

# FLT-SEC-P-T1-3S-350/25-FM - Type 1+2 combined lightning current and surge arrester



2905421

<https://www.phoenixcontact.com/in/products/2905421>

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Plug-in lightning current arrester, in accordance with Type 1/Class I, for 3-phase power supply networks, with separate N and PE (L1, L2, L3, PE, N).

## 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	2905421
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	CL1
Product Key	CL1171
Catalog Page	Page 37 (C-4-2019)
GTIN	4046356950114
Weight per Piece (including packing)	1,455 g
Weight per Piece (excluding packing)	1,371 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 $\mu$ s)
	SPD according to AS/NZS 1768 Cat. C3

### Product properties

IEC test classification	I / II
	T1 / T2
EN type	T1 / T2
IEC power supply system	TN-S
	TT
Type	DIN rail module, two-section, divisible
Product type	Combination type
Product family	SEC Family
Number of positions	4
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)
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#### 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
Conductor cross section flexible	2.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Conductor cross section rigid	2.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Conductor cross section AWG	13 ... 2

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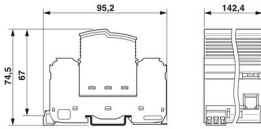
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Connection method	Fork-type cable lug
Conductor cross section flexible	1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>

## Remote fault indicator contact

Connection method	Plug-in/screw connection via COMBICON
Screw thread	M2
Tightening torque	0.25 Nm
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section rigid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	28 ... 16

## Dimensions

Dimensional drawing	
Width	142.4 mm
Height	95.2 mm
Depth	74.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	8 Div.

## Material specifications

Flammability rating according to UL 94	V-0
CTI value of material	600
Insulating material	PA6.6-FR 20% GF PBT-FR
Material group	I
Housing material	PA 6.6-FR 20 % GF PBT-FR

## Mechanical properties

### Mechanical data

Open side panel	No
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## Protective circuit

Mode of protection	L-N L-PE N-PE
Direction of action	3L-N & N-PE
Nominal voltage $U_N$	240/415 V AC (TN-S) 240/415 V AC (TT)
Nominal frequency $f_N$	50 Hz (60 Hz)

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Maximum continuous voltage $U_C$	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
Nominal discharge current $I_n$ (8/20) μs (N-PE)	100 kA
Maximum discharge current $I_{max}$ (8/20) μs (L-N)	50 kA
Maximum discharge current $I_{max}$ (8/20) μs (L-PE)	50 kA
Impulse discharge current (10/350) μs (L-N), charge	12.5 As
Impulse discharge current (10/350) μs (L-N), specific energy	160 kJ/Ω
Impulse discharge current (10/350) μs (L-N), peak current value $I_{imp}$	25 kA
Impulse discharge current (10/350) μs (L-PE), charge	12.5 As
Impulse discharge current (10/350) μs (L-PE), specific energy	160 kJ/Ω
Impulse discharge current (10/350) μs (L-PE), peak current value $I_{imp}$	25 kA
Impulse discharge current (10/350) μs (N-PE), charge	50 As
Impulse discharge current (10/350) μs (N-PE), specific energy	2500 kJ/Ω
Impulse discharge current (10/350) μs (N-PE), peak current value $I_{imp}$	100 kA
Total discharge current $I_{total}$ (10/350) μs	100 kA
Follow current quenching capacity $I_{fi}$ (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)	≤ 1.5 kV
Voltage protection level $U_p$ (L-PE)	≤ 2.5 kV
Voltage protection level $U_p$ (N-PE)	≤ 1.5 kV
Residual voltage $U_{res}$ (L-N)	≤ 1.5 kV (at $I_n$ )
Residual voltage $U_{res}$ (L-PE)	≤ 2.5 kV (at $I_n$ )
Residual voltage $U_{res}$ (N-PE)	≤ 1.5 kV (at $I_n$ )
TOV behavior at $U_T$ (L-N)	415 V AC (5 s / withstand mode) 457 V AC (120 min / withstand mode)
TOV behavior at $U_T$ (N-PE)	1200 V AC (200 ms / withstand mode)
Response time $t_A$	≤ 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 quenching capacity $I_{fi}$ (L-N)	100 kA (264 V AC)

## Environmental and real-life conditions

### Ambient conditions

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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	≤ 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 (5 - 500 Hz/2.5 h/X, Y, Z)

## Approvals

### UL specifications

Maximum continuous operating voltage MCOV (L-L)	700 V AC
Maximum continuous operating voltage MCOV (L-N)	350 V AC
Maximum continuous operating voltage MCOV (L-G)	350 V AC
Maximum continuous operating voltage MCOV (N-G)	350 V AC
Short-circuit current rating (SCCR)	50 kA
Voltage protection rating VPR (L-L)	2000 V
Voltage protection rating VPR (L-N)	1500 V
Voltage protection rating VPR (L-G)	1500 V
Voltage protection rating VPR (N-G)	1200 V
Nominal discharge current $I_n$	20 kA
Mode of protection	L-L L-N L-G N-G
Nominal voltage	240/415 V AC
Rated load current $I_L$	50 A
Power distribution system	Wye
Nominal frequency	50/60 Hz
SPD Type	2CA

