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

2905415

https://www.phoenixcontact.com/us/products/2905415

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Plug-in lightning current arrester, in accordance with Type 1/Class I, for 1-phase power supply networks with separate N and PE (L1, 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	2905415
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL01
Product key	CL1171
Catalog page	Page 39 (C-4-2019)
GTIN	4055626045887
Weight per piece (including packing)	724 g
Weight per piece (excluding packing)	724 g
Customs tariff number	85363010
Country of origin	DE

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
EN type	T1 / T2
IEC power supply system	TN-S
	TT
Type	DIN rail module, two-section, divisible
Number of positions	2
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

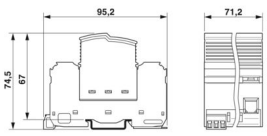
Connection method	Screw connection
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	18 mm
Conductor cross section flexible	2.5 mm² ... 35 mm²
Conductor cross section rigid	2.5 mm² ... 35 mm²
Conductor cross section AWG	13 ... 2
Connection method	Fork-type cable lug

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	71.2 mm
Height	95.2 mm
Depth	74.5 mm
Horizontal pitch	4 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
	PBT-FR
Material group	I
Housing material	PA 6.6-FR 20 % GF
	PBT-FR

Mechanical properties

Mechanical data

Open side panel	No

Protective circuit

Mode of protection	L-N
	L-PE
	N-PE
Direction of action	1L-N & N-PE
Nominal voltage U_N	240 V AC (TN-S)

	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)
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	50 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

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)
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	350 V AC
Short-circuit current rating (SCCR)	50 kA
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-N
	L-G
	N-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_f-in.
Conductor cross section AWG	3 ... 2

Standards and regulations

Standards/specifications	IEC 61643-11
Note	2011

EN 61643-11

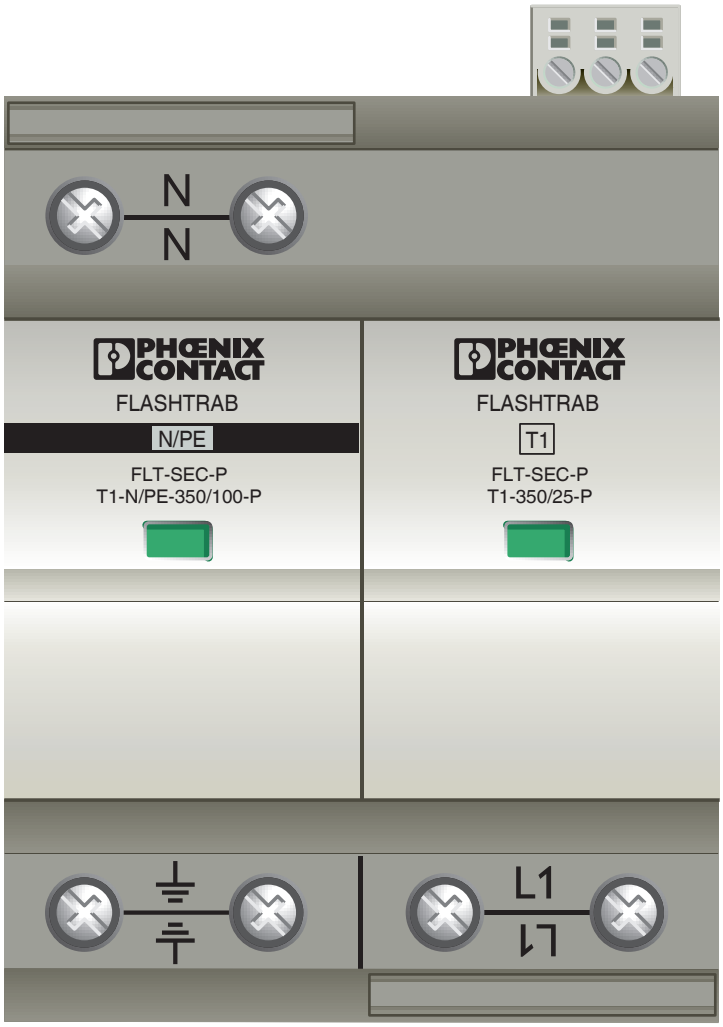
Standards/specifications	EN 61643-11
Note	2012

