VAL-SPP-T2-275/40-3+1-UT-R - Type 2 surge arrester

1466216

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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), 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	1466216
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL18
Product key	CL1381
GTIN	4063151860660
Weight per piece (including packing)	480.5 g
Weight per piece (excluding packing)	450.3 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 indicator contact
Number of ports	One

Insulation characteristics

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

Electrical properties

Maximum power dissipation for nominal condition	≤ 320 mVA

Indicator/remote signaling

Connection name	remote fault indicator contact (11, 12, 14)
Switching contact	Changeover contact
AC operating voltage	5 V AC ... 250 V AC
AC operating current	5 mA AC ... 1 A AC
DC operating voltage	5 V DC ... 30 V DC
DC operating current	5 mA DC ... 1 A DC
DC operating voltage	5 V DC ... 125 V DC
DC operating current	5 mA DC ... 200 mA DC
Max. required back-up fuse	1 A (gG)
Insulation type (between the main and auxiliary circuit)	Double/reinforced insulation

Indicator/remote signaling

Connection name	remote fault indicator contact (11, 12, 14)

Connection data

protection circuit (L1, L2, L3, 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

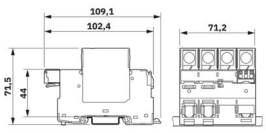
Biconnect terminal block

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

remote fault indicator contact (11, 12, 14)

Connection method	Push-in connection
Stripping length	8 mm
Conductor cross-section rigid	0.25 mm² ... 1.5 mm²
Conductor cross-section flexible	0.25 mm² ... 1.5 mm²
Conductor cross-section AWG	24 ... 16
Conductor cross-section, flexible, with ferrule, without plastic sleeve	0.25 mm² ... 1 mm²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 1.5 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 HP

Material specifications

Color	gray (RAL 7042)
	light gray (RAL 7035)

Material Housing	PA 6.6-FR 20 % GF
	PA 6.6
	PBT
Flammability rating according to UL 94	V-0
Insulating material	PA 6.6-FR 20 % GF
	PA 6.6
	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	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)	264 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	≤ 320 mVA
Nominal discharge current I_n (8/20) µs (L-N)	20 kA
Nominal discharge current I_n (8/20) µs (L-PE)	20 kA
Nominal discharge current I_n (8/20) µs (N-PE)	40 kA
Max. discharge surge current Imax (8/20) µs (L-N)	40 kA
Max. discharge surge current Imax (8/20) µs (L-PE)	40 kA
Max. discharge surge current Imax (8/20) µs (N-PE)	80 kA
Total discharge current I_{Total} (8/20) µs	80 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)	≤ 0.7 kV (at I_n)
	≤ 0.5 kV (at 10 kA)
	≤ 0.4 kV (at 5 kA)
	≤ 0.3 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 and Table 2
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

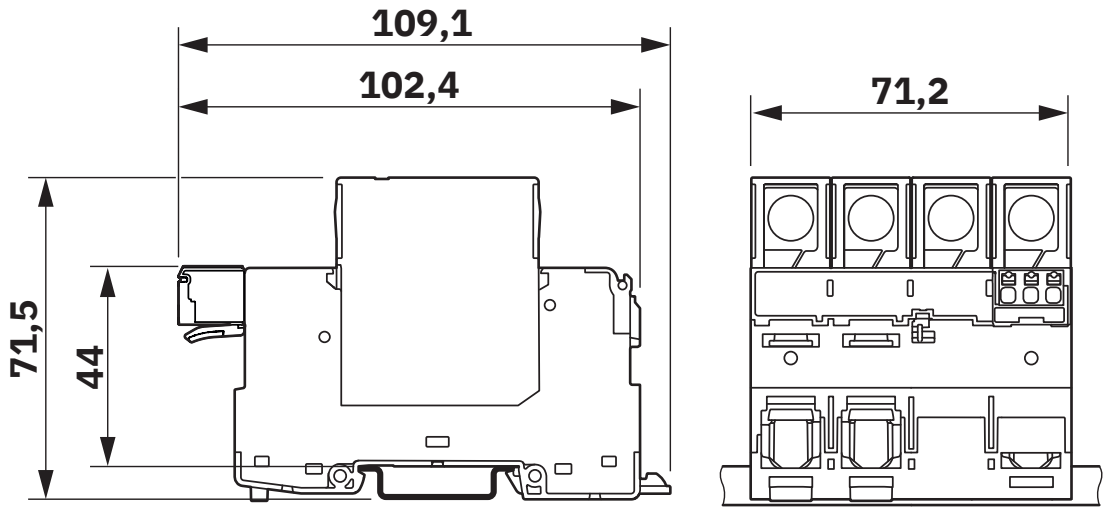
Standards/specifications	IEC 61643-11
Note	2025
Standards/specifications	EN IEC 61643-11
Note	2025 + A11:2025
Standards/specifications	EN 61643-11
Note	2012 + A11:2018