### UL indicator/remote signaling

AC 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
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### EN 61643-11

Standards/specifications	EN 61643-11
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## Mounting

Mounting type	DIN rail: 35 mm
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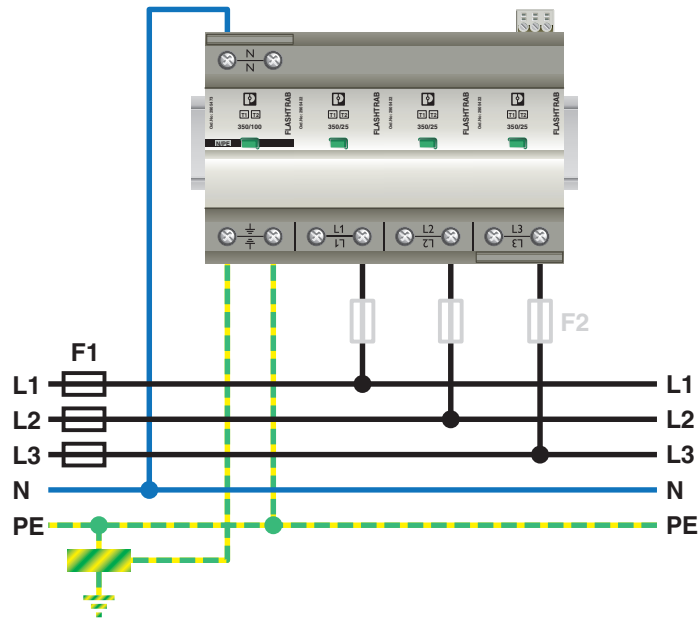


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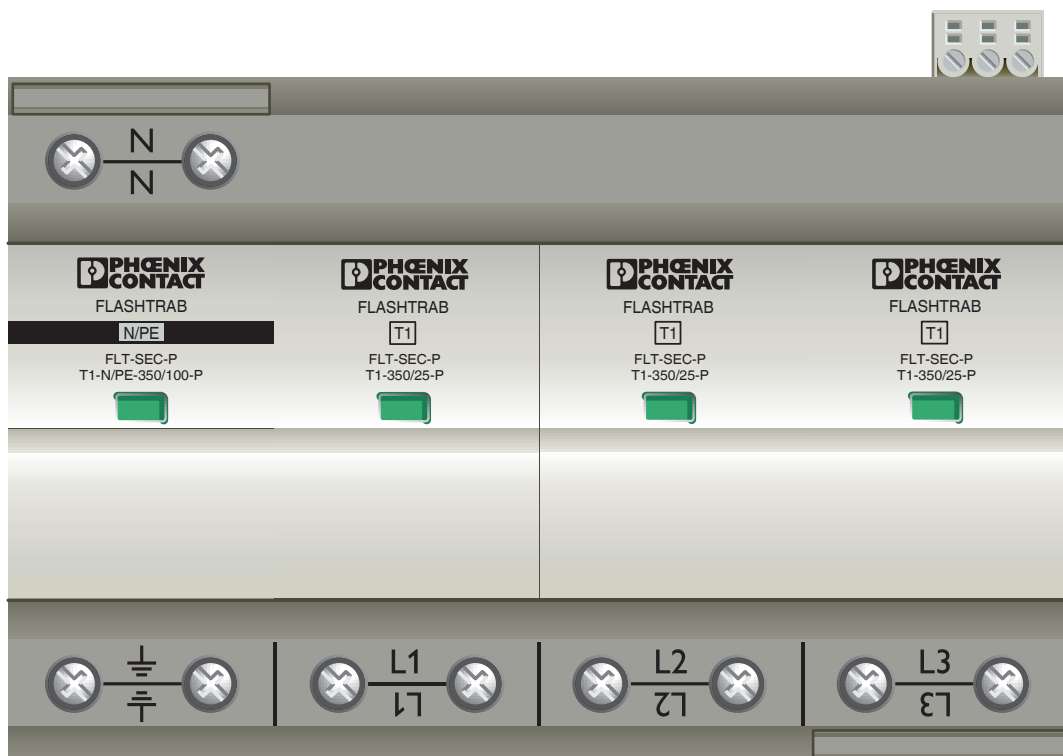
<https://www.phoenixcontact.com/in/products/2905421>

