

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



2905987

<https://www.phoenixcontact.com/gb/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
Sales Key	CL1172
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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Technical Data

Product properties

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
Product type	Combination type
Number of positions	1
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

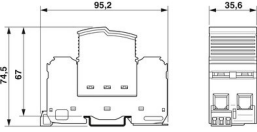
Connection method	Screw connection
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	18 mm
Conductor cross section flexible	2.5 mm ² ... 35 mm ²
Conductor cross section solid	2.5 mm ² ... 35 mm ²
Conductor cross section AWG	13 ... 2
Connection method	Fork-type cable lug
Conductor cross section flexible	1.5 mm ² ... 16 mm ²

Dimensions

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

Material specifications

Color	light grey RAL 7035
	traffic grey A 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)
	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 μ A
Nominal discharge current I_n (8/20) μ s	35 kA
Maximum discharge current I_{max} (8/20) μ s	50 kA

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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 (above mean sea level))
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)

Approval data

UL specifications

Short-circuit current rating (SCCR)	25 kA
Mode of protection	L-G
Nominal voltage	400 V AC
Rated load current I_L	50 A
Power distribution system	Single phase
Nominal frequency	50/60 Hz
SPD Type	2CA
AC operating voltage	125 V AC
AC operating current	1 A AC

UL connection data

Tightening torque	40 lb _F -in.
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Conductor cross section AWG	3 ... 2
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Standards and regulations

Standards/specifications	IEC 61643-11
Standards/specifications	EN 61643-11

Mounting

Mounting type	DIN rail: 35 mm
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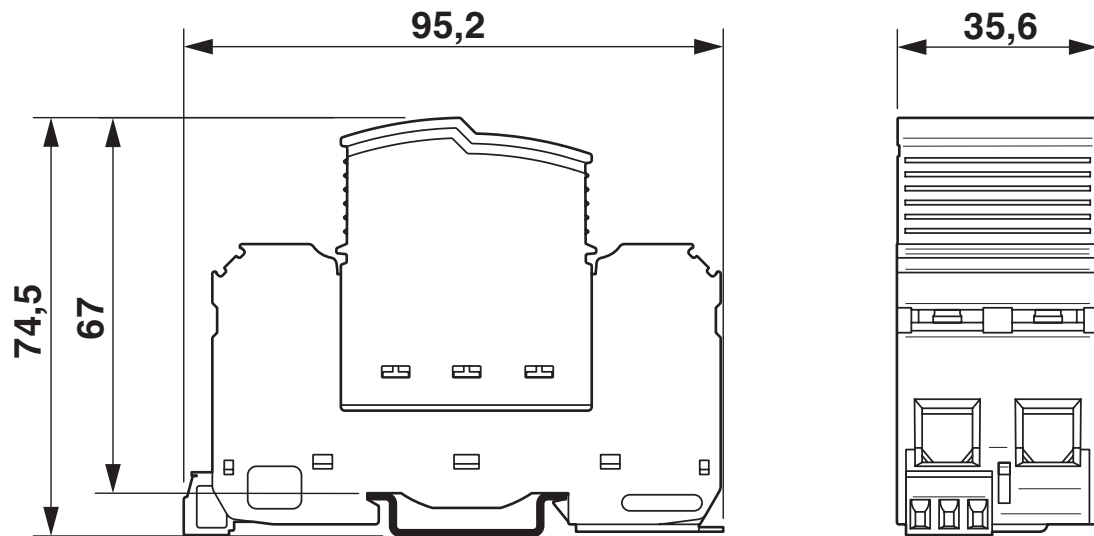
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Drawings

