA)
Residual voltage U_{res} (L-PE)	≤ 1.6 kV (at I_n)
	≤ 1.3 kV (at 10 kA)
	≤ 1.1 kV (at 5 kA)
	≤ 1 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)	350 V AC (5 s / withstand mode)
	460 V AC (120 min / safe failure mode)
TOV behavior at U_T (L-PE)	460 V AC (120 min / withstand mode)
	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)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20C (under touch protection cover)
Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Ambient temperature (assembly)	-5 °C ... 50 °C
Altitude	≤ 2000 m (amsl)
	For higher altitudes, see Table 1
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	25g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	5g (10 ... 150 Hz / 2.5 h / X, Y, Z)
	0,7g (5 ... 100 Hz / X, Y, Z - according to GL)

Standards and regulations

Standards/specifications	IEC 61643-11

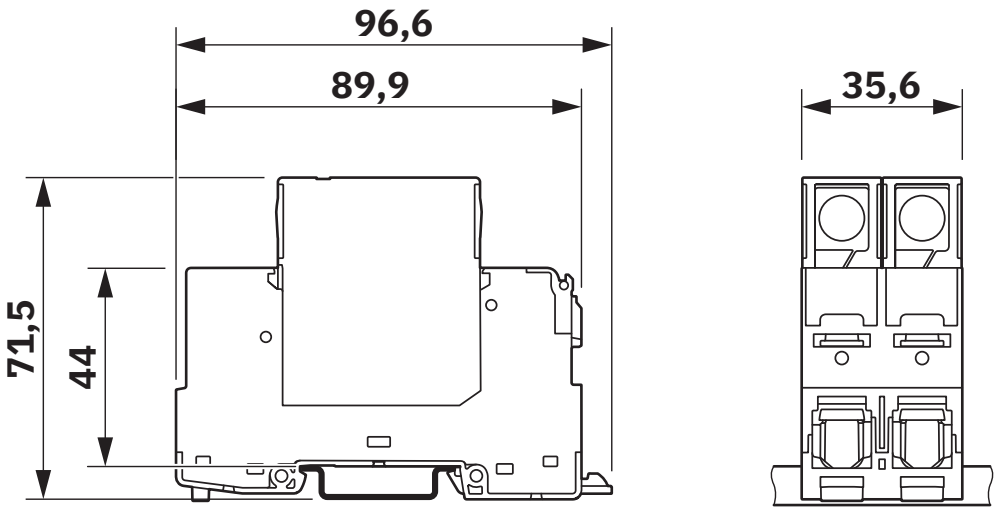
Note	2025
Standards/specifications	EN IEC 61643-11
Note	2025 + A11:2025
Standards/specifications	EN 61643-11
Note	2012 + A11:2018

