

# FLT-SEC-P-T1-1C-350/25-FM - Type 1+2 combined lightning current and surge arrester



2905414

<https://www.phoenixcontact.com/us/products/2905414>

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Plug-in lightning current arrester, in accordance with Type 1/Class I, for 1-phase power supply networks with combined PE and N installed in one conductor (L1, PEN).

## Your advantages

- Surge protection family for universal use with optimum energy coordination from the lightning current arrester to the device protection
- Easy to maintain due to consistently pluggable protection modules
- Excellent level of information provided by mechanical/visual status indicator and remote indication contact
- Optimum protective effect in the event of high-energy lightning currents, thanks to spark gap technology with low residual voltage characteristic
- Low voltage protection level for direct protection of end devices in the main distribution area

## Commercial data

|                                      |                    |
|--------------------------------------|--------------------|
| Item number                          | 2905414            |
| Packing unit                         | 1 pc               |
| Minimum order quantity               | 1 pc               |
| Sales key                            | CL01               |
| Product key                          | CL1171             |
| Catalog page                         | Page 39 (C-4-2019) |
| GTIN                                 | 4046356949460      |
| Weight per piece (including packing) | 403.8 g            |
| Weight per piece (excluding packing) | 404.9 g            |
| Customs tariff number                | 85363010           |
| Country of origin                    | DE                 |

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## Technical data

### Notes

#### General

|      |                                       |
|------|---------------------------------------|
| Note | Max. single impulse: 100 kA (8/20 µs) |
|      | SPD according to AS/NZS 1768 Cat. C3  |

### Product properties

|                                |                                         |
|--------------------------------|-----------------------------------------|
| Product type                   | Combination type                        |
| Product family                 | SEC Family                              |
| IEC test classification        | I / II                                  |
|                                | I                                       |
|                                | T1 / T2                                 |
|                                | T1                                      |
| EN type                        | T1 / T2                                 |
|                                | T1                                      |
| IEC power supply system        | TN-C                                    |
|                                | TT                                      |
| Type                           | DIN rail module, two-section, divisible |
| Number of positions            | 1                                       |
| Surge protection fault message | Optical, remote indicator contact       |

#### Insulation characteristics

|                      |     |
|----------------------|-----|
| Overvoltage category | III |
| Pollution degree     | 2   |

### Electrical properties

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

#### Indicator/remote signaling

|                    |                                |
|--------------------|--------------------------------|
| Connection name    | Remote fault indicator contact |
| Switching function | Changeover contact             |
| Operating voltage  | 12 V AC ... 250 V AC           |
|                    | 125 V DC (200 mA DC)           |
| Operating current  | 10 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  | 18 mm            |

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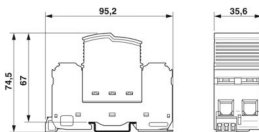
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|                                  |                     |
|----------------------------------|---------------------|
| Conductor cross section flexible | 2.5 mm² ... 35 mm²  |
| Conductor cross section rigid    | 2.5 mm² ... 35 mm²  |
| Conductor cross section AWG      | 13 ... 2            |
| Connection method                | Fork-type cable lug |
| Conductor cross section flexible | 1.5 mm² ... 16 mm²  |

## Remote fault indicator contact

|                                  |                                       |
|----------------------------------|---------------------------------------|
| Connection method                | Plug-in/screw connection via COMBICON |
| Screw thread                     | M2                                    |
| Tightening torque                | 0.25 Nm                               |
| Stripping length                 | 7 mm                                  |
| Conductor cross section flexible | 0.14 mm² ... 1.5 mm²                  |
| Conductor cross section rigid    | 0.14 mm² ... 1.5 mm²                  |
| Conductor cross section AWG      | 28 ... 16                             |

## Dimensions

|                     |                                                                                      |
|---------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing |  |
| Width               | 35.6 mm                                                                              |
| Height              | 95.2 mm                                                                              |
| Depth               | 74.5 mm (incl. DIN rail 7.5 mm)                                                      |
| Horizontal pitch    | 2 Div.                                                                               |

## Material specifications

|                                        |                             |
|----------------------------------------|-----------------------------|
| Color (Male connector)                 | light grey (RAL 7035)       |
| Color (Base element)                   | gray (RAL 7042)             |
| Flammability rating according to UL 94 | V-0                         |
| CTI value of material                  | 600                         |
| Insulating material                    | PA6.6-FR 20% GF<br>PBT-FR   |
| Material group                         | I                           |
| Housing material                       | PA 6.6-FR 20 % GF<br>PBT-FR |

## Mechanical properties

### Mechanical data

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

## Protective circuit

|                    |       |
|--------------------|-------|
| Mode of protection | L-PEN |
|--------------------|-------|

