

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



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

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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

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 rigid	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

Remote fault indicator contact

Connection method	Plug-in/screw connection via COMBICON
Screw thread	M2

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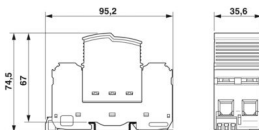


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Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section flexible	0.14 mm ² ... 1.5 mm ²
Conductor cross section rigid	0.14 mm ² ... 1.5 mm ²
Conductor cross section AWG	28 ... 16

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 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-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)
Nominal frequency f _N	50 Hz (60 Hz)
Maximum continuous voltage U _C	440 V AC

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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
Rated load current I_L	50 A
Power distribution system	Single phase

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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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