Mounting

Mounting type	DIN rail: 35 mm
Mounting method	fixed

Drawings

Dimensional drawing

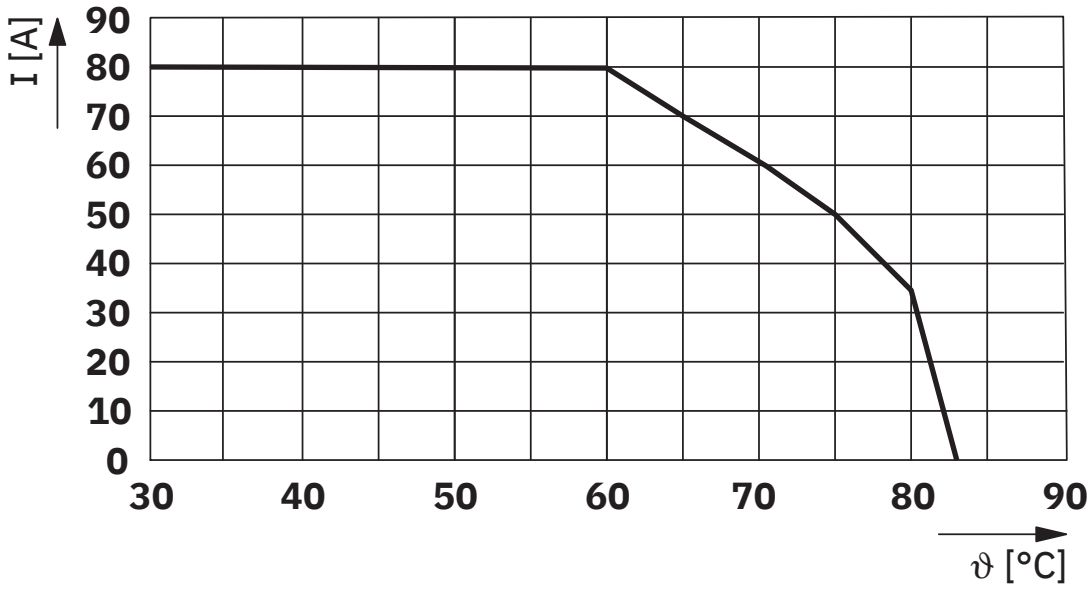


Schematic diagram

Pollution degree	2			3		
	Altitude			Altitude		
Conductor cross section	≤2000 m	≤4000 m	≤5000 m	≤2000 m	≤4000 m	≤5000 m
≤50 mm²	-	-	-	-	-	-
≤35 mm²						
≥35 mm²	-	-	-	1 mm	1 mm	1 mm
≤25 mm²	-	-	-	-	-	-
≤16 mm²						
≥16 mm²	-	-	-	1 mm	1 mm	1 mm
≥25 mm²				2 mm	2 mm	2 mm

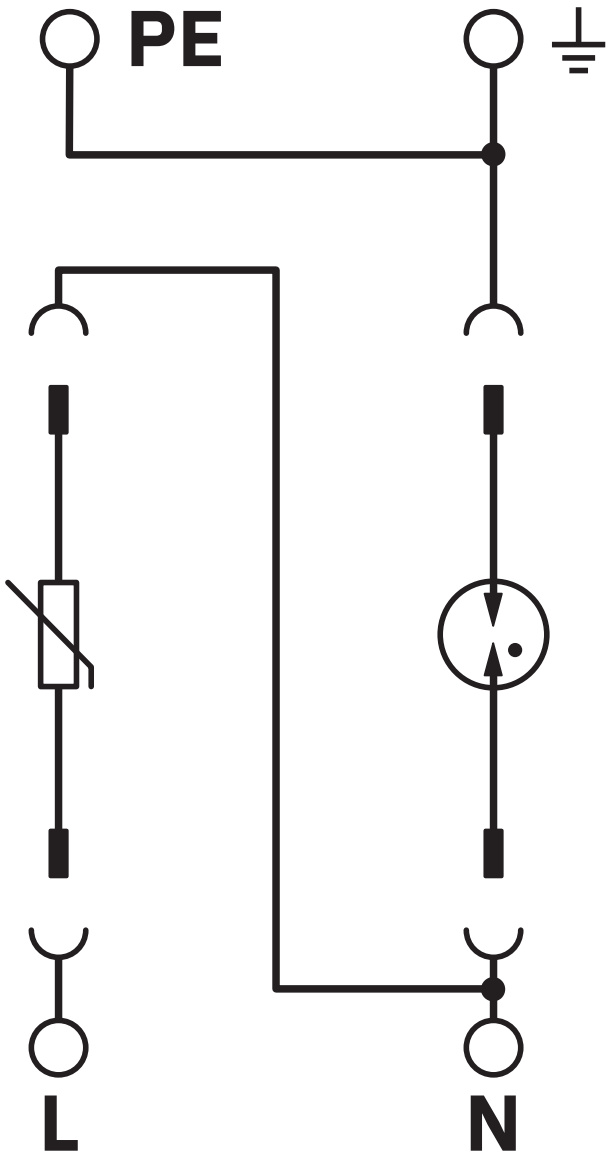
Table 1: Minimum lateral distance to active and grounded conductive parts

Diagram



Max. permissible current in relation to the ambient temperature

Circuit diagram



Approvals

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IECEE CB Scheme
Approval ID: NL-127624

CCA
Approval ID: NTR NL-8099

DNV
Approval ID: TAE0000501

cULus Recognized
Approval ID: E330181-20240717

DEKRA
Approval ID: 71-178747

Classifications

ECLASS

ECLASS-13.0	27171202
ECLASS-15.0	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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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com