

## Lightning arrester type 1 - FLT-CP-PLUS-2S-350 - 2882666

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>)



Pluggable lightning current arrester, in acc. with type 1/class I/B for 2-phase power supply networks with combined PE and N (L1, L2, PE, N).

### Why buy this product

- ✓ Plugs can be checked with CHECKMASTER
- ✓ High continuous voltage of 350 V AC for 230/400 V AC networks with high voltage fluctuations
- ✓ With floating remote indication contact
- ✓ Optical, mechanical status indication for the individual arresters
- ✓ Thermal disconnect device for each individual plug
- ✓ Can be used in the pre-meter area



### Key commercial data

|                                      |                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit                         | 1 pc                                                                                                    |
| GTIN                                 | <br>4 046356 098229 |
| Weight per Piece (excluding packing) | 1256.8 g                                                                                                |
| Custom tariff number                 | 85363010                                                                                                |
| Country of origin                    | Germany                                                                                                 |
| Note                                 | Made to Order (non-returnable)                                                                          |

### Technical data

#### Dimensions

|                  |          |
|------------------|----------|
| Height           | 95 mm    |
| Width            | 106.8 mm |
| Depth            | 71.5 mm  |
| Horizontal pitch | 6 Div.   |

#### Ambient conditions

|                      |                                               |
|----------------------|-----------------------------------------------|
| Degree of protection | IP20 (only when all terminal points are used) |
|----------------------|-----------------------------------------------|

# Lightning arrester type 1 - FLT-CP-PLUS-2S-350 - 2882666

## Technical data

### Ambient conditions

|                                         |                                          |
|-----------------------------------------|------------------------------------------|
| Ambient temperature (operation)         | -40 °C ... 80 °C                         |
| Ambient temperature (storage/transport) | -40 °C ... 80 °C                         |
| Altitude                                | ≤ 2000 m (amsl (above mean sea level))   |
| Permissible humidity (operation)        | 5 % ... 95 %                             |
| Shock (operation)                       | 25g (half sinus / 11 ms / 3x ±X, ±Y, ±Z) |
| Vibration (operation)                   | 5g (5 - 500 Hz/2.5 h/X, Y, Z)            |

### General

|                                         |                                         |
|-----------------------------------------|-----------------------------------------|
| Standards/specifications                | IEC 61643-11 2011                       |
|                                         | EN 61643-11 2012                        |
| IEC test classification                 | I / II                                  |
|                                         | T1 / T2                                 |
| EN type                                 | T1 / T2                                 |
| IEC power supply system                 | TN-S                                    |
|                                         | TT                                      |
| Lightning protection class              | II                                      |
| Number of ports                         | One                                     |
| SPD design                              | Voltage-switching type                  |
| Mode of protection                      | L-N                                     |
|                                         | L-PE                                    |
|                                         | N-PE                                    |
| Mounting type                           | DIN rail: 35 mm                         |
| Color                                   | gray/blue                               |
|                                         | black                                   |
| Housing material                        | PBT                                     |
| Pollution degree                        | 2                                       |
| Inflammability class 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 $U_N$                            | 240/415 V AC (TN-S) |
|                                                  | 240/415 V AC (TT)   |
| Nominal frequency $f_N$                          | 50 Hz (60 Hz)       |
| Maximum continuous operating voltage $U_C$ (L-N) | 350 V AC            |
| Maximum continuous voltage $U_C$ (N-PE)          | 350 V AC            |
| Rated load current $I_L$                         | 125 A (< 55 °C)     |
| Residual current $I_{PE}$                        | ≤ 0.01 mA           |
| Nominal discharge current $I_n$ (8/20) μs (L-N)  | 25 kA               |
| Nominal discharge current $I_n$ (8/20) μs (L-PE) | 25 kA               |

