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

1466613

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Plug-in surge protective device, in accordance with type 2/class II, for 1-phase power supply networks with separate N and PE (2-conductor system: N, PE), 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	1466613
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL18
Product key	CL1381
GTIN	4063151860134
Weight per piece (including packing)	137.4 g
Weight per piece (excluding packing)	113.2 g
Customs tariff number	85363030
Country of origin	DE

Technical data

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
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

Maximum power dissipation for nominal condition	≤ 1.5 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 (≤ 2000 m (amsl) at pollution degree 2)
	5 V AC ... 150 V AC (≤ 5000 m (amsl))
AC operating current	5 mA AC ... 1 A AC
DC operating voltage	30 V DC (≤ 5000 m (amsl))
DC operating current	1 A DC
DC operating voltage	125 V DC (≤ 5000 m (amsl))
DC operating current	200 mA DC
Insulation type	The product has double/reinforced insulation between the main and auxiliary circuit.

Connection data

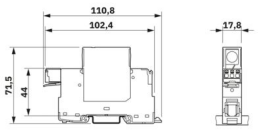
Connection method	Screw connection
Screw thread	M5
Tightening torque	3 Nm ... 3.5 Nm
Stripping length	18 mm
Conductor cross-section flexible	1.5 mm² ... 35 mm² (without ferrule)
	2x 1.5 mm² ... 16 mm² (2 conductors with the same cross-

	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	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)
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	N-PE
Direction of action	N-PE
Nominal voltage U_N	240 V AC ±10 % (TN - only N-PE)
	240 V AC ±10 % (TT - only N-PE)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous operating voltage U_C	305 V AC
Protective conductor current I_{PE}	≤ 5 µA
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
Voltage protection level U_p	≤ 1.5 kV
Residual voltage U_{res}	≤ 0.5 kV (at I_n)
	≤ 0.4 kV (at 10 kA)
	≤ 0.3 kV (at 5 kA)
	≤ 0.1 kV (at 3 kA)
Front-of-wave sparkover voltage at 6 kV (1.2/50) µs	≤ 1.5 kV
TOV behavior at U_T	1200 V AC (200 ms / withstand mode)
Response time t_A	≤ 100 ns

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

Maximum continuous operating voltage MCOV	305 V AC
Nominal discharge current I_n	20 kA
Mode of protection	N-G
Power distribution system	Single phase
Nominal frequency	50/60 Hz
Measured limiting voltage MLV	1140 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_fin.
Conductor cross-section AWG	14 ... 2

Standards and regulations

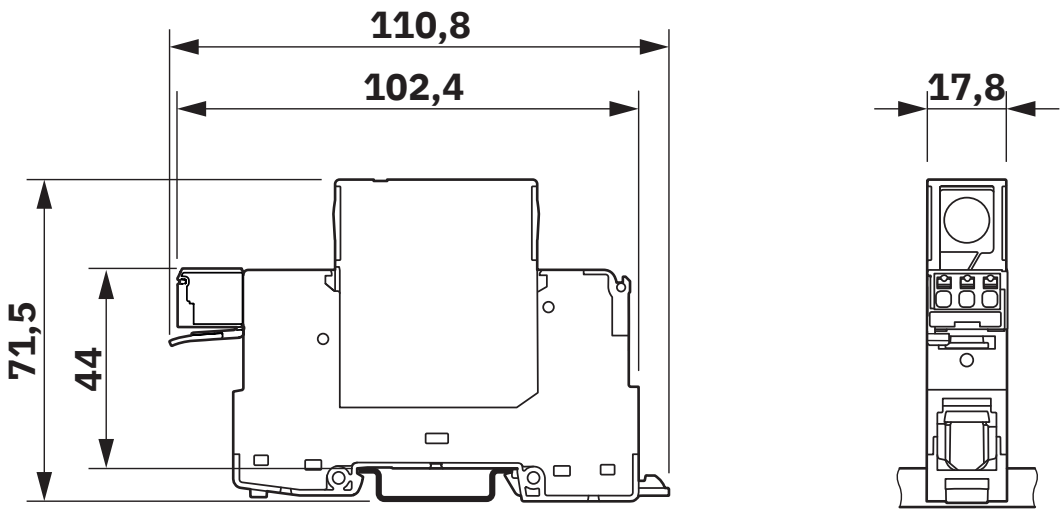
Standards/specifications	IEC 61643-11
Note	2011
Standards/specifications	EN 61643-11
Note	2012 + A11:2018

