

VAL-CP-3C-175 - Type 2 surge arrester



2859466

<https://www.phoenixcontact.com/us/products/2859466>

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Plug-in surge arrester for 3-phase power supply networks with N and PE in a common conductor (4-conductor system: L1, L2, L3, PEN), with remote indication contact.

Commercial data

Item number	2859466
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	CL01
Product key	CL1311
GTIN	4046356045469
Weight per piece (including packing)	299.4 g
Weight per piece (excluding packing)	299.4 g
Customs tariff number	85369010
Country of origin	DE

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Technical data

Product properties

Product type	Surge arrester
IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN-C
Type	DIN rail module, two-section, divisible
Number of positions	3
Surge protection fault message	Optical, remote indicator contact
Number of ports	One

Insulation characteristics

Overvoltage category	III
Pollution degree	2

Electrical properties

Nominal frequency f_N	50 Hz (60 Hz)
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Indicator/remote signaling

Connection name	Remote fault indicator contact
Switching function	Changeover contact
Operating voltage	5 V AC ... 250 V AC
	125 V DC (200 mA DC)
Operating current	5 mA AC ... 1 A AC
	1 A DC (30 V DC)

Connection data

Connection method	Screw connection
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	16 mm
Conductor cross-section flexible	2.5 mm ² ... 16 mm ²
Conductor cross-section rigid	2.5 mm ² ... 25 mm ²
Conductor cross-section AWG	12 ... 4

Remote fault indicator contact

Connection method	Pluggable screw connection
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross-section flexible	0.14 mm ² ... 1.5 mm ²
Conductor cross-section rigid	0.14 mm ² ... 1.5 mm ²
Conductor cross-section AWG	28 ... 16

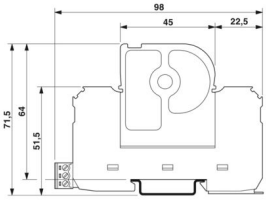
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Dimensions

Dimensional drawing	
Width	37.25 mm
Height	98 mm
Depth	71.5 mm
Horizontal pitch	2 Div.

Material specifications

Flammability rating according to UL 94	V-0
CTI value of material	600
Insulating material	PBT-FR
Material group	I
Housing material	PBT-FR

Protective circuit

Mode of protection	L-PEN
Direction of action	3L-N/PE
Nominal voltage U_N	120/208 V AC (TN-C)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous operating voltage U_C (L-PEN)	175 V AC
Rated load current I_L	40 A (Biconnect M4 fork-type cable lug 6 mm ²)
	63 A (TWIN ferrule 2 x 10 mm ²)
Nominal discharge current I_n (8/20) μ s (L-PEN)	20 kA
Maximum discharge current I_{max} (8/20) μ s (L-PEN)	40 kA
Short-circuit current rating I_{SCCR}	25 kA
Voltage protection level U_p (L-PEN)	≤ 0.85 kV
Residual voltage U_{res} (L-PEN)	≤ 0.85 kV (at I_n)
	≤ 0.75 kV (at 10 kA)
	≤ 0.65 kV (at 5 kA)
	≤ 0.63 kV (at 4 kA)
	≤ 0.57 kV (at 2 kA)
TOV behavior at U_T (L-PEN)	240 V AC (5 s / withstand mode)
	240 V AC (120 min / safe failure mode)
Response time t_A (L-PEN)	≤ 25 ns
Max. backup fuse with V-type through wiring	40 A (gG / Biconnect M4 fork-type cable lug, 6 mm ²)
	63 A (gG / TWIN ferrule 2x 10mm ²)
Max. backup fuse with branch wiring	315 A (gG)

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Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 2000 m (amsl)
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	30g (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 (L-L)	350 V AC
Maximum continuous operating voltage MCOV (L-N)	175 V AC
Nominal discharge current I_n (L-L)	20 kA
Nominal discharge current I_n (L-N)	20 kA
Mode of protection	L-L L-N
Nominal voltage	120/208 V AC
Power distribution system	Wye
Nominal frequency	50/60 Hz
Measured limiting voltage MLV (L-L)	2010 V
Measured limiting voltage MLV (L-N)	1510 V
SPD Type	4CA

UL indicator/remote signaling

Operating voltage	125 V AC
AC operating current	1 A AC

UL connection data

Tightening torque	40 lb _F -in. ... 50 lb _F -in.
Conductor cross-section AWG	14 ... 2 (solid) 14 ... 4 (flexible)

Standards and regulations

Air clearances and creepage distances

Standards/regulations	DIN VDE 0110-1 / IEC 60664-1 / IEC 61643-1
Standards/specifications	IEC 61643-11
Note	2011
Standards/specifications	EN 61643-11
Note	2012

