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# Lightning/surge arrester combination type 1+2 - FLT-SEC-T1+T2-3S-350/25-FM - 2905470

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Plug-in lightning and surge arrester combination, in accordance with Type 1+2/Class I+II, for 3-phase power supply networks, with separate N and PE (L1, L2, L3, PE, N).

## Why buy this product

- Directly coordinated combination of type 1 spark gap without line follow current and type 2 varistor arrester
- Particularly suitable for maximum protection of sensitive devices in harsh environments
- High continuous voltage of 350 V AC for 230/400 V AC networks with high voltage fluctuations
- Pluggable
- Low voltage protection level of 1.5 kV
- Optical, mechanical status indicator
- With floating remote indication contact
- Plugs can be checked with CHECKMASTER 2



## Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 950664

## Technical data

### Dimensions

Height	95.2 mm
Width	142.4 mm
Depth	74.5 mm
Horizontal pitch	8 Div.

### Ambient conditions

Degree of protection	IP20 (only when all terminal points are used)
Ambient temperature (operation)	-40 °C ... 80 °C

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## Technical data

### Ambient conditions

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 sinus / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	5g (5 - 500 Hz/2.5 h/X, Y, Z)

### General

Standards/specifications	IEC 61643-11 2011
	EN 61643-11 2012
IEC test classification	I + II
	T1 + T2
	T1
	I
EN type	T1 + T2
	T1
IEC power supply system	TN-S
	TT
Number of ports	One
SPD design	Combination type
Mode of protection	L-N
	L-PE
	N-PE
Mounting type	DIN rail: 35 mm
Color	light grey RAL 7035
	traffic grey A RAL 7042
Housing material	PA 6.6-FR 20% GF
	PBT-FR
Degree of pollution	2
Flammability rating according to UL 94	V-0
Type	DIN rail module, two-section, divisible
Number of positions	4
Surge protection fault message	Optical, remote indicator contact

### Protective circuit

Nominal voltage $U_N$	240/415 V AC (TN-S)
	240/415 V AC (TT)
Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous operating voltage $U_C$ (L-N)	350 V AC
Maximum continuous voltage $U_C$ (N-PE)	350 V AC
Rated load current $I_L$	125 A (< 55 °C)

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## Technical data

### Protective circuit

Residual current $I_{PE}$	$\leq 0.01$ mA
Nominal discharge current $I_n$ (8/20) $\mu$ s (L-N)	25 kA
Nominal discharge current $I_n$ (8/20) $\mu$ s (L-PE)	25 kA
Nominal discharge current $I_n$ (8/20) $\mu$ s (N-PE)	100 kA
Impulse discharge current (10/350) $\mu$ s (L-N), charge	12.5 As
Impulse discharge current (10/350) $\mu$ s (L-N), specific energy	160 kJ/ $\Omega$
Impulse discharge current (10/350) $\mu$ s (L-N), peak current value $I_{imp}$	25 kA
Impulse discharge current (10/350) $\mu$ s (L-PE), charge	12.5 As
Impulse discharge current (10/350) $\mu$ s (L-PE), specific energy	160 kJ/ $\Omega$
Impulse discharge current (10/350) $\mu$ s (L-PE), peak current value $I_{imp}$	25 kA
Impulse discharge current (10/350) $\mu$ s (N-PE), charge	50 As
Impulse discharge current (10/350) $\mu$ s (N-PE), specific energy	2500 kJ/ $\Omega$
Impulse discharge current (10/350) $\mu$ s (N-PE), peak current value $I_{imp}$	100 kA
Follow current interrupt rating $I_{fi}$ (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)	$\leq 1.5$ kV
Voltage protection level $U_p$ (L-PE)	$\leq 2.2$ kV
Voltage protection level $U_p$ (N-PE)	$\leq 1.5$ kV
Residual voltage $U_{res}$ (L-N)	$\leq 1.5$ kV (at $I_n$ )
	$\leq 1.2$ kV (at 10 kA)
	$\leq 1$ kV (at 5 kA)
	$\leq 0.9$ kV (at 3 kA)
Residual voltage $U_{res}$ (L-PE)	$\leq 2.2$ kV (at $I_n$ )
	$\leq 2$ kV (at 10 kA)
	$\leq 1.8$ kV (at 5 kA)
	$\leq 1.6$ kV (at 3 kA)
Residual voltage $U_{res}$ (N-PE)	$\leq 1.5$ kV (at $I_n$ )
	$\leq 1$ kV (at 10 kA)
	$\leq 0.9$ kV (at 5 kA)
	$\leq 0.8$ kV (at 3 kA)
Front of wave sparkover voltage at 6 kV (1.2/50) $\mu$ s (L-N)	$\leq 1.5$ kV
Front of wave sparkover voltage at 6 kV (1.2/50) $\mu$ s (L-PE)	$\leq 2.2$ kV
Front of wave sparkover voltage at 6 kV (1.2/50) $\mu$ s (N-PE)	$\leq 1.5$ kV
TOV behavior at $U_T$ (L-N)	415 V AC (5 s / withstand mode)
	457 V AC (120 min / safe failure mode)

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## Technical data

### Protective circuit

TOV behavior at $U_T$ (N-PE)	1200 V AC (200 ms / withstand mode)
Response time $t_A$ (L-N)	$\leq 25$ ns
Response time $t_A$ (N-PE)	$\leq 100$ ns
Max. backup fuse with branch wiring	315 A (gG)
Max. backup fuse with V-type through wiring	125 A (gG)