Mounting

Mounting type	DIN rail: 35 mm

Drawings

Dimensional drawing



Schematic diagram

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

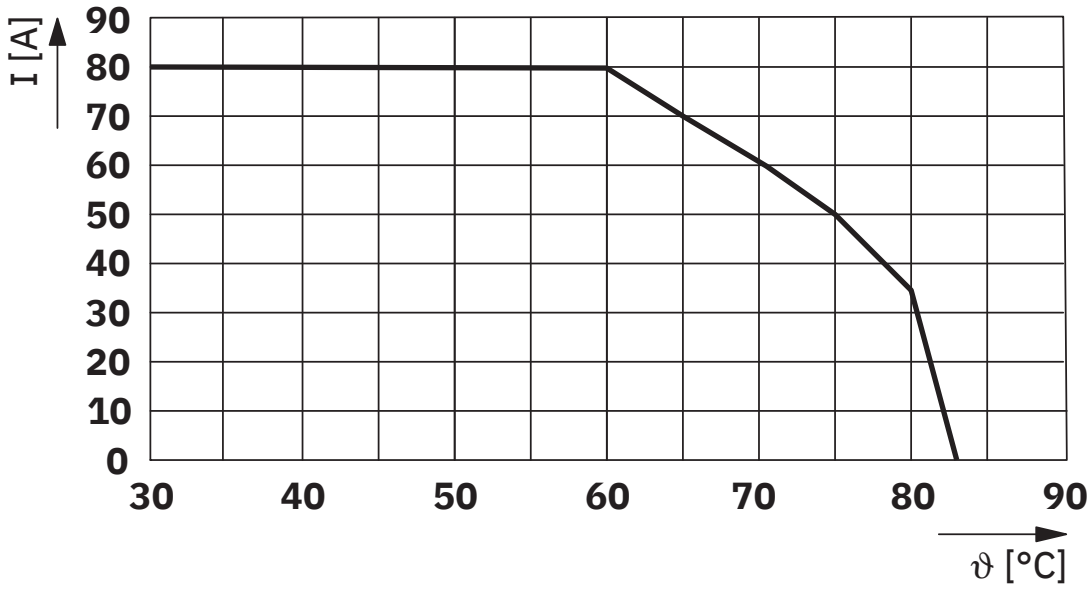
Table 1: Minimum lateral distance to active and grounded conductive parts

Schematic diagram

Pollution degree	2	3
Altitude	>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 ... 100 V AC 5 V ... 30 V DC (5 mA ... 1 A DC) 30 V DC ... 100 V DC (5 mA ... 200 mA DC)
Insulation type between main and auxiliary circuit	Double / Reinforced insulation	

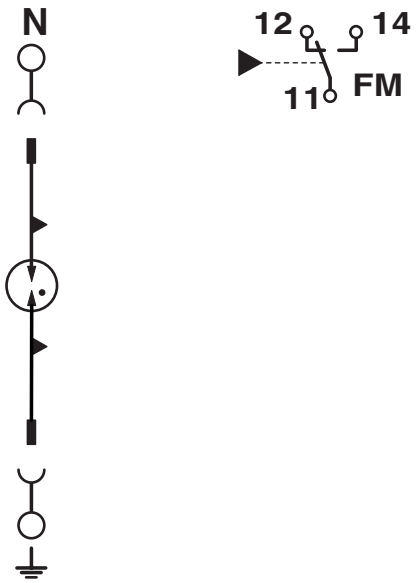
Table 2: Technical data for remote fault indicator contact

Diagram



Max. permissible current in relation to the ambient temperature

Circuit diagram



Approvals

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DNV
Approval ID: TAE0000501

IECEE CB Scheme
Approval ID: NL-118261

cULus Recognized
Approval ID: E330181-20240717

DEKRA
Approval ID: 71-161244

Classifications

ECLASS

ECLASS-13.0	27171202
ECLASS-15.0	27171202

ETIM

ETIM 10.0	EC000941

UNSPSC

UNSPSC 21.0	39121600

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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