Mounting

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Mounting type

DIN rail: 35 mm

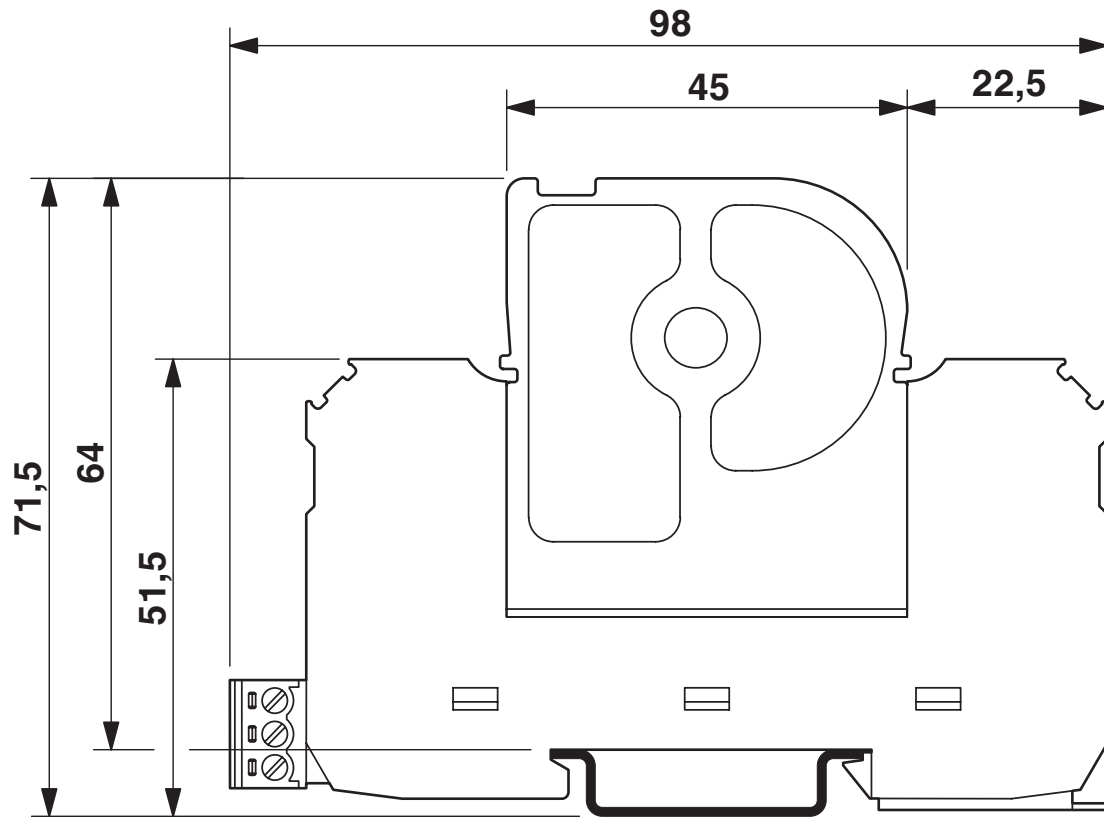
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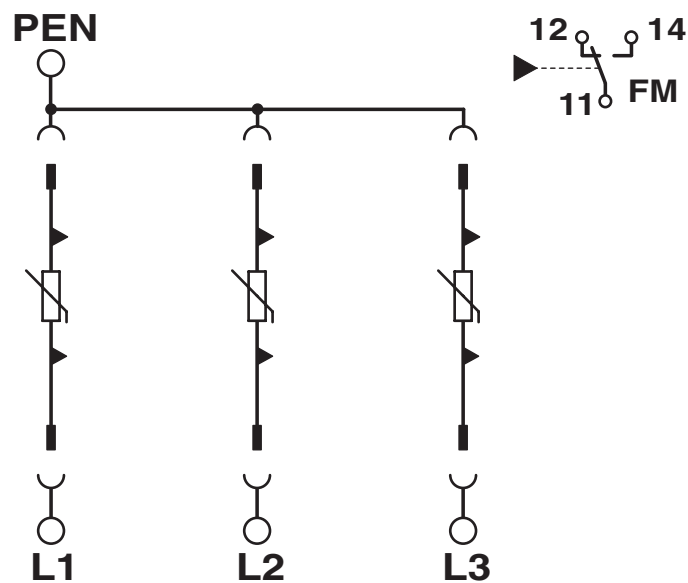
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Drawings

Dimensional drawing



Circuit diagram



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Environmental product compliance

EU REACH SVHC

REACH candidate substance (CAS No.)	
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	No substance above 0.1 wt%
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