### Indicator/remote signaling

Connection name	Remote fault indicator contact
Switching function	PDT contact
Operating voltage	12 V AC ... 250 V AC
	125 V DC (200 mA DC)
Operating current	10 mA AC ... 1 A
	1 A (30 V DC)
Connection method	Plug-in/screw connection via COMBICON
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section flexible min.	0.14 mm <sup>2</sup>
Conductor cross section flexible max.	1.5 mm <sup>2</sup>
Conductor cross section solid min.	0.14 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section AWG	28 ... 16

### Connection data

Connection method	Screw terminal blocks
Conductor cross section flexible min.	2.5 mm <sup>2</sup>
Conductor cross section flexible max.	25 mm <sup>2</sup>
Conductor cross section solid min.	2.5 mm <sup>2</sup>
Conductor cross section solid max.	35 mm <sup>2</sup>
Conductor cross section AWG	13 ... 2
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	18 mm

### UL specifications

SPD Type	4CA
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)	528 V AC
Maximum continuous operating voltage MCOV (N-G)	264 V AC
Nom. voltage	240/415 V AC

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## Technical data

### UL specifications

Mode of protection	L-L
	L-N
	L-G
	N-G
Power distribution system	3Y
Nominal frequency	50/60 Hz
Measured limiting voltage MLV (L-L)	2470 V
Measured limiting voltage MLV (L-N)	1340 V
Measured limiting voltage MLV (L-G)	1550 V
Measured limiting voltage MLV (N-G)	1080 V
Nominal discharge current I <sub>n</sub> (L-L)	20 kA
Nominal discharge current I <sub>n</sub> (L-N)	20 kA
Nominal discharge current I <sub>n</sub> (L-G)	20 kA
Nominal discharge current I <sub>n</sub> (N-G)	20 kA
Follow current (L-N)	10 kA (264 V AC)
Follow current (N-G)	200 A (264 V AC)

### UL indicator/remote signaling

Operating voltage	125 V AC
Operating current	1 A
Tightening torque	4 lb <sub>F</sub> -in.
Conductor cross section AWG	30 ... 14

### UL connection data

Conductor cross section AWG	12 ... 2
Tightening torque	40 lb <sub>F</sub> -in.

## Classifications

### eCl@ss

eCl@ss 5.1	27140201
eCl@ss 6.0	27140201
eCl@ss 8.0	27130808

### ETIM

ETIM 5.0	EC001457
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## Approvals

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## Approvals

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UL Recognized / KEMA-KEUR / cUL Recognized / CCA / IECB Scheme / GL / EAC / cULus Recognized

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### Ex Approvals

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### Approvals submitted

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## Approval details

UL Recognized 

KEMA-KEUR 

cUL Recognized 

CCA

IECEE CB Scheme 

GL

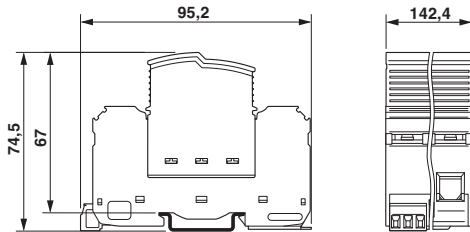
EAC

cULus Recognized 

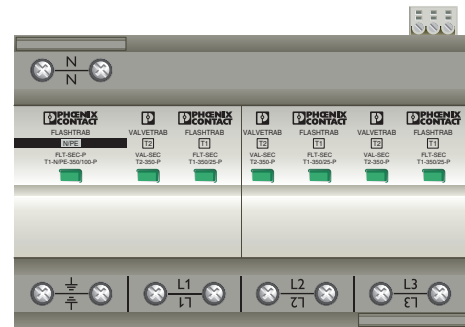
## Drawings

# Lightning/surge arrester combination type 1+2 - FLT-SEC-T1+T2-3S-350/25-FM - 2905470

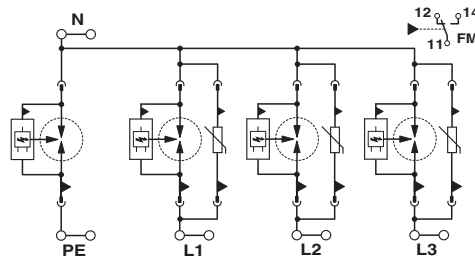
Dimensional drawing



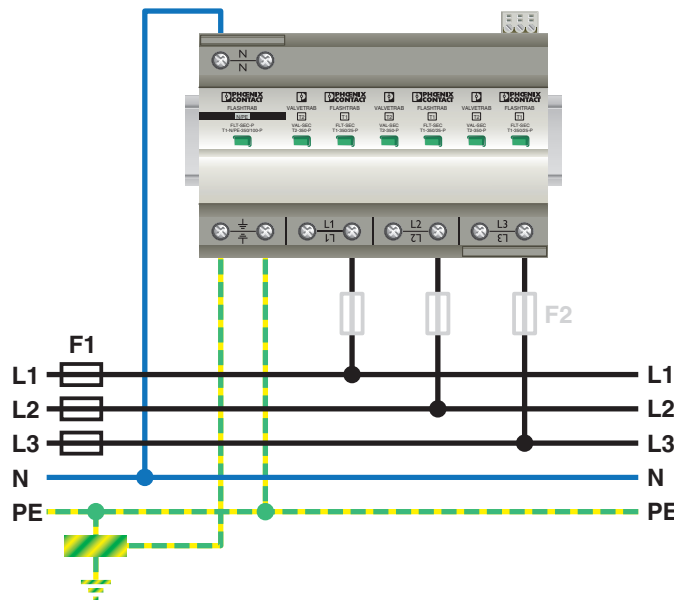
Product drawing



Circuit diagram



Application drawing





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PHOENIX CONTACT GmbH & Co. KG  
Flachmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>



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