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|                                                                  |                                     |
|------------------------------------------------------------------|-------------------------------------|
| Direction of action                                              | 1L-PEN                              |
| Nominal voltage $U_N$                                            | 240 V AC (TN-C)                     |
|                                                                  | 240 V AC (TT)                       |
| Nominal frequency $f_N$                                          | 50 Hz (60 Hz)                       |
| Maximum continuous voltage $U_C$                                 | 350 V AC                            |
| Rated load current $I_L$                                         | 125 A (< 55 °C)                     |
| Nominal discharge current $I_n$ (8/20) $\mu$ s                   | 25 kA                               |
| Maximum discharge current $I_{max}$ (8/20) $\mu$ s               | 50 kA                               |
| Impulse discharge current (10/350) $\mu$ s, charge               | 12.5 As                             |
| Impulse discharge current (10/350) $\mu$ s, specific energy      | 160 kJ/ $\Omega$                    |
| Impulse discharge current (10/350) $\mu$ s, peak value $I_{imp}$ | 25 kA                               |
| Follow current interrupt rating $I_{fi}$                         | 50 kA                               |
| Short-circuit current rating $I_{SCCR}$                          | 50 kA                               |
| Voltage protection level $U_p$                                   | $\leq 1.5$ kV                       |
| Residual voltage $U_{res}$                                       | $\leq 1.5$ kV (at $I_n$ )           |
| Front of wave sparkover voltage at 6 kV (1.2/50) $\mu$ s         | $\leq 1.5$ kV                       |
| TOV behavior at $U_T$                                            | 415 V AC (5 s / withstand mode)     |
|                                                                  | 457 V AC (120 min / withstand mode) |
| Response time $t_A$                                              | $\leq 100$ ns                       |
| Max. backup fuse with V-type through wiring                      | 125 A (gG)                          |
| Max. backup fuse with branch wiring                              | 315 A (gG)                          |

## Additional technical data

|                                          |                   |
|------------------------------------------|-------------------|
| Short-circuit current rating $I_{SCCR}$  | 100 kA (264 V AC) |
| Follow current interrupt rating $I_{fi}$ | 100 kA (264 V AC) |

## Environmental and real-life conditions

### Ambient conditions

|                                         |                                                           |
|-----------------------------------------|-----------------------------------------------------------|
| Degree of protection                    | IP20 (only when all terminal points are used)             |
| Ambient temperature (operation)         | -40 °C ... 80 °C                                          |
| Ambient temperature (storage/transport) | -40 °C ... 80 °C                                          |
| Altitude                                | $\leq 2000$ m (amsl)                                      |
| Permissible humidity (operation)        | 5 % ... 95 %                                              |
| Shock (operation)                       | 30g (Half-sine / 11 ms / 3x $\pm X$ , $\pm Y$ , $\pm Z$ ) |
| Vibration (operation)                   | 5g (5 - 500 Hz/2.5 h/X, Y, Z)                             |

## Approvals

### UL specifications

|                                           |          |
|-------------------------------------------|----------|
| Maximum continuous operating voltage MCOV | 350 V AC |
| Short-circuit current rating (SCCR)       | 50 kA    |
| Voltage protection rating VPR             | 1500 V   |
| Nominal discharge current $I_n$           | 20 kA    |

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|                           |              |
|---------------------------|--------------|
| Mode of protection        | L-G          |
| Nominal voltage           | 240 V AC     |
| Rated load current $I_L$  | 50 A         |
| Power distribution system | Single phase |
| Nominal frequency         | 50/60 Hz     |
| SPD Type                  | 2CA          |

## UL indicator/remote signaling

|                      |          |
|----------------------|----------|
| Operating voltage    | 125 V AC |
| AC operating current | 1 A AC   |

## UL connection data

|                             |                         |
|-----------------------------|-------------------------|
| Tightening torque           | 40 lb <sub>F</sub> ·in. |
| Conductor cross section AWG | 3 ... 2                 |

## Standards and regulations

|                          |              |
|--------------------------|--------------|
| Standards/specifications | IEC 61643-11 |
| Note                     | 2011         |

## EN 61643-11

|                          |             |
|--------------------------|-------------|
| Standards/specifications | EN 61643-11 |
| Note                     | 2012        |

## Mounting

|               |                 |
|---------------|-----------------|
| Mounting type | DIN rail: 35 mm |
|---------------|-----------------|

