

# Combination type 1/2 protective device - FLT-SEC-P-T1-3C-440/35-FM - 2905988

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Plug-in lightning current arrester for higher nominal voltages, according to Type 1/Class I, for 3-phase power supply networks in TN and IT versions (L1, L2, L3, PE).

## Your advantages

- Spark gap has no line follow current
- Free of leakage current
- High continuous voltage of 440 V AC for 400/690 V AC networks with high voltage fluctuations
- Satisfies TOV requirements for use in IT systems
- Pluggable
- Low voltage protection level of 2.5 kV
- Optical, mechanical status indicator
- With floating remote indication contact
- Plugs can be checked with CHECKMASTER 2



## Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4055626013275

## Technical data

### Dimensions

Height	95.2 mm
Width	106.8 mm
Depth	74.5 mm
Horizontal pitch	6 Div.

### Ambient conditions

Degree of protection	IP20 (only when all terminal points are used)
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## 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)	30g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	5g (5 - 500 Hz/2.5 h/X, Y, Z)

### General

IEC test classification	I / II
	T1 / T2
EN type	T1 / T2
IEC power supply system	TN-C
	IT
Mode of protection	L-PE
	L-PEN
Mounting type	DIN rail: 35 mm
Color	light grey RAL 7035
	traffic grey A RAL 7042
Housing material	PA 6.6-FR 20 % GF
	PBT-FR
Degree of pollution	2
Flammability rating 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 $U_N$	400/690 V AC (TN-C)
	400 V AC (IT)
Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous voltage $U_C$	440 V AC
Rated load current $I_L$	125 A (< 55 °C)
Residual current $I_{PE}$	< 5 µA
Nominal discharge current $I_n$ (8/20) µs	35 kA
Maximum discharge current $I_{max}$ (8/20) µs	50 kA
Impulse discharge current (10/350) µs, charge	17.5 As
Impulse discharge current (10/350) µs, specific energy	310 kJ/Ω
Impulse discharge current (10/350) µs, peak value $I_{imp}$	35 kA
Follow current interrupt rating $I_{fi}$	50 kA
Short-circuit current rating $I_{SCCR}$	50 kA

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## Technical data

### Protective circuit

Voltage protection level $U_p$	$\leq 2.5$ kV
Residual voltage $U_{res}$	$\leq 2.5$ kV (at $I_n$ )
	$\leq 2.7$ kV (at $I_{max}$ )
	$\leq 2$ kV (at 17.5 kA)
	$\leq 1.7$ kV (at 7 kA)
	$\leq 1.5$ kV (at 3.5 kA)
TOV behavior at $U_T$	580 V AC (5 s / withstand mode)
	800 V AC (120 min / withstand mode)
	1640 V AC (200 ms / safe failure 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	400 A (gG)

### Indicator/remote signaling

Switching function	PDT 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 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 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section solid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	28 ... 16

### 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 solid	2.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Conductor cross section AWG	13 ... 2
Connection method	Fork-type cable lug
Conductor cross section flexible	1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>

### UL specifications

SPD Type	2CA
Maximum continuous operating voltage MCOV (L-L)	880 V AC

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## Technical data

### UL specifications

Maximum continuous operating voltage MCOV (L-G)	440 V AC
Nom. voltage	400 V AC
	400/690 V AC
Rated load current I <sub>L</sub>	50 A
Mode of protection	L-L
	L-G
Power distribution system	Delta
	Wye
Nominal frequency	50/60 Hz
Voltage protection rating VPR (L-L)	3000 V
Voltage protection rating VPR (L-G)	1800 V
Nominal discharge current I <sub>n</sub>	20 kA
Short-circuit current rating (SCCR)	25 kA

### UL indicator/remote signaling

Operating voltage	125 V AC
Operating current	1 A AC
Tightening torque	4 lb <sub>F</sub> -in.
Conductor cross section AWG	30 ... 14

### UL connection data

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

### Standards and Regulations

Standards/regulations	IEC 61643-11 2011
	EN 61643-11 2012

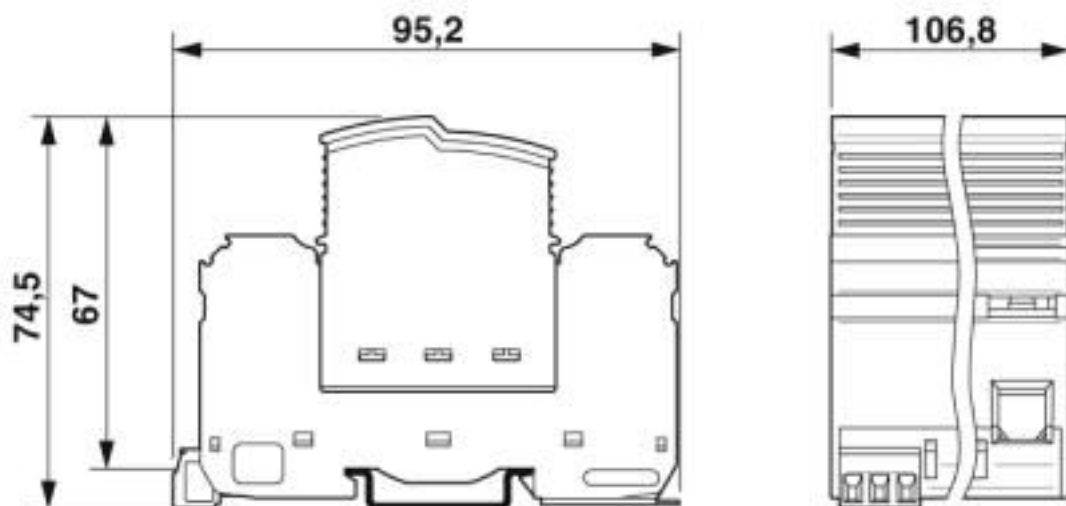
### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

