

# Lightning arrester type 1 - FLT-PLUS CTRL-3.0 - 2800168

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Type 1 / Class I (lightning current arrester) with arc chopping spark gap and ignition electronics, quenching plates for high mains follow-through current quenching capacity, 1-channel. Protection level: 3 kV. Housing width: 35 mm (2 Div.)

The illustration shows version FLT-PLUS CTRL-0,9

## Why buy this product

- High discharge capacity
- Good follow current quenching capacity with higher rated voltage
- Direct parallel connection with type 2 arresters supported
- Single-channel
- Triggered



## Key commercial data

|                                      |   |
|--------------------------------------|---|
| Packing unit                         | 1 pc  |
| GTIN                                 | <br>4 046356 497558 |
| Weight per Piece (excluding packing) | 567.9 g   |
| Custom tariff number                 | 85363010  |
| Country of origin                    | Germany   |
| Note                                 | Made to Order (non-returnable)  |

## Technical data

### Dimensions

|                  |         |
|------------------|---------|
| Height           | 150 mm  |
| Width            | 35.5 mm |
| Depth            | 80.5 mm |
| Horizontal pitch | 2 Div.  |

### Ambient conditions

|                                  |                  |
|----------------------------------|------------------|
| Degree of protection             | IP20             |
| Ambient temperature (operation)  | -40 °C ... 85 °C |
| Permissible humidity (operation) | ≤ 95 %           |

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## Technical data

### General

|  |                                  |
|--|----------------------------------|
| IEC power supply system                  | TT                               |
|  | TN-C                             |
|  | TN-S                             |
| Housing material                         | PA-GF                            |
| Inflammability class according to UL 94  | V0                               |
| Color                                    | black                            |
| Standards for air and creepage distances | EN 60664-1                       |
|  | EN61643-11                       |
| Mounting type                            | DIN rail: 35 mm                  |
| Type                                     | Rail-mountable module, one-piece |
| Number of positions                      | 1                                |
| Surge protection fault message           | None                             |
| Direction of action                      | 1L-N/PE                          |

### Protective circuit

|  |                     |
|--|---------------------|
| IEC test classification  | I                   |
|  | T1                  |
| EN type  | T1                  |
| Nominal voltage $U_N$  | 230 V AC (400 V AC) |
| Maximum continuous operating voltage $U_C$                       | 440 V AC            |
| Maximum continuous operating voltage $U_C$ (L-N)                 | 440 V AC            |
| Maximum continuous operating voltage $U_C$ (L-PEN)               | 440 V AC            |
| $U_T$ (TOV-proof)  | 580 V AC (5 sec.)   |
| $U_T$ (TOV-safe)   | 1640 V AC (200 ms)  |
| Nominal frequency $f_N$  | 50 Hz               |
|  | 60 Hz               |
| Residual current $I_{PE}$  | $\leq 0.1$ mA       |
| Standby power consumption $P_C$                                  | $\leq 44$ mVA       |
| Max. discharge current $I_{max}$ (8/20) $\mu$ s                  | 50 kA               |
| Nominal discharge current $I_n$ (8/20) $\mu$ s                   | 50 kA               |
| Nominal discharge current $I_n$ (8/20) $\mu$ s (L-N)             | 50 kA               |
| Nominal discharge current $I_n$ (8/20) $\mu$ s (L-PEN)           | 50 kA               |
| Impulse discharge current (10/350) $\mu$ s charge                | 25 As               |
| Impulse discharge current (10/350) $\mu$ s, specific energy      | 625 kJ/ $\Omega$    |
| Impulse discharge current (10/350) $\mu$ s, peak value $I_{imp}$ | 50 kA               |
| Front of wave sparkover voltage at 6 kV (1.2/50) $\mu$ s         | $\leq 3$ kV         |
| Voltage protection level $U_p$                                   | $\leq 3$ kV         |
| Voltage protection level $U_p$ (L-N)                             | $\leq 3$ kV         |
| Voltage protection level $U_p$ (L-PEN)                           | $\leq 3$ kV         |
| Response time  | $\leq 100$ ns       |

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## Technical data

### Protective circuit

|   |                  |
|---|------------------|
| Response time (L-N)   | ≤ 100 ns         |
| Response time (L-PEN)   | ≤ 100 ns         |
| Max. backup fuse with branch wiring                                       | 500 A (NH-gL)    |
| Short-circuit resistance I <sub>p</sub> with max. backup fuse (effective) | 25 kA (440 V AC) |
|   | 50 kA (350 V AC) |
| Follow current quenching capacity I <sub>f</sub>                          | 25 kA (440 V AC) |
|   | 50 kA (350 V AC) |

### Connection, protective circuit

|  |                                |
|--|--------------------------------|
| Connection method                      | Screw connection               |
| Connection type IN                     | Biconnect screw terminal block |
| Connection type OUT                    | Biconnect screw terminal block |
| Connection method                      | Biconnect terminal block       |
| Screw thread                           | M6                             |
| Tightening torque                      | 8 Nm                           |
| Stripping length                       | 19 mm                          |
| Conductor cross section stranded min.  | 16 mm <sup>2</sup>             |
| Conductor cross section stranded max.  | 35 mm <sup>2</sup>             |
| Conductor cross section solid min.     | 10 mm <sup>2</sup>             |
| Conductor cross section solid max.     | 50 mm <sup>2</sup>             |
| Conductor cross section AWG/kcmil min. | 6                              |
| Conductor cross section AWG/kcmil max  | 1                              |

### Standards and Regulations

|                       |                          |
|-----------------------|--------------------------|
| Standards/regulations | IEC 61643-1 2005         |
|                       | DIN EN 61643-11 2002     |
|                       | DIN EN 61643-11/A11 2007 |

## Classifications

### eCl@ss

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

### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC000381 |
| ETIM 3.0 | EC000381 |

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## Classifications

### ETIM

|          |          |
|----------|----------|
| 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

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#### Approvals

UL Recognized / KEMA-KEUR / cUL Recognized / GL / CCA / IECCEB Scheme / EAC / cULus Recognized

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#### Ex Approvals

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#### Approvals submitted

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## Approval details

UL Recognized

KEMA-KEUR


cUL Recognized

GL


CCA

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## Approvals

IECEE CB Scheme 

EAC

cULus Recognized 

## Accessories

### Accessories

#### Bridge

Wiring bridge - MPB 18/1-57 - 2809238



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 57-pos.

Wiring bridge - MPB 18/1-12 - 2748593



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 12-pos.

Wiring bridge - MPB 18/1- 9 - 2748580



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 9-pos.

Wiring bridge - MPB 18/1- 8 - 2748577



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 8-pos.

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## Accessories

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Wiring bridge - MPB 18/1- 6 - 2748564



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 6-pos.

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Wiring bridge - MPB 18/1- 4 - 2809225



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 4-pos.

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- MPB 18/1- 3 - 2809212

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Wiring bridge - MPB 18/1- 2 - 2809209



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 2-pos.

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## 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

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## End block

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## Accessories

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

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## 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: 18 x 5 mm

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

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## 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

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## Drawings

Circuit diagram