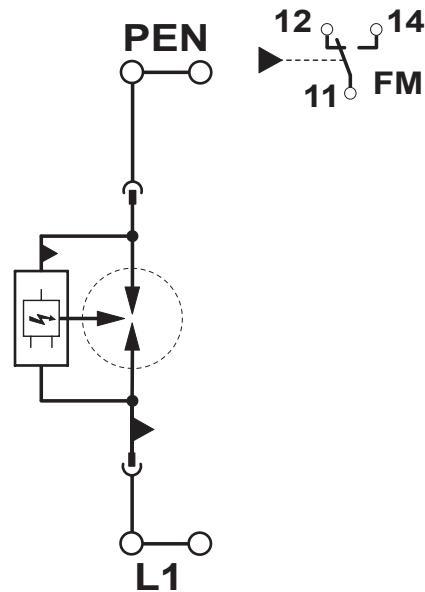
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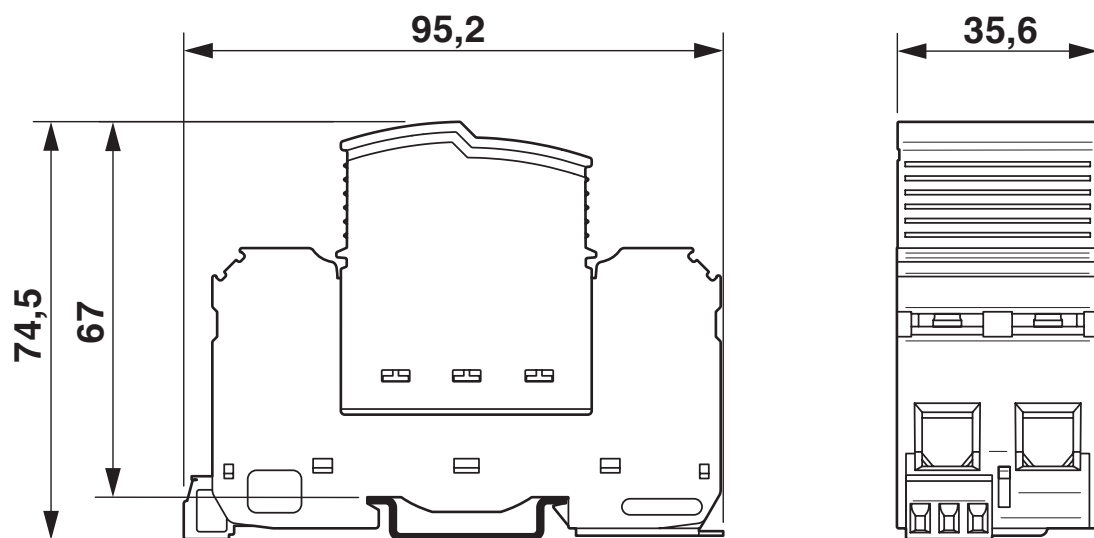
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## Drawings

Circuit diagram



Dimensional drawing



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2905414>



**cUL Recognized**  
Approval ID: FILE E 330181



**UL Recognized**  
Approval ID: FILE E 330181



**IECEE CB Scheme**  
Approval ID: NL-56588



**EAC**  
Approval ID: RU C-DE: \*09.B.00169

**CCA**

Approval ID: NTR-NL 7726



**KEMA-KEUR**  
Approval ID: 71-106982



**DNV GL**  
Approval ID: TAE000040S

**UAE-RoHS**

Approval ID: 23-10-88709

**cULus Recognized**

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27130802 |
| ECLASS-13.0 | 27171201 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC000381 |
|----------|----------|

### UNSPSC

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

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## 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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## Accessories

### CLIPFIX 35 - End bracket

3022218

<https://www.phoenixcontact.com/us/products/3022218>



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, width: 9.5 mm, color: gray

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### EML (20XE)R - Label

0803452

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



Label, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, lettering field size: continuous x 20 mm, Number of individual labels: 1

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## EML (20XE)R YE - Label

0803453

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



Label, Roll, yellow, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMaster 300/600, THERMOMARK X1.2, mounting type: adhesive, lettering field size: continuous x 20 mm, Number of individual labels: 1

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## ZBN 18:UNBEDRUCKT - Zack marker strip

2809128

<https://www.phoenixcontact.com/us/products/2809128>



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

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

2749576

<https://www.phoenixcontact.com/us/products/2749576>



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

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

2749589

<https://www.phoenixcontact.com/us/products/2749589>



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

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## ZBFM 5/WH:UNBEDRUCKT - Flat zack marker sheet

0803595

<https://www.phoenixcontact.com/us/products/0803595>

Flat zack marker sheet, Sheet, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snapped, for terminal block width: 5.2 mm, lettering field size: 5 x 4.5 mm, Number of individual labels: 120



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## ZBN 18 CUS - Zack marker strip

0825059

<https://www.phoenixcontact.com/us/products/0825059>

Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, 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



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## X-PEN 0,35 - Marker pen

0811228

<https://www.phoenixcontact.com/us/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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## SZK PZ2 VDE - Screwdriver

1206463

<https://www.phoenixcontact.com/us/products/1206463>



Screwdriver, PZ crosshead, VDE insulated, size: PZ 2 x 100 mm, 2-component grip, with non-slip grip

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## SZS 0,4X2,5 VDE - Screwdriver

1205037

<https://www.phoenixcontact.com/us/products/1205037>



Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

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## FLT-SEC-P-T1-350/25-P - Type 1 surge protection plug

2905422

<https://www.phoenixcontact.com/us/products/2905422>



Replacement plug for lightning current arresters from the FLASHTRAB SEC PLUS 350 product range, for L-N and L-PEN paths.

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