

## Type 2 surge arrester - VAL-CP-3C-175 - 2859466

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)




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.

### Your advantages

- ✓ With or without floating remote indication contact
- ✓ Plugs can be checked with CHECKMASTER
- ✓ High continuous voltage of 175 V AC for 120/208 V AC networks with high voltage fluctuations
- ✓ Mechanical coding of all slots
- ✓ Optical, mechanical status indication for the individual arresters
- ✓ Type 2 consistent plug-in surge arresters
- ✓ Disconnect device on each individual plug
- ✓ Use of varistors with a low leakage current
- ✓ Modular arrester blocks with ultra-narrow design



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 045469
GTIN	4046356045469

### Technical data

#### Dimensions

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

#### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 80 °C

# Type 2 surge arrester - VAL-CP-3C-175 - 2859466

## Technical data

### Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 2000 m (amsl (above mean sea level))
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)

### General

IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN-C
Mode of protection	L-PEN
Mounting type	DIN rail: 35 mm
Color	gray/blue
	black
Housing material	PBT-FR
Degree of pollution	2
Flammability rating according to UL 94	V-0
Type	DIN rail module, two-section, divisible
Number of positions	3
Surge protection fault message	Optical, remote indicator contact

### Protective circuit

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 <sup>2</sup> )
	63 A (TWIN ferrule 2 x 10 mm <sup>2</sup> )
Nominal discharge current $I_n$ (8/20) $\mu$ s (L-PEN)	20 kA
Maximum discharge current $I_{max}$ (8/20) $\mu$ 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 <sup>2</sup> )

# Type 2 surge arrester - VAL-CP-3C-175 - 2859466

## Technical data

### Protective circuit

	63 A (gG / TWIN ferrule 2x 10mm <sup>2</sup> )
Max. backup fuse with branch wiring	315 A (gG)

### Indicator/remote signaling

Switching function	PDT 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 method	Pluggable screw connection
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section solid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	28 ... 16

### 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 <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross section solid	2.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>
Conductor cross section AWG	12 ... 4

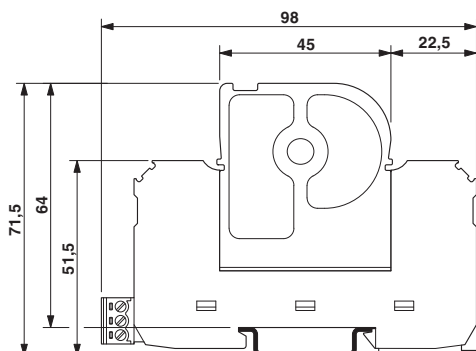
### UL specifications

SPD Type	4CA
Maximum continuous operating voltage MCOV (L-L)	350 V AC
Maximum continuous operating voltage MCOV (L-N)	175 V AC
Nom. voltage	120/208 V AC
Mode of protection	L-L
	L-N
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
Nominal discharge current I <sub>n</sub> (L-L)	20 kA
Nominal discharge current I <sub>n</sub> (L-N)	20 kA

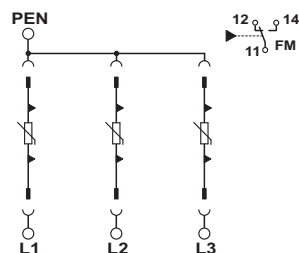
## Drawings

## Type 2 surge arrester - VAL-CP-3C-175 - 2859466

Dimensional drawing



Circuit diagram



### Classifications

#### eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130800
eCl@ss 6.0	27130800
eCl@ss 7.0	27130805
eCl@ss 8.0	27130805
eCl@ss 9.0	27130805

#### ETIM

ETIM 2.0	EC000941
ETIM 3.0	EC000941
ETIM 4.0	EC000941
ETIM 5.0	EC000941
ETIM 6.0	EC000941

#### UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620
UNSPSC 19.0	39121620

### Accessories

Accessories

Bridge

## Type 2 surge arrester - VAL-CP-3C-175 - 2859466

### Accessories

Wiring bridge - MPB SET VAL-CP-3S - 2880684



Wiring bridge set, consisting of three flexible bridges 15 cm black, 1 bridge 27 cm blue.

---

### Device marking

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

---

### Feed-through terminal block

Feed-through terminal block - DK-BIC-35 - 2749880



Feed-through terminal block for VAL and FLT applications

---

### Labeled device marker

Marker for terminal blocks - ZBN 18,LGS:ERDE - 2749589



Marker for terminal blocks, Strip, white, labeled, horizontal: Grounding symbol, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

Marker for terminal blocks - ZBN 18,LGS:L1-N,ERDE - 2749576



Marker for terminal blocks, Strip, white, labeled, horizontal: L1, L2, L3, N, GND, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

---

### Marker pen

## Type 2 surge arrester - VAL-CP-3C-175 - 2859466

### Accessories

Marker pen - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

---

### Spare parts

Type 2 surge protection plug - VAL-CP-175-ST - 2859628



Replacement plug for VAL-CP surge protective device with high-capacity varistor with a low leakage current.

---

Phoenix Contact 2021 © - all rights reserved  
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>