

# FLT-SEC-P-T1-3C-440/35-FM - Type 1+2 combined lightning current and surge arrester



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

- 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	2905988
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL01
Product key	CL1172
Catalog page	Page 35 (C-4-2019)
GTIN	4055626013275
Weight per piece (including packing)	1,192.5 g
Weight per piece (excluding packing)	1,084 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
Product family	SEC Family
Number of positions	3
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
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

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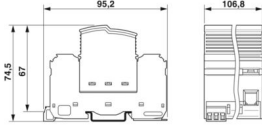


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Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section rigid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	28 ... 16

## Dimensions

Dimensional drawing	
Width	106.8 mm
Height	95.2 mm
Depth	74.5 mm
Horizontal pitch	6 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
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## Protective circuit

Mode of protection	L-PE L-PEN
Direction of action	3L-N/PE
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 $\mu$ A

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Nominal discharge current $I_n$ (8/20) $\mu$ s	35 kA
Maximum discharge current $I_{max}$ (8/20) $\mu$ s	50 kA
Impulse discharge current (10/350) $\mu$ s, charge	17.5 As
Impulse discharge current (10/350) $\mu$ s, specific energy	310 kJ/ $\Omega$
Impulse discharge current (10/350) $\mu$ 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 $U_p$	$\leq 2.5$ 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)

## 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	$\leq 2000$ 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 (L-L)	880 V AC
Maximum continuous operating voltage MCOV (L-G)	440 V AC
Short-circuit current rating (SCCR)	25 kA
Voltage protection rating VPR (L-L)	3000 V
Voltage protection rating VPR (L-G)	1800 V
Nominal discharge current $I_n$	20 kA
Mode of protection	L-L
	L-G
Nominal voltage	400 V AC
	400/690 V AC

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Rated load current $I_L$	50 A
Power distribution system	Delta
	Wye
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 <sub>f</sub> -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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## 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

REACH SVHC	N,N-dimethylacetamide 127-19-5
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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