

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



2905466

<https://www.phoenixcontact.com/us/products/2905466>

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Plug-in lightning and surge arrester combination, in accordance with Type 1+2/Class I+II, for 1-phase power supply networks, with separate N and PE (L1, 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	2905466
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	CL01
Product key	CL1241
Catalog page	Page 43 (C-4-2019)
GTIN	4046356950169
Weight per piece (including packing)	654.3 g
Weight per piece (excluding packing)	631.5 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-S
	TT
Type	DIN rail module, two-section, divisible
Product type	Arrester combination
Product family	SEC Family
Number of positions	2
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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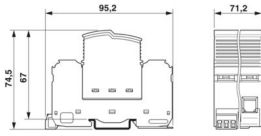


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Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section rigid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	28 ... 16

## Dimensions

Dimensional drawing	
Width	71.2 mm
Height	95.2 mm
Depth	74.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	4 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	1L-N & N-PE
Nominal voltage $U_N$	240 V AC (TN-S)
	240 V AC (TT)
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)

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

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Max. backup fuse with branch wiring	315 A (gG)
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## 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 ±X, ±Y, ±Z)
Vibration (operation)	5g (5 - 500 Hz/2.5 h/X, Y, Z)

## Approvals

### UL specifications

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-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-N L-G N-G
Nominal voltage	240 V AC
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 <sub>F</sub> -in.
Conductor cross section AWG	3 ... 2

## Standards and regulations

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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	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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