

# Type 1+2+3 combined lightning current and surge arresters - FLT-SEC-ZP2-3C-255/12.5



1168946

<https://www.phoenixcontact.com/gb/products/1168946>

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Lightning arrester, in acc. with Type 1 / Class I, for 3-phase power supply networks with combination installed N and PE (L1, L2, L3, PEN). For lightning protection equipotential bonding in accordance with lightning protection levels III and IV. For mounting on 40 mm busbar systems.

## Your advantages

- Universal use – fits into every meter cabinet, regardless of manufacturer, with a narrow overall width of just 27 mm
- Installation in the unmetrated area with application rule VDE-AR-N 4100 compliance – confirmed through VDE approval
- Mounts securely and without tools through a universal interlock on a 5 mm and 10 mm rail thickness
- Integration into building technology systems with optional remote signaling module

## Commercial Data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1168946       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales Key                            | CL1181        |
| Product Key                          | CL1181        |
| GTIN                                 | 4063151188207 |
| Weight per Piece (including packing) | 621 g         |
| Weight per Piece (excluding packing) | 554.9 g       |
| Customs tariff number                | 85363090      |
| Country of origin                    | DE            |

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## Technical Data

### Product properties

|                                |  |
|--------------------------------|--|
| IEC test classification        | I + II + III<br>T1 + T2 + T3                 |
| EN type                        | T1 + T2 + T3                                 |
| IEC power supply system        | TN-C   |
| Type                           | Busbar module, one-piece                     |
| Product type                   | Combination type                             |
| Number of positions            | 3  |
| Surge protection fault message | visual, remote signaling via optional module |

### Insulation characteristics

|                      |    |
|----------------------|----|
| Overvoltage category | IV |
| Pollution degree     | 2  |

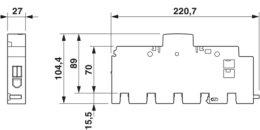
### Electrical properties

|                         |               |
|-------------------------|---------------|
| Nominal frequency $f_N$ | 50 Hz (60 Hz) |
|-------------------------|---------------|

### Connection data

|                                  |  |
|----------------------------------|--|
| Connection method                | Screw connection                           |
| Screw thread                     | M6   |
| Tightening torque                | 2.5 Nm                                     |
| Stripping length                 | 18 mm                                      |
| Conductor cross section flexible | 2.5 mm <sup>2</sup> ... 35 mm <sup>2</sup> |
| Conductor cross section solid    | 2.5 mm <sup>2</sup> ... 50 mm <sup>2</sup> |

### Dimensions

|                     |  |
|---------------------|--|
| Dimensional drawing |  |
| Width               | 27 mm<br>47 mm (with spacer lid)<br>52 mm (with spacer lid)                          |
| Height              | 220.7 mm   |
| Depth               | 104.4 mm   |
| Horizontal pitch    | 1.5 Div.   |

### Material specifications

|  |                     |
|--|---------------------|
| Color                                  | light grey RAL 7035 |
| Flammability rating according to UL 94 | V-0                 |

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|                       |        |
|-----------------------|--------|
| CTI value of material | 175    |
| Insulating material   | PA 6.6 |
|                       | PC     |
| Material group        | IIIa   |
| Housing material      | PA 6.6 |
|                       | PC     |

## Mechanical properties

### Mechanical data

|                 |    |
|-----------------|----|
| Open side panel | No |
|-----------------|----|

## Protective circuit

|   |                                     |
|---|-------------------------------------|
| Mode of protection  | L-PEN                               |
| Direction of action   | 3L-PEN                              |
| Nominal voltage $U_N$   | 230/400 V AC $\pm 10\%$ (TN-C)      |
| Nominal frequency $f_N$   | 50 Hz (60 Hz)                       |
| Maximum continuous voltage $U_C$                                  | 255 V AC                            |
| Nominal discharge current $I_n$ (8/20) $\mu s$                    | 20 kA                               |
| Combination wave $U_{OC}$   | 20 kV                               |
| Impulse discharge current (10/350) $\mu s$ , charge               | 6.25 As                             |
| Impulse discharge current (10/350) $\mu s$ , specific energy      | 39 kJ/ $\Omega$                     |
| Impulse discharge current (10/350) $\mu s$ , peak value $I_{imp}$ | 12.5 kA                             |
| Total discharge current $I_{total}$ (10/350) $\mu s$              | 37.5 kA                             |
| Follow current interrupt rating $I_{fi}$                          | 25 kA                               |
| Short-circuit current rating $I_{SCCR}$                           | 25 kA                               |
| Voltage protection level $U_p$                                    | $\leq 1.5$ kV                       |
| Front of wave sparkover voltage at 6 kV (1.2/50) $\mu s$          | $\leq 1.5$ kV                       |
| TOV behavior at $U_T$   | 442 V AC (120 min / withstand mode) |
| Response time $t_A$   | $\leq 100$ ns                       |
| Max. backup fuse with branch wiring                               | 160 A (gG)                          |

