

VAL-SPP-T2-BE-1+0-UT - Type 2 surge protection base element



1466702

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Base element for type 2 arresters from the VAL-SPP product family. Version for 1-phase power supplies with combined installation of PE and N in one conductor.



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	1466702
Packing unit	4 pc
Minimum order quantity	4 pc
Sales key	CL138Z
Product key	CL138Z
GTIN	4063151860257
Weight per piece (including packing)	79.7 g
Weight per piece (excluding packing)	72.3 g
Customs tariff number	85363030
Country of origin	DE

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Technical data

Notes

General

Note	<p>Depending on the voltage U_c, the installation height, and the pollution degree, additional minimum lateral distances to grounded, conductive surfaces may need to be observed.</p> <p>Pollution degree 2: $U_c \leq 440$: No lateral distances required.</p> <p>Pollution degree 3: $U_c \leq 385$ V: For wiring using a fork-type cable lug, an additional minimum distance of 1 mm must be observed for cross-sections ≥ 16 mm².</p> <p>$U_c > 385$ V ... 440 V: See the table in the download area under the item Packing slip in the installation notes.</p>
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Product properties

Product type	Base element
Product family	VAL-SPP
IEC test classification	II T2
EN type	T2
IEC power supply system	TN TT IT
Type	Base element, DIN rail mounting
Number of positions	1
Surge protection fault message	Remote signaling via optional module

Insulation characteristics

Overvoltage category	III
Pollution degree	3

Electrical properties

Nominal frequency f_N	50 Hz (60 Hz)
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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 mm ² ... 35 mm ² (without ferrule) 2x 1.5 mm ² ... 16 mm ² (2 conductors with the same cross-

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	section)
Conductor cross-section rigid	1.5 mm ² ... 50 mm ²
	2x 1.5 mm ² ... 16 mm ² (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 mm ² ... 16 mm ²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	1.5 mm ² ... 35 mm ²
	2x 1.5 mm ² ... 10 mm ² (2 conductors with the same cross-section)
Conductor cross-section flexible, with ferrule without plastic sleeve	1.5 mm ² ... 25 mm ²
	2x 1.5 mm ² ... 16 mm ² (2 conductors with the same cross-section)
Connection method	Fork-type cable lug
Conductor cross-section flexible	1.5 mm ² ... 25 mm ²

Dimensions

Dimensional drawing	
Width	17.8 mm
Height	96.6 mm
Depth	51.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	1 Div.

Material specifications

Color	gray (RAL 7042)
Flammability rating according to UL 94	V-0
CTI value of material	600
Insulating material	PBT
Material group	I
Housing material	PBT

Mechanical properties

Mechanical data

Open side panel	No
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Protective circuit

Mode of protection	L-N
	L-PEN
	L-PE
	N-PE

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Nominal voltage U_N	400 V AC $\pm 10\%$ (TN)
	400 V AC $\pm 10\%$ (TT)
	400 V AC $\pm 10\%$ (IT)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous operating voltage U_C	440 V AC
Rated load current I_L	80 A (25 mm ²)
Nominal discharge current I_n (8/20) μ s	40 kA
Maximum discharge current I_{max} (8/20) μ s	80 kA
Short-circuit current rating I_{SCCR}	50 kA
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
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Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20 (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 $\pm X$, $\pm Y$, $\pm Z$)
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
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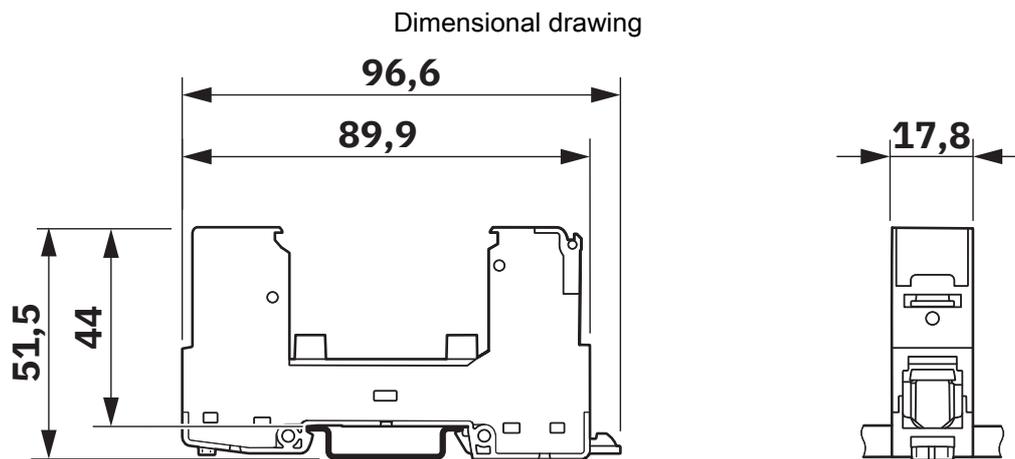
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Drawings



