

FLT-SEC-P-T1-1C-440/35-FM - Type 1+2 combined lightning current and surge arrester



2905987

<https://www.phoenixcontact.com/pc/products/2905987>

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

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
- Maximum performance in a minimum amount of space: compact design with high discharge capacity at high nominal voltage

Commercial data

Item number	2905987
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	CL1172
Catalog page	Page 36 (C-4-2019)
GTIN	4055626013268
Weight per piece (including packing)	417 g
Weight per piece (excluding packing)	397.61 g
Customs tariff number	85363030
Country of origin	DE

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2905987

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Technical data

Product properties

Product type	Combination type
Product family	SEC Family
IEC test classification	I / II
	T1 / T2
EN type	T1 / T2
IEC power supply system	TN-C
	IT
Type	DIN rail module, two-section, divisible
Number of positions	1
Surge protection fault message	Optical, remote indicator contact

Data management status

Article revision	06
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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 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

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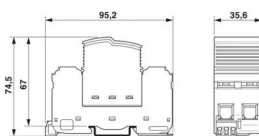


2905987

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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 ² ... 1.5 mm ²
Conductor cross section rigid	0.14 mm ² ... 1.5 mm ²
Conductor cross section AWG	28 ... 16

Dimensions

Dimensional drawing	
Width	35.6 mm
Height	95.2 mm
Depth	74.5 mm
Horizontal pitch	2 Div.

Material specifications

Color (Male connector)	light gray (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
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Protective circuit

Mode of protection	L-N L-PE L-PEN N-PE (4+0)
Direction of action	L-N / L-PEN
Nominal voltage U _N	400 V AC (TN-C) 400 V AC (IT)

FLT-SEC-P-T1-1C-440/35-FM - Type 1+2 combined lightning current and surge arrester



2905987

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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 μ A
Nominal discharge current I_n (8/20) μ s	35 kA
Maximum discharge current I_{max} (8/20) μ s	50 kA
Impulse discharge current (10/350) μ s, charge	17.5 As
Impulse discharge current (10/350) μ s, specific energy	310 kJ/ Ω
Impulse discharge current (10/350) μ s, peak value I_{imp}	35 kA
Follow current interrupt rating I_{fi}	50 kA
Short-circuit current rating I_{SCCR}	50 kA
Voltage protection level U_p	≤ 2.5 kV
Residual voltage U_{res}	≤ 2.5 kV (at I_n)
	≤ 2.7 kV (at I_{max})
	≤ 2 kV (at 17.5 kA)
	≤ 1.7 kV (at 7 kA)
	≤ 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	≤ 100 ns
Max. backup fuse with V-type through wiring	125 A (gG)
Max. backup fuse with branch wiring	400 A (gG)

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 $\pm X$, $\pm Y$, $\pm Z$)
Vibration (operation)	5g (5 - 500 Hz/2.5 h/X, Y, Z)

Approvals

UL specifications

Maximum continuous operating voltage MCOV	440 V AC
Short-circuit current rating (SCCR)	25 kA
Voltage protection rating VPR	1800 V
Nominal discharge current I_n	20 kA
Mode of protection	L-G
Nominal voltage	400 V AC

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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
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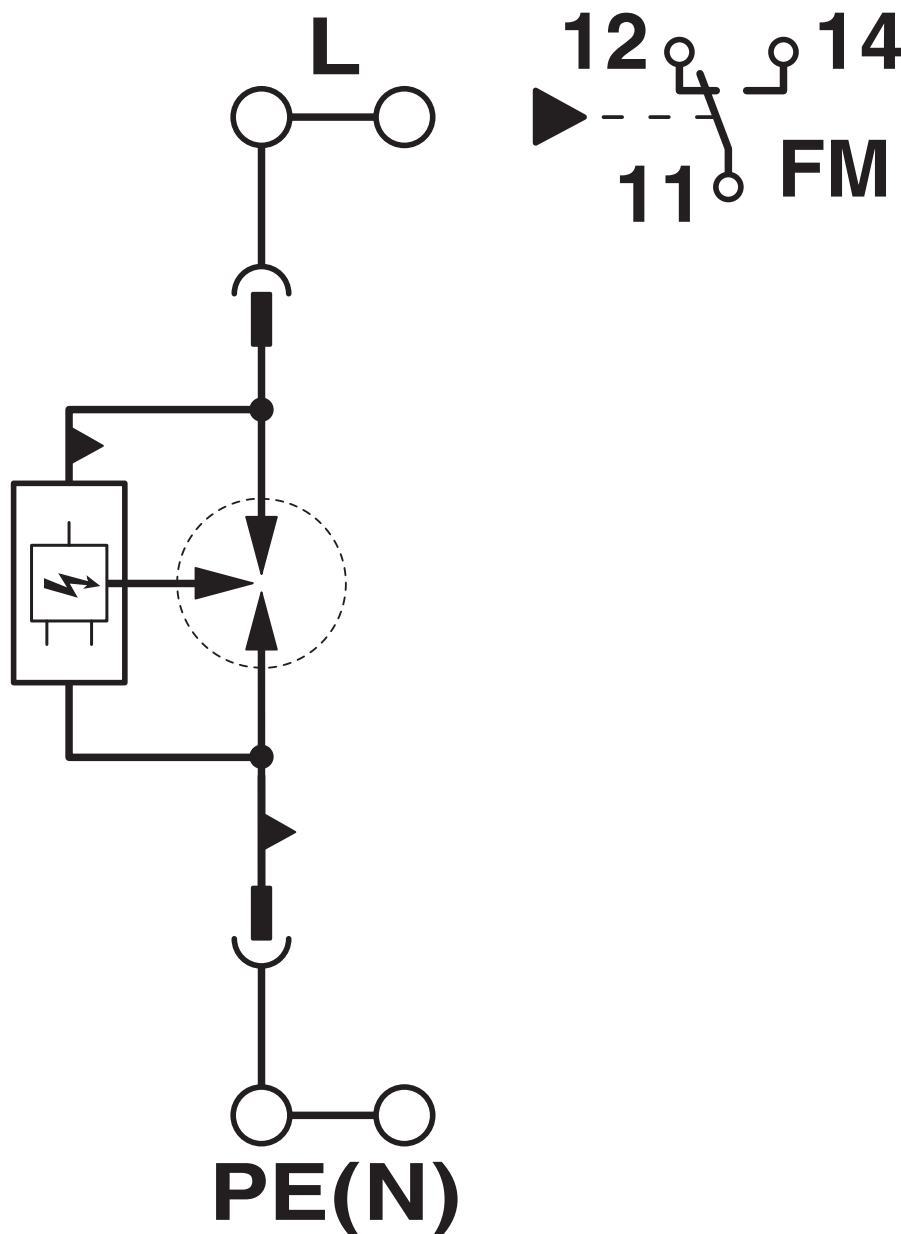
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Drawings