# Lightning arrester type 1 - FLT-CP-PLUS-2S-350 - 2882666

## Technical data

### Protective circuit

|                                                                                 |                                     |
|---------------------------------------------------------------------------------|-------------------------------------|
| Nominal discharge current $I_n$ (8/20) $\mu$ s (N-PE)                           | 100 kA                              |
| Maximum discharge current $I_{max}$ (8/20) $\mu$ s (L-N)                        | 50 kA                               |
| Maximum discharge current $I_{max}$ (8/20) $\mu$ s (L-PE)                       | 50 kA                               |
| Impulse discharge current (10/350) $\mu$ s (L-N), charge                        | 12.5 As                             |
| Impulse discharge current (10/350) $\mu$ s (L-N), specific energy               | 160 kJ/ $\Omega$                    |
| Impulse discharge current (10/350) $\mu$ s (L-N), peak current value $I_{imp}$  | 25 kA                               |
| Impulse discharge current (10/350) $\mu$ s (N-PE), charge                       | 50 As                               |
| Impulse discharge current (10/350) $\mu$ s (N-PE), specific energy              | 2500 kJ/ $\Omega$                   |
| Impulse discharge current (10/350) $\mu$ s (N-PE), peak current value $I_{imp}$ | 100 kA                              |
| Impulse discharge current (10/350) $\mu$ s (L-PE), charge                       | 12.5 As                             |
| Impulse discharge current (10/350) $\mu$ s (L-PE), specific energy              | 160 kJ/ $\Omega$                    |
| Impulse discharge current (10/350) $\mu$ s (L-PE), peak current value $I_{imp}$ | 25 kA                               |
| Total discharge current $I_{Total}$ (10/350) $\mu$ s                            | 75 kA                               |
| Follow current interrupt rating $I_{fi}$ (L-N)                                  | 50 kA                               |
| Follow current interrupt rating $I_{fi}$ (N-PE)                                 | 100 A                               |
| Short-circuit current rating $I_{SCCR}$                                         | 50 kA                               |
| Voltage protection level $U_p$ (L-N)                                            | $\leq 1.5$ kV                       |
| Voltage protection level $U_p$ (L-PE)                                           | $\leq 2.5$ kV                       |
| Voltage protection level $U_p$ (N-PE)                                           | $\leq 1.5$ kV                       |
| Residual voltage $U_{res}$ (L-N)                                                | $\leq 1.5$ kV (at $I_n$ )           |
| Residual voltage $U_{res}$ (L-PE)                                               | $\leq 2.5$ kV (at $I_n$ )           |
| Residual voltage $U_{res}$ (N-PE)                                               | $\leq 1.5$ kV (at $I_n$ )           |
| Front of wave sparkover voltage at 6 kV (1.2/50) $\mu$ s (L-N)                  | $\leq 1.5$ kV                       |
| Front of wave sparkover voltage at 6 kV (1.2/50) $\mu$ s (L-PE)                 | $\leq 2.5$ kV                       |
| Front of wave sparkover voltage at 6 kV (1.2/50) $\mu$ s (N-PE)                 | $\leq 1.5$ kV                       |
| TOV behavior at $U_T$ (L-N)                                                     | 415 V AC (5 s / withstand mode)     |
|                                                                                 | 440 V AC (120 min / withstand mode) |
| TOV behavior at $U_T$ (N-PE)                                                    | 1200 V AC (200 ms / withstand mode) |
| Response time $t_A$ (L-N)                                                       | $\leq 100$ ns                       |
| Response time $t_A$ (N-PE)                                                      | $\leq 100$ ns                       |
| Max. backup fuse with branch wiring                                             | 315 A AC (gG)                       |
| Max. backup fuse with V-type through wiring                                     | 125 A AC (gG)                       |

### Indicator/remote signaling

|                    |                                |
|--------------------|--------------------------------|
| Connection name    | Remote fault indicator contact |
| Switching function | PDT contact                    |
| Operating voltage  | 12 V AC ... 250 V AC           |
|                    | 125 V AC (UL)                  |
|                    | 125 V DC (200 mA DC)           |
| Operating current  | 10 mA AC ... 1 A AC            |

# Lightning arrester type 1 - FLT-CP-PLUS-2S-350 - 2882666

## Technical data

### Indicator/remote signaling

|                                       |                                       |
|---------------------------------------|---------------------------------------|
|                                       | 1 A AC (UL)                           |
|                                       | 1 A DC (30 V DC)                      |
| Connection method                     | Plug-in/screw connection via COMBICON |
| Screw thread                          | M2                                    |
| Tightening torque                     | 0.25 Nm                               |
|                                       | 4 lb <sub>f</sub> -in. (UL)           |
| Stripping length                      | 7 mm                                  |
| Conductor cross section stranded min. | 0.14 mm <sup>2</sup>                  |
| Conductor cross section stranded max. | 1.5 mm <sup>2</sup>                   |
| Conductor cross section solid min.    | 0.14 mm <sup>2</sup>                  |
| Conductor cross section solid max.    | 1.5 mm <sup>2</sup>                   |
| AWG conductor cross section           | 28 ... 16                             |
|                                       | 30 ... 14 (UL)                        |

### Connection data

|                                       |                              |
|---------------------------------------|------------------------------|
| Connection method                     | Screw terminal blocks        |
| Conductor cross section stranded min. | 2.5 mm <sup>2</sup>          |
| Conductor cross section stranded max. | 25 mm <sup>2</sup>           |
| Conductor cross section solid min.    | 2.5 mm <sup>2</sup>          |
| Conductor cross section solid max.    | 35 mm <sup>2</sup>           |
| AWG conductor cross section           | 13 ... 2                     |
|                                       | 12 ... 2 (UL)                |
| Screw thread                          | M5                           |
| Tightening torque                     | 4.5 Nm                       |
|                                       | 40 lb <sub>f</sub> -in. (UL) |
| Stripping length                      | 18 mm                        |