Mounting

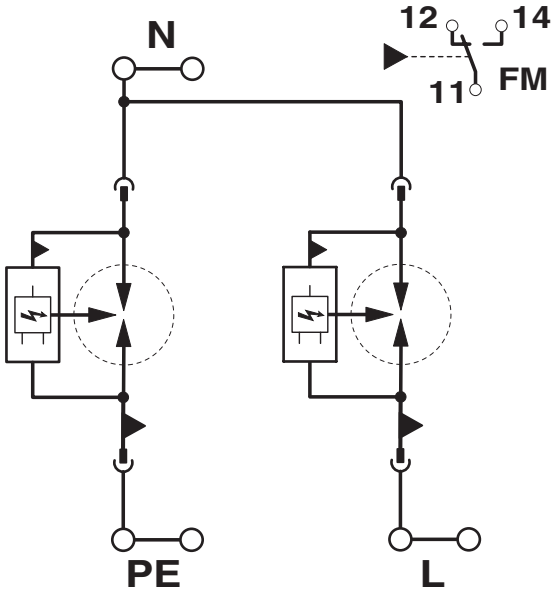
Mounting type	DIN rail: 35 mm

Drawings

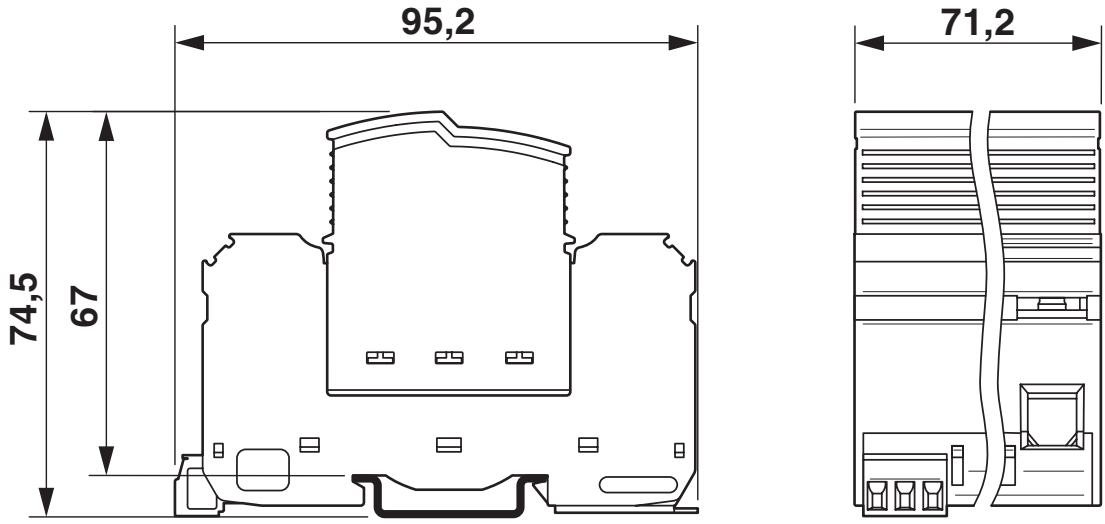
Product drawing



Circuit diagram



Dimensional drawing



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2905415

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

Classifications

ECLASS

ECLASS-11.0	27130802
ECLASS-13.0	27171201

ETIM

ETIM 9.0	EC000381

UNSPSC

UNSPSC 21.0	39121600

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c)

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	3793ac32-2bdd-42aa-8fa0-96238a237ef9

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

EML (20XE)R - Label

0803452

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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

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

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

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

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

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

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

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

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

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

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.

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

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FLT-SEC-P-T1-N/PE-350/100-P - Type 1 surge protection plug

2905473

https://www.phoenixcontact.com/us/products/2905473



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

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