

# FLT-SEC-T1+T2-2S-350/25-FM - Type 1+2 special combined lightning current and surge arrester



2905468

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Plug-in lightning and surge arrester combination, in accordance with Type 1+2/Class I+II, for 2-phase power supply networks, with separate N and PE (L1, L2, PE, N).

## 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 protection against dynamic overvoltages for sensitive devices, thanks to direct coordination with varistor arresters connected in parallel

## Commercial data

Item number	2905468
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL1
Product key	CL1241
Catalog page	Page 43 (C-4-2019)
GTIN	4046356950619
Weight per piece (including packing)	1,012 g
Weight per piece (excluding packing)	909 g
Customs tariff number	85363030
Country of origin	DE

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## Technical data

### Product properties

Product type	Arrester combination
Product family	SEC Family
IEC test classification	I + II
	I
	T1 + T2
	T1
EN type	T1 + T2
	T1
IEC power supply system	TN-S
	TT
Type	DIN rail module, two-section, divisible
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 terminal blocks
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>

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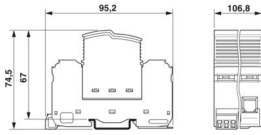
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## Remote fault indicator contact

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 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-N L-PE N-PE
Direction of action	2L-N & N-PE
Nominal voltage U <sub>N</sub>	240/415 V AC (TN-S) 240/415 V AC (TT)

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Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous voltage $U_C$	350 V AC
Rated load current $I_L$	125 A (< 55 °C)
Residual current $I_{PE}$	≤ 0.01 mA
Nominal discharge current $I_n$ (8/20) μs (L-N)	25 kA
Nominal discharge current $I_n$ (8/20) μs (L-PE)	25 kA
Nominal discharge current $I_n$ (8/20) μs (N-PE)	100 kA
Impulse discharge current (10/350) μs (L-N), charge	12.5 As
Impulse discharge current (10/350) μs (L-N), specific energy	160 kJ/Ω
Impulse discharge current (10/350) μs (L-N), peak current value $I_{imp}$	25 kA
Impulse discharge current (10/350) μs (L-PE), charge	12.5 As
Impulse discharge current (10/350) μs (L-PE), specific energy	160 kJ/Ω
Impulse discharge current (10/350) μs (L-PE), peak current value $I_{imp}$	25 kA
Impulse discharge current (10/350) μs (N-PE), charge	50 As
Impulse discharge current (10/350) μs (N-PE), specific energy	2500 kJ/Ω
Impulse discharge current (10/350) μs (N-PE), peak current value $I_{imp}$	100 kA
Follow current quenching capacity $I_{fi}$ (L-N)	25 kA (264 V AC) 3 kA (350 V AC)
Follow current interrupt rating $I_{fi}$ (N-PE)	100 A (350 V AC)
Short-circuit current rating $I_{SCCR}$	25 kA (264 V AC) 3 kA (350 V AC)
Voltage protection level $U_p$ (L-N)	≤ 1.5 kV
Voltage protection level $U_p$ (L-PE)	≤ 2.2 kV
Voltage protection level $U_p$ (N-PE)	≤ 1.5 kV
Residual voltage $U_{res}$ (L-N)	≤ 1.5 kV (at $I_n$ ) ≤ 1.2 kV (at 10 kA) ≤ 1 kV (at 5 kA) ≤ 0.9 kV (at 3 kA)
Residual voltage $U_{res}$ (L-PE)	≤ 2.2 kV (at $I_n$ ) ≤ 2 kV (at 10 kA) ≤ 1.8 kV (at 5 kA) ≤ 1.6 kV (at 3 kA)
Residual voltage $U_{res}$ (N-PE)	≤ 1.5 kV (at $I_n$ ) ≤ 1 kV (at 10 kA) ≤ 0.9 kV (at 5 kA) ≤ 0.8 kV (at 3 kA)
TOV behavior at $U_T$ (L-N)	415 V AC (5 s / withstand mode) 457 V AC (120 min / safe failure mode)
TOV behavior at $U_T$ (N-PE)	1200 V AC (200 ms / withstand mode)
Response time $t_A$ (L-N)	≤ 25 ns

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Response time $t_A$ (N-PE)	≤ 100 ns
Max. backup fuse with V-type through wiring	125 A (gG)
Max. backup fuse with branch wiring	315 A (gG)

## Additional technical data

Maximum discharge current $I_{max}$ (8/20) $\mu$ s	100 kA
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## 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 (L-L)	528 V AC
Maximum continuous operating voltage MCOV (L-N)	264 V AC
Maximum continuous operating voltage MCOV (L-G)	264 V AC
Maximum continuous operating voltage MCOV (N-G)	350 V AC
Short-circuit current rating (SCCR)	50 kA
Voltage protection rating VPR (L-L)	2000 V
Voltage protection rating VPR (L-N)	1200 V
Voltage protection rating VPR (L-G)	1500 V
Voltage protection rating VPR (N-G)	1200 V
Nominal discharge current $I_n$	20 kA
Mode of protection	L-L
	L-N
	L-G
	N-G
Nominal voltage	240/415 V AC
	120/240 V AC
Rated load current $I_L$	50 A
Power distribution system	Wye
	Split phase
Nominal frequency	50/60 Hz
SPD Type	2CA