### UL specifications

|                                                 |                                    |
|-------------------------------------------------|------------------------------------|
| UL class                                        | Type 4 SPD for Type 2 applications |
| Maximum continuous operating voltage MCOV (L-L) | 528 V AC                           |
| Maximum continuous operating voltage MCOV (L-N) | 264 V AC                           |
| Maximum continuous operating voltage MCOV (L-G) | 528 V AC                           |
| Maximum continuous operating voltage MCOV (N-G) | 264 V AC                           |
| Nom. voltage                                    | 240/415 V AC                       |
| Mode of protection                              | L-L                                |
|                                                 | L-N                                |
|                                                 | L-G                                |
|                                                 | N-G                                |
| Power distribution system                       | 3Y                                 |
| Nominal frequency                               | 50/60 Hz                           |
| Voltage protection rating VPR (L-L)             | 2 kV                               |
| Voltage protection rating VPR (L-N)             | 1.2 kV                             |

# Lightning arrester type 1 - FLT-CP-PLUS-2S-350 - 2882666

## Technical data

### UL specifications

|                                       |                  |
|---------------------------------------|------------------|
| Voltage protection rating VPR (L-G)   | 2 kV             |
| Voltage protection rating VPR (N-G)   | 1.5 kV           |
| Nominal discharge current $I_n$ (L-L) | 20 kA            |
| Nominal discharge current $I_n$ (L-N) | 20 kA            |
| Nominal discharge current $I_n$ (L-G) | 20 kA            |
| Nominal discharge current $I_n$ (N-G) | 20 kA            |
| Follow current (L-N)                  | 10 kA (264 V AC) |
| Follow current (N-G)                  | 200 A (264 V AC) |

## Classifications

### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27140201 |
| eCl@ss 4.1 | 27130801 |
| eCl@ss 5.0 | 27130801 |
| eCl@ss 5.1 | 27130801 |
| eCl@ss 6.0 | 27130802 |
| eCl@ss 7.0 | 27130802 |
| eCl@ss 8.0 | 27130802 |

### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC000941 |
| ETIM 3.0 | EC000941 |
| ETIM 4.0 | EC000381 |
| ETIM 5.0 | EC000381 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30212010 |
| UNSPSC 7.0901 | 39121610 |
| UNSPSC 11     | 39121610 |
| UNSPSC 12.01  | 39121610 |
| UNSPSC 13.2   | 39121620 |

## Approvals

### Approvals

#### Approvals

UL Recognized / cUL Recognized / KEMA-KEUR / CCA / IECCE CB Scheme / EAC / cULus Recognized

## Lightning arrester type 1 - FLT-CP-PLUS-2S-350 - 2882666

### Approvals

Ex Approvals

Approvals submitted

### Approval details

UL Recognized 

cUL Recognized 

KEMA-KEUR 

CCA

IECEE CB Scheme 

EAC

cULus Recognized 

### Accessories

Accessories

Device marking

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128



Zack marker strip, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into tall marker groove, for terminal block width: 18 mm, Lettering field: 18 x 5 mm

## Lightning arrester type 1 - FLT-CP-PLUS-2S-350 - 2882666

### Accessories

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128



Zack marker strip, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into tall marker groove, for terminal block width: 18 mm, Lettering field: 18 x 5 mm

---

### End block

End clamp - CLIPFIX 35 - 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

---

### Labeled device marker

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: 18 x 5 mm

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: 18 x 5 mm

---

### Marker pen

Marker pen - B-STIFT - 1051993



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

---

### Terminal marking

## Lightning arrester type 1 - FLT-CP-PLUS-2S-350 - 2882666

### Accessories

Flat zack marker sheet - ZBFM 5/WH:UNBEDRUCKT - 0803595



Flat zack marker sheet, Sheet, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into flat marker groove, for terminal block width: 5.2 mm, Lettering field: 5 x 4.5 mm

### Spare parts

Type 1 surge protection plug - FLT-CP-PLUS-350-ST - 2859913



Type 1 / Class I / B arrester (lightning arrester) replacement plug for paths L-N and L-PEN, can be combined with FLASHTRAB compact series of products.

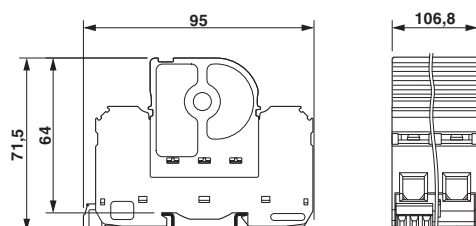
Type 1 surge protection plug - FLT-CP-N/PE-350-ST - 2859686



Type 1 / Class I / B arrester (lightning arrester) replacement plug for path N-PE, can be combined with FLASHTRAB compact series of products.

### Drawings

Dimensioned drawing



Circuit diagram