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

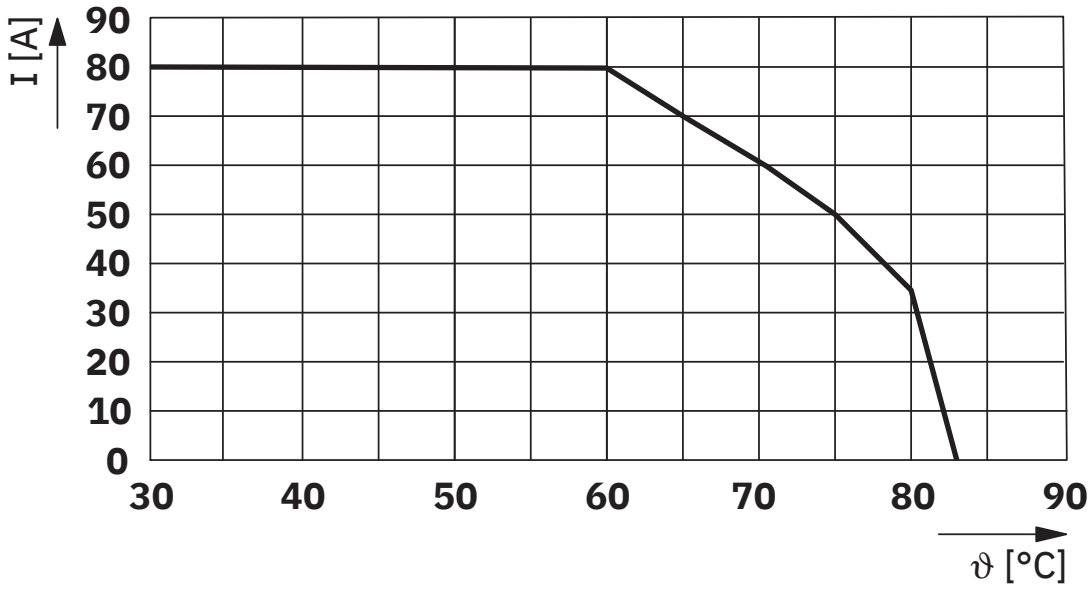
Table 1: Minimum lateral distance to active and grounded conductive parts

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	

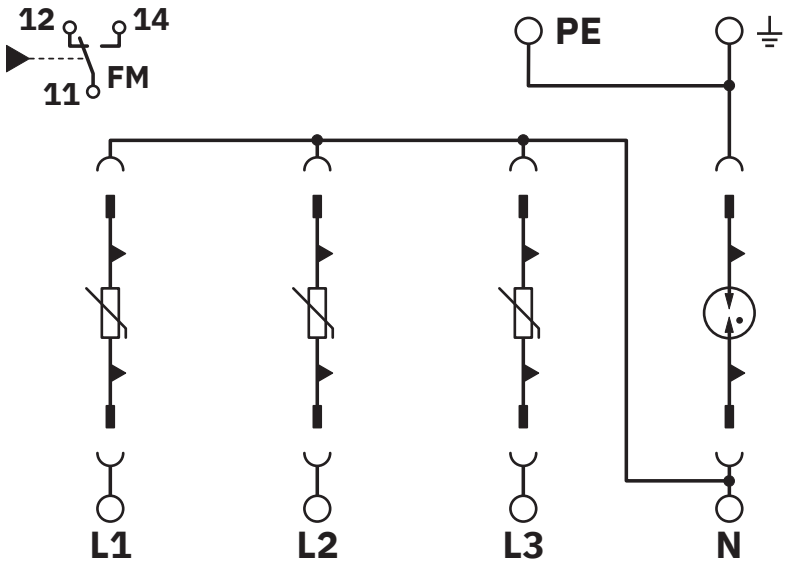
Table 2: Technical data for remote fault indicator contact

Diagram



Max. permissible current in relation to the ambient temperature

Circuit diagram



Approvals

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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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