### UL indicator/remote signaling

Operating voltage	125 V AC
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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

### Air clearances and creepage distances

Standards/regulations	DIN VDE 0110-1 / IEC 60664-1 / IEC 61643-11
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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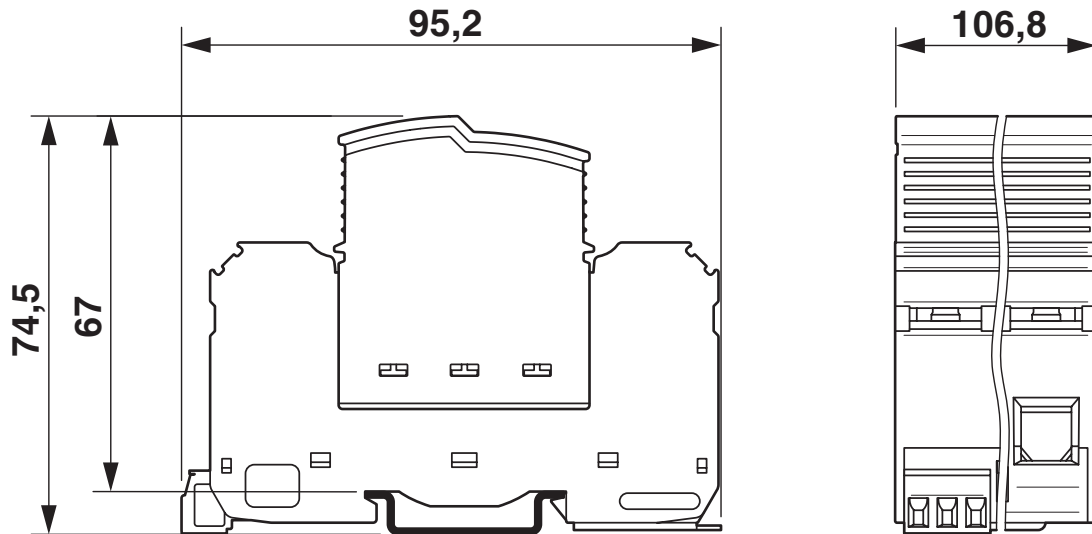


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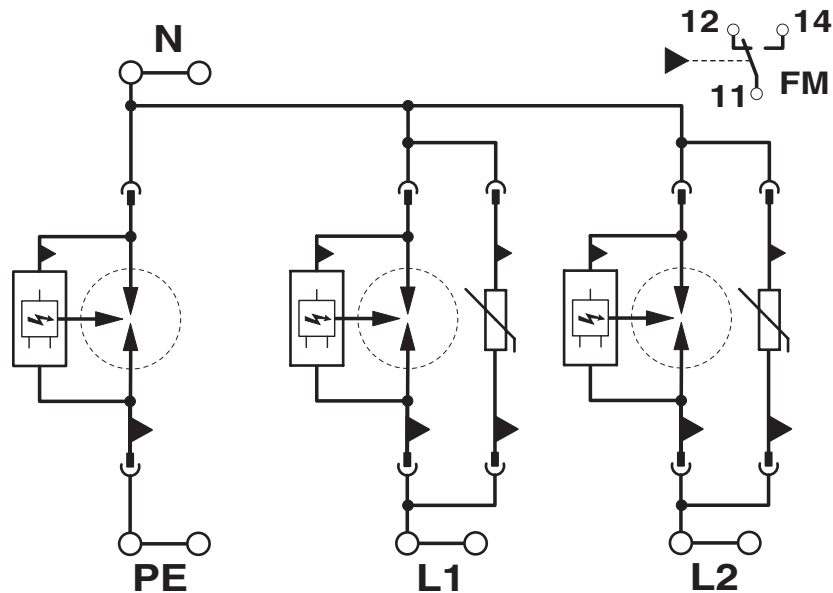
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## Drawings

Dimensional drawing



Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/it/products/2905468>



**cUL Recognized**  
Approval ID: FILE E 330181



**UL Recognized**  
Approval ID: FILE E 330181



**IECEE CB Scheme**  
Approval ID: NL-58252



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

**CCA**

Approval ID: NTR-NL 7736



**KEMA-KEUR**  
Approval ID: 71-106983



**DNV GL**  
Approval ID: TAE000040S

**UAE-RoHS**

Approval ID: 23-10-88887

**cULus Recognized**



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## Classifications

### ECLASS

ECLASS-11.0	27130808
ECLASS-13.0	27171204

### ETIM

ETIM 9.0	EC001457
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### UNSPSC

UNSPSC 21.0	39121600
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## Environmental product compliance

REACH SVHC	Lead 7439-92-1
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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