## Environmental and real-life conditions

### Ambient conditions

|   |   |
|---|---|
| Degree of protection                    | IP20C (Installed)                           |
| Ambient temperature (operation)         | -40 °C ... 80 °C                            |
| Ambient temperature (storage/transport) | -40 °C ... 80 °C                            |
| Altitude                                | $\leq 6000$ m (amsl (above mean sea level)) |
| Permissible humidity (operation)        | 5 % ... 95 %                                |

## Standards and regulations

|                          |              |
|--------------------------|--------------|
| Standards/specifications | IEC 61643-11 |
| Standards/specifications | EN 61643-11  |

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## Mounting

|               |              |
|---------------|--------------|
| Mounting type | Busbar 40 mm |
|---------------|--------------|

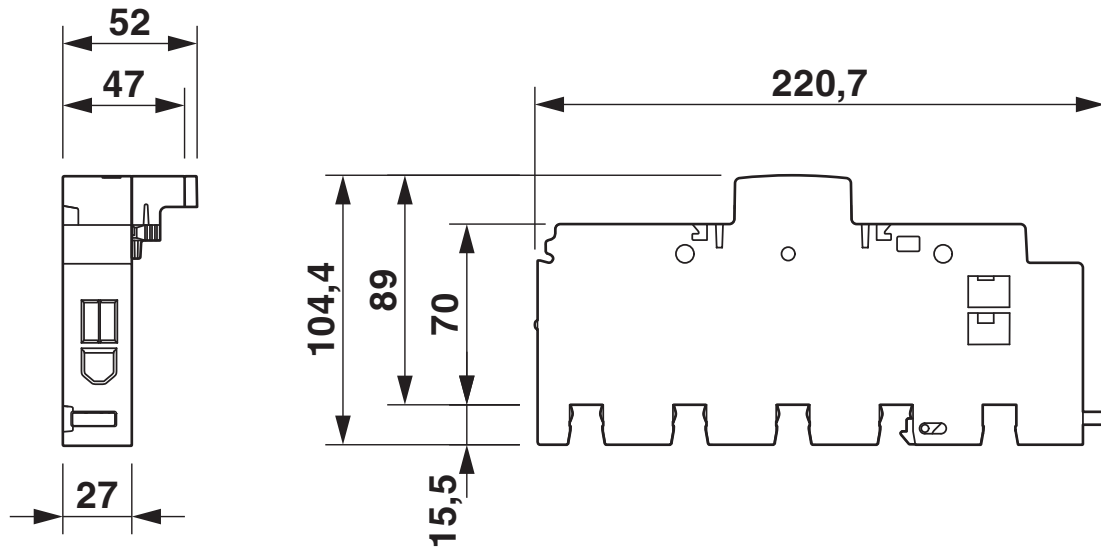
# Type 1+2+3 combined lightning current and surge arresters - FLT-SEC-ZP2-3C-255/12.5