## Drawings

Application drawing



Product drawing

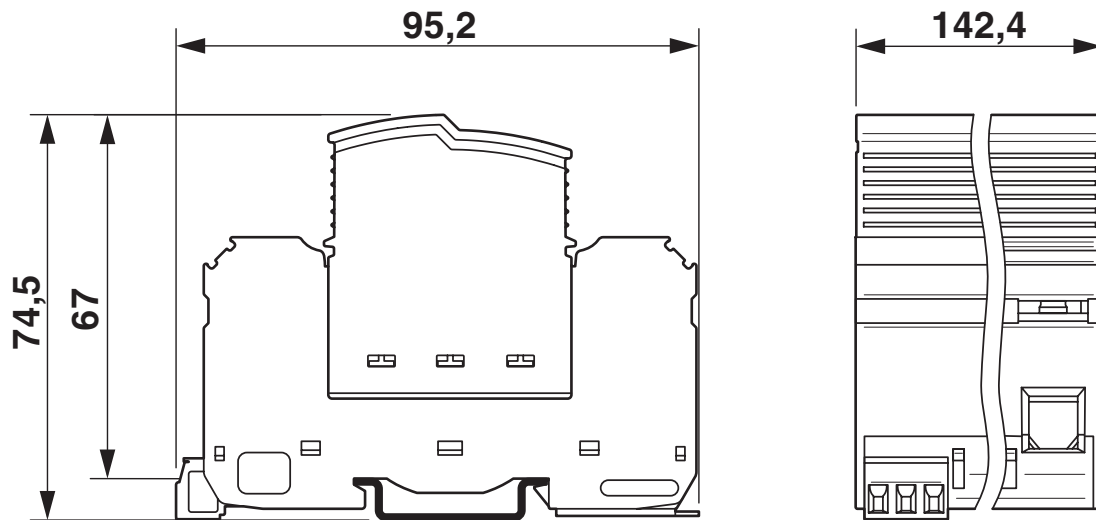


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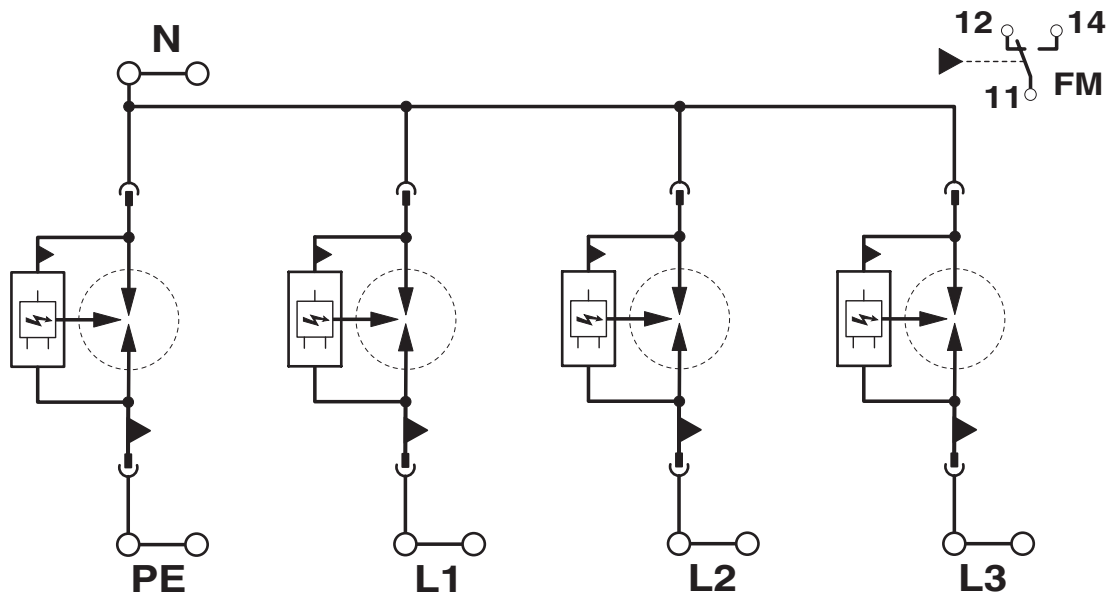
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Dimensional drawing



Circuit diagram





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## Approvals



**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



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



**DNV GL**  
Approval ID: TAE000040S

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## Classifications

### ECLASS

ECLASS-11.0	27130802
ECLASS-13.0	27171201

### ETIM

ETIM 8.0	EC000381
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### UNSPSC

UNSPSC 21.0	39121600
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## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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## Accessories

### CLIPFIX 35 - End clamp

3022218

<https://www.phoenixcontact.com/in/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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### X-PEN 0,35 - Marker pen

0811228

<https://www.phoenixcontact.com/in/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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## EML (20XE)R - Label

0803452

<https://www.phoenixcontact.com/in/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

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## EML (20XE)R YE - Label

0803453

<https://www.phoenixcontact.com/in/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

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## ZBN 18:UNBEDRUCKT - Zack marker strip

2809128

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



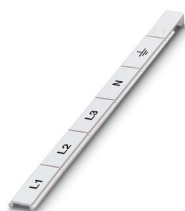
Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snapped, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

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

2749576

<https://www.phoenixcontact.com/in/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/in/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/in/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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## FLT-SEC-P-T1-350/25-P - Type 1 surge protection plug

2905422

<https://www.phoenixcontact.com/in/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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## FLT-SEC-P-T1-N/PE-350/100-P - Type 1 surge protection plug

2905473

<https://www.phoenixcontact.com/in/products/2905473>



Replacement plug for lightning current arresters from the FLASHTRAB SEC product range, for the N-PE path.

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