# Combination type 1/2 protective device - FLT-SEC-P-T1-3C-440/35-FM - 2905988

Dimensional drawing



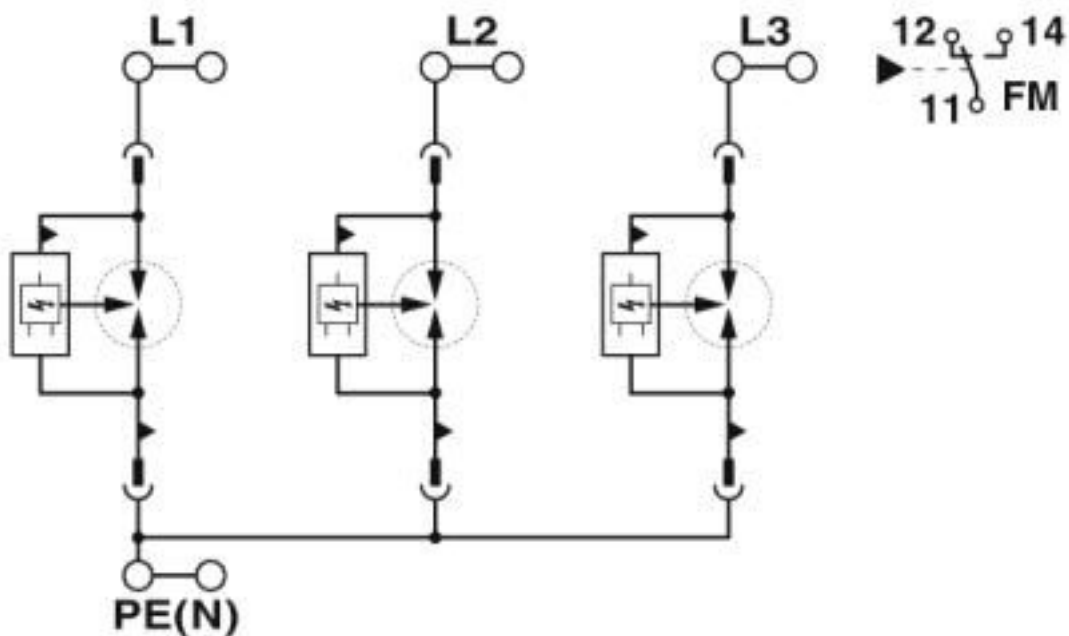
# Combination type 1/2 protective device - FLT-SEC-P-T1-3C-440/35-FM - 2905988

Product drawing



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Circuit diagram



## Classifications

eCl@ss

eCl@ss 10.0.1	27130802
eCl@ss 4.0	27130800
eCl@ss 4.1	27130800
eCl@ss 5.0	27130800
eCl@ss 5.1	27130800
eCl@ss 6.0	27130800
eCl@ss 7.0	27130802
eCl@ss 8.0	27130802
eCl@ss 9.0	27130802

ETIM

ETIM 4.0	EC000381
ETIM 5.0	EC000381
ETIM 6.0	EC000381
ETIM 7.0	EC000381

UNSPSC

UNSPSC 13.2	39121620
UNSPSC 18.0	39121620
UNSPSC 19.0	39121620
UNSPSC 20.0	39121620

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## Classifications

### UNSPSC

UNSPSC 21.0	39121620
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## Approvals

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

### Ex Approvals

## Approval details

CCA	NTR-NL 7480
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KEMA-KEUR		<a href="http://www.dekra-certification.com">http://www.dekra-certification.com</a>	2188430.01
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IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	NL-40634
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EAC			RU C-DE.*09.B.00169
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UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 330181
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cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 330181
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cULus Recognized			
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## Combination type 1/2 protective device - FLT-SEC-P-T1-3C-440/35-FM - 2905988

### Accessories

#### Accessories

#### Device marking

Label - EML (20XE)R - 0803452



Label, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: adhesive, lettering field size: continuous x 20#mm

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Label - EML (20XE)R YE - 0803453



Label, Roll, yellow, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: adhesive, lettering field size: continuous x 20#mm

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Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, 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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Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, 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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### 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

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### Accessories

#### 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 size: 18 x 5 mm, Number of individual labels: 5

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 size: 18 x 5 mm, Number of individual labels: 5

#### Marker pen

Marker pen - X-PEN 0,35 - 0811228



Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

#### Terminal marking

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



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

#### Spare parts

Type 1 surge protection plug - FLT-SEC-P-T1-440/35-P - 2905989



Replacement plug for lightning current arresters from the FLASHTRAB SEC PLUS 440 product range, for L-N and L-PE paths.

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### Accessories

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PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>

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