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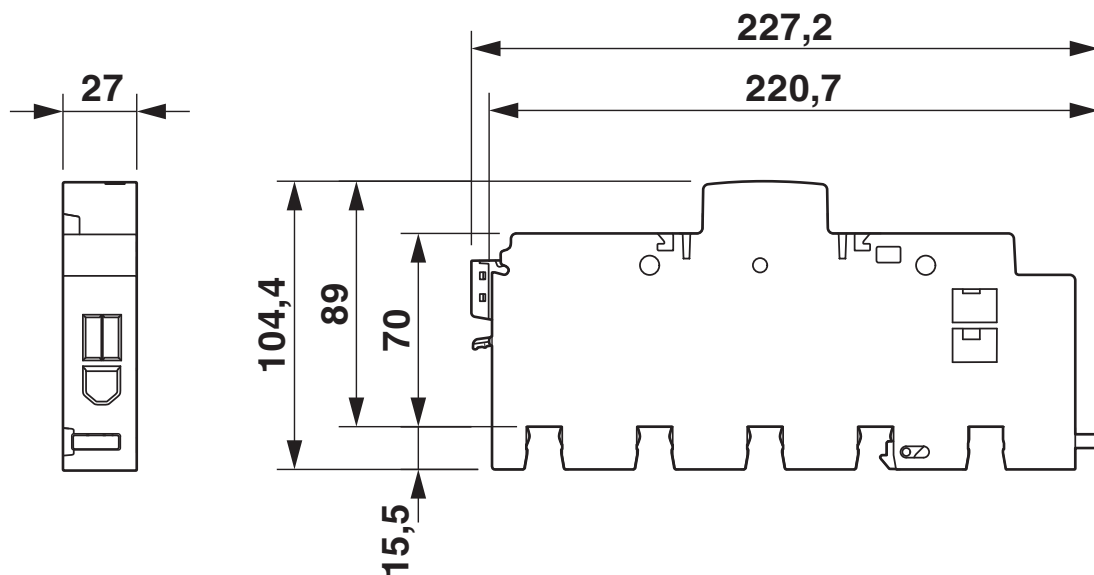
## Drawings

Dimensional drawing



The figure shows the product with included spacer lid

Dimensional drawing



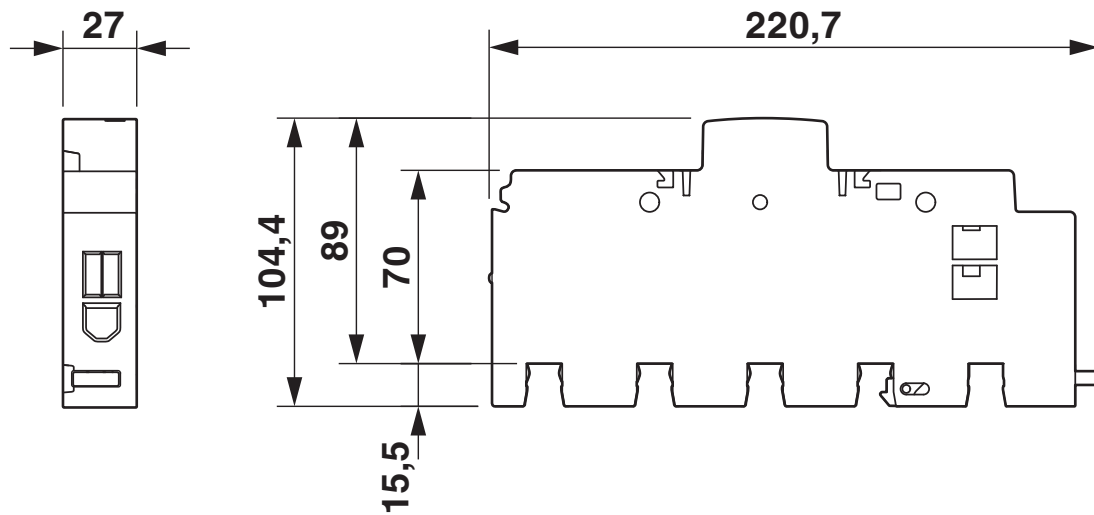
The figure shows the product with optional remote signaling "FM-MODULE"