Dimensional drawing

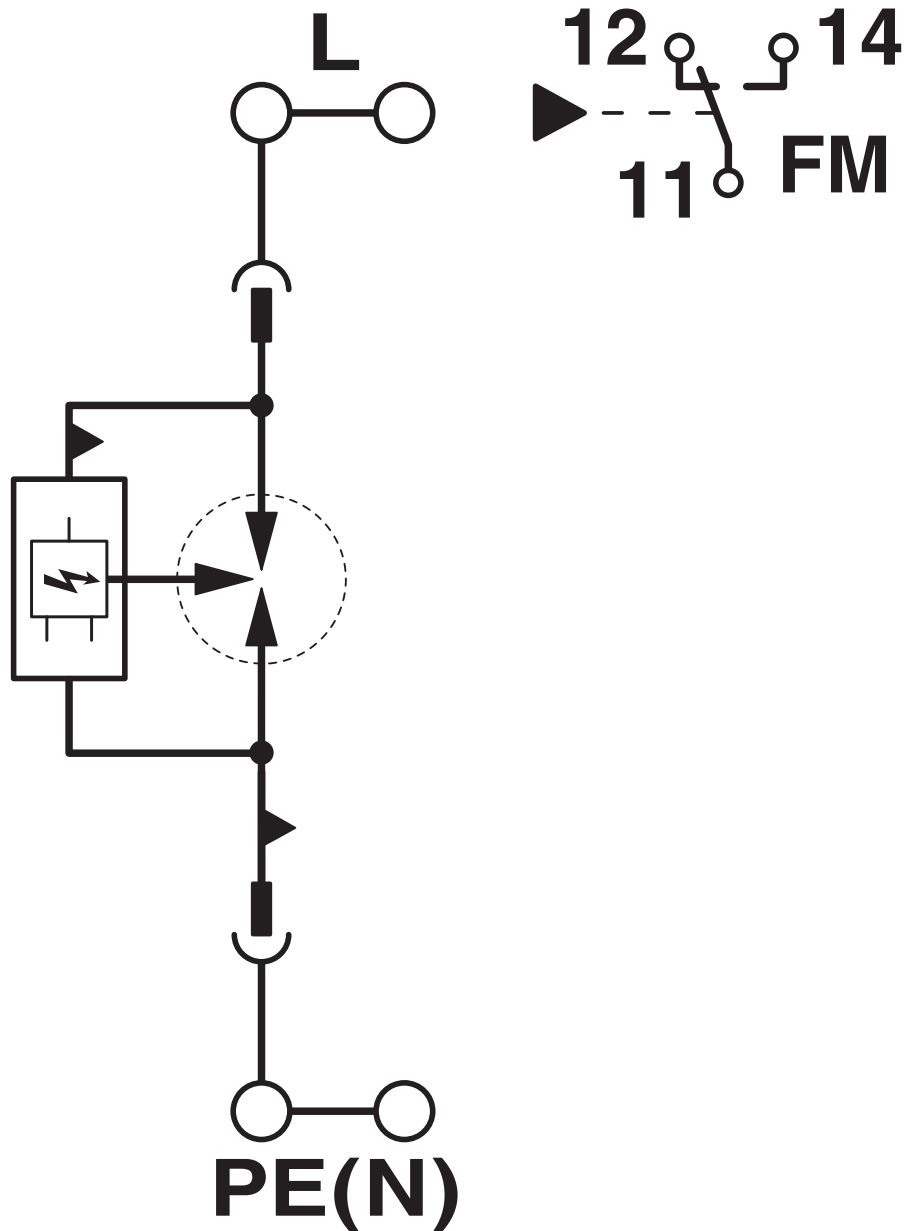


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Circuit diagram



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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-40634



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

CCA

Approval ID: NTR-NL 7480

Nominal Voltage U_N

Nominal Current I_N

Cross Section AWG

Cross Section mm^2

-

-



KEMA-KEUR
Approval ID: 2188430.01

cULus Recognized

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Classifications

ECLASS

ECLASS-9.0	27130802
ECLASS-10.0.1	27130802
ECLASS-11.0	27130802

ETIM

ETIM 8.0	EC000381
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UNSPSC

UNSPSC 21.0	39121600
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Environmental Product Compliance

REACH SVHC	N,N-dimethylacetamide 127-19-5
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

End clamp

End clamp - CLIPFIX 35 - 3022218

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



Marker pen

Marker pen - X-PEN 0,35 - 0811228

<https://www.phoenixcontact.com/gb/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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Label

Label - EML (20XE)R - 0803452

<https://www.phoenixcontact.com/gb/products/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

Label

Label - EML (20XE)R YE - 0803453

<https://www.phoenixcontact.com/gb/products/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

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128

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

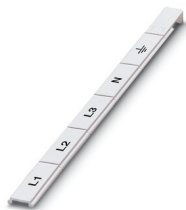


Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snapped, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

Marker for terminal blocks

Marker for terminal blocks - ZBN 18,LGS:L1-N,ERDE - 2749576

<https://www.phoenixcontact.com/gb/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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Marker for terminal blocks

Marker for terminal blocks - ZBN 18,LGS:ERDE - 2749589

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

Flat zack marker sheet

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

<https://www.phoenixcontact.com/gb/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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Type 1 surge protection plug

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

<https://www.phoenixcontact.com/gb/products/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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