Circuit diagram



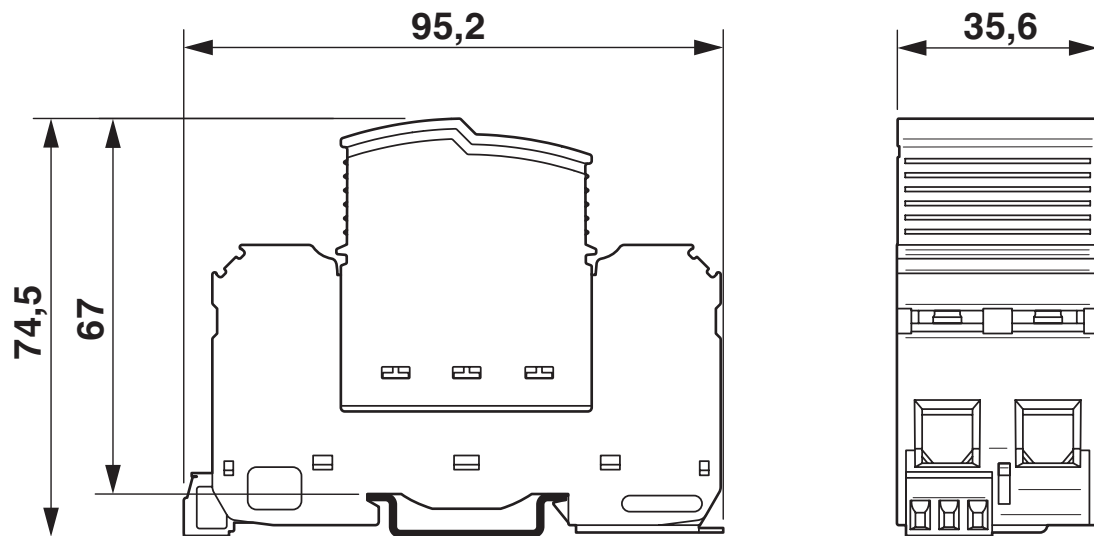
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Dimensional drawing



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Approvals

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cUL Recognized
Approval ID: FILE E 330181



UL Recognized
Approval ID: FILE E 330181



IECEE CB Scheme
Approval ID: NL-40634



EAC
Approval ID: RU C-DE: *09.B.00169

CCA

Approval ID: NTR-NL 7480



KEMA-KEUR
Approval ID: 2188430.01

UAE-RoHS

Approval ID: 23-10-88709

cULus Recognized

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Classifications

ECLASS

ECLASS-11.0	27130802
ECLASS-13.0	27171201

ETIM

ETIM 9.0	EC000381
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UNSPSC

UNSPSC 21.0	39121600
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
China RoHS	
Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits
EU REACH SVHC	
REACH candidate substance (CAS No.)	N,N-dimethylacetamide(CAS: 127-19-5)
SCIP	a93267a7-07ae-4088-8304-d260920be55f

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Accessories

CLIPFIX 35 - End bracket

3022218

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

<https://www.phoenixcontact.com/pc/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, Number of individual labels: 1

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EML (20XE)R YE - Label

0803453

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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/pc/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/pc/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/pc/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/pc/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/pc/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

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X-PEN 0,35 - Marker pen

0811228

<https://www.phoenixcontact.com/pc/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/pc/products/1206463>



Screwdriver, PZ crosshead, VDE insulated, size: PZ 2 x 100 mm, 2-component grip, with non-slip grip

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

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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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