# Type 1+2+3 combined lightning current and surge arresters - FLT-SEC-ZP2-3C-255/12.5

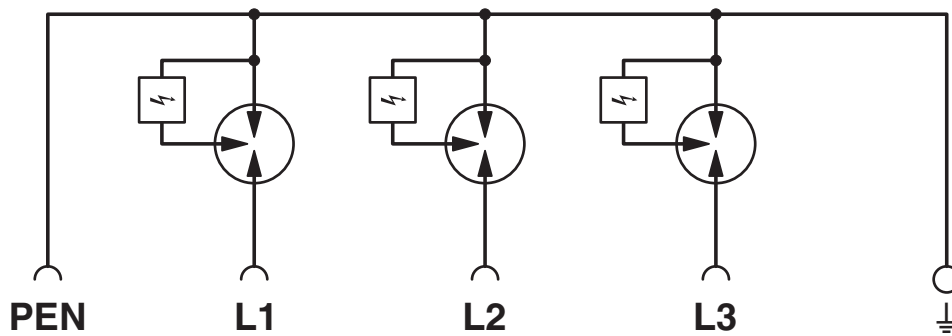
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Dimensional drawing



Circuit diagram

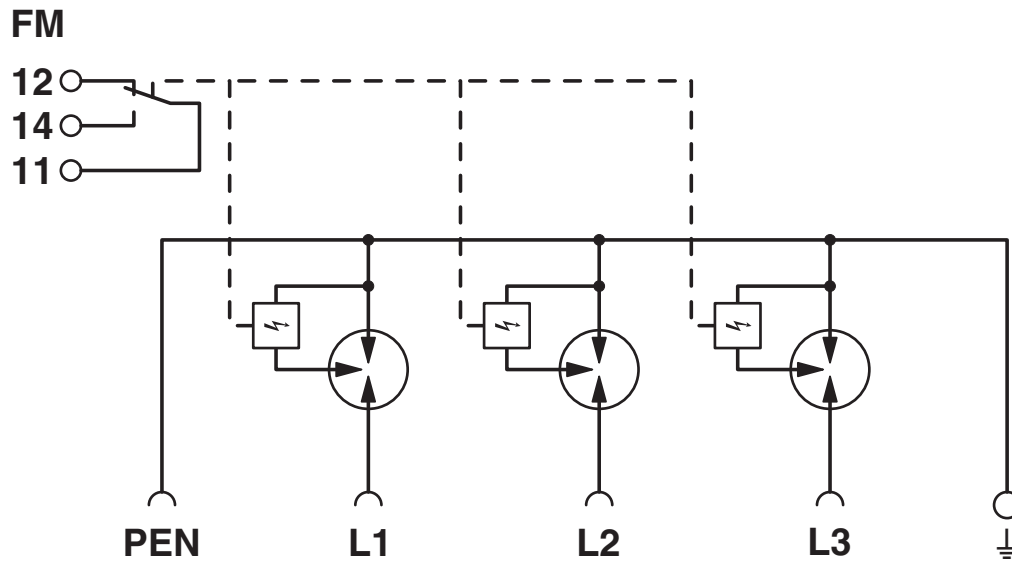


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Circuit diagram



The figure shows the product with optional remote signaling "FM-MODULE"

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## Approvals



**IECEE CB Scheme**  
Approval ID: NL-67563

### CCA

Approval ID: NTR-NL 7853

Nominal Voltage  $U_N$

Nominal Current  $I_N$

Cross Section AWG

Cross Section  $\text{mm}^2$

-

-



**KEMA-KEUR**  
Approval ID: 71-114664



**VDE Zeichengenehmigung**  
Approval ID: 40052444



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## Classifications

### ECLASS

|               |          |
|---------------|----------|
| ECLASS-9.0    | 27130802 |
| ECLASS-10.0.1 | 27130802 |
| ECLASS-11.0   | 27130802 |

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | EC000381 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121600 |
|-------------|----------|

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## Accessories

### Marker pen

Marker pen - X-PEN 0,35 - 0811228

<https://www.phoenixcontact.com/gb/products/0811228>



Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

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### Label

Label - EML (20XE)R - 0803452

<https://www.phoenixcontact.com/gb/products/0803452>



Label, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: adhesive, lettering field size: continuous x 20 mm

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## Label

Label - EML (20XE)R YE - 0803453

<https://www.phoenixcontact.com/gb/products/0803453>



Label, Roll, yellow, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: adhesive, lettering field size: continuous x 20 mm

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## Remote signaling module

Remote signaling module - FLT-SEC-ZP2 FM-MODULE - 1168947

<https://www.phoenixcontact.com/gb/products/1168947>



Optional remote signaling module. Can only be used in the FLT-SEC-ZP2.

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