Schematic diagram

Uc	Conductor cross section		Pollution degree 2			Pollution degree 3		
			Altitude			Altitude		
			≤2000 m	>2000 m ... ≤4000 m	5000 m	≤2000 m	>2000 m ... ≤4000 m	5000 m
275 V		≥16 mm ²	-	-	1 mm	-	-	1 mm
335 V			-	-	1 mm	1 mm	1 mm	
385 V			-	-	1 mm	1 mm	1 mm	
440 V		all	-	4 mm	5 mm	-	4 mm	5 mm
			-			4 mm		
			2 mm	4 mm	5 mm	2 mm	4 mm	5 mm
			2 mm	4 mm	5 mm	2 mm	4 mm	5 mm

Minimum lateral distance to active and grounded conductive parts

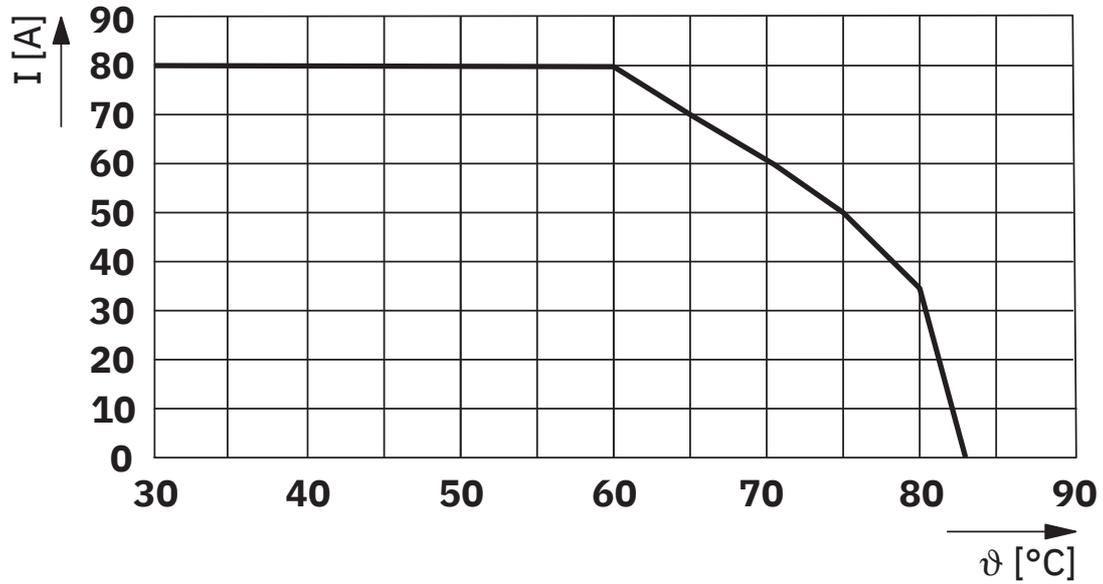
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Diagram



Max. permissible current in relation to the ambient temperature

Circuit diagram



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Approvals

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DNV

Approval ID: TAE0000501



IECEE CB Scheme

Approval ID: NL-118261

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Classifications

ECLASS

ECLASS-13.0	27171292
ECLASS-15.0	27171292

ETIM

ETIM 9.0	EC002496
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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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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