

# Type 1+2 protective device combination - FLT-SEC-T1+T2-1C-350/25-FM - 2905465

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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 combined PE and N installed in one conductor (L1, PEN).


## Your advantages

- ✓ 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



COMPLETE 2014

## Key Commercial Data

Packing unit	1 pc
GTIN	 4 0 4 6 3 5 6 9 5 0 1 4 5
GTIN	4046356950145

## Technical data

### Dimensions

Height	95.2 mm
Width	35.6 mm
Depth	74.5 mm
Horizontal pitch	2 Div.

### Ambient conditions

Degree of protection	IP20 (only when all terminal points are used)
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## Technical data

### Ambient conditions

Ambient temperature (operation)	-40 °C ... 80 °C
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-sine / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	5g (5 - 500 Hz/2.5 h/X, Y, Z)

### General

IEC test classification	I + II
	I
	T1 + T2
	T1
EN type	T1 + T2
	T1
IEC power supply system	TN-C
	TT
Mode of protection	L-PEN
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	1
Surge protection fault message	Optical, remote indicator contact

### Protective circuit

Nominal voltage $U_N$	240 V AC (TN-C)
	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)
Nominal discharge current $I_n$ (8/20) $\mu$ s	25 kA
Impulse discharge current (10/350) $\mu$ s, charge	12.5 As
Impulse discharge current (10/350) $\mu$ s, specific energy	160 kJ/ $\Omega$
Impulse discharge current (10/350) $\mu$ s, peak value $I_{imp}$	25 kA
Follow current interrupt rating $I_{fi}$	25 kA (264 V AC)
	3 kA (350 V AC)

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## Technical data

### Protective circuit

Short-circuit current rating $I_{SCCR}$	25 kA (264 V AC)
	3 kA (350 V AC)
Voltage protection level $U_p$	$\leq 1.5$ kV
Residual voltage $U_{res}$	$\leq 1.5$ kV (at $I_n$ )
	$\leq 1.2$ kV (at 10 kA)
	$\leq 1$ kV (at 5 kA)
	$\leq 0.9$ kV (at 3 kA)
Front of wave sparkover voltage at 6 kV (1.2/50) $\mu$ s	$\leq 1.5$ kV
TOV behavior at $U_T$	415 V AC (5 s / withstand mode)
	457 V AC (120 min / safe failure mode)
Response time $t_A$	$\leq 25$ 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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### Indicator/remote signaling

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 AC
	1 A DC (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	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section solid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	28 ... 16

### 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 solid	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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## Technical data

### UL specifications

SPD Type	2CA
Maximum continuous operating voltage MCOV	264 V AC
Nom. voltage	240 V AC
Rated load current I <sub>L</sub>	50 A
Mode of protection	L-G
Power distribution system	Single phase
Nominal frequency	50/60 Hz
Voltage protection rating VPR	1200 V
Nominal discharge current I <sub>n</sub>	20 kA
Short-circuit current rating (SCCR)	50 kA

### UL indicator/remote signaling

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

### UL connection data

Conductor cross section AWG	3 ... 2
Tightening torque	40 lb <sub>F</sub> -in.

### Standards and Regulations

Standards/regulations	IEC 61643-11 2011
	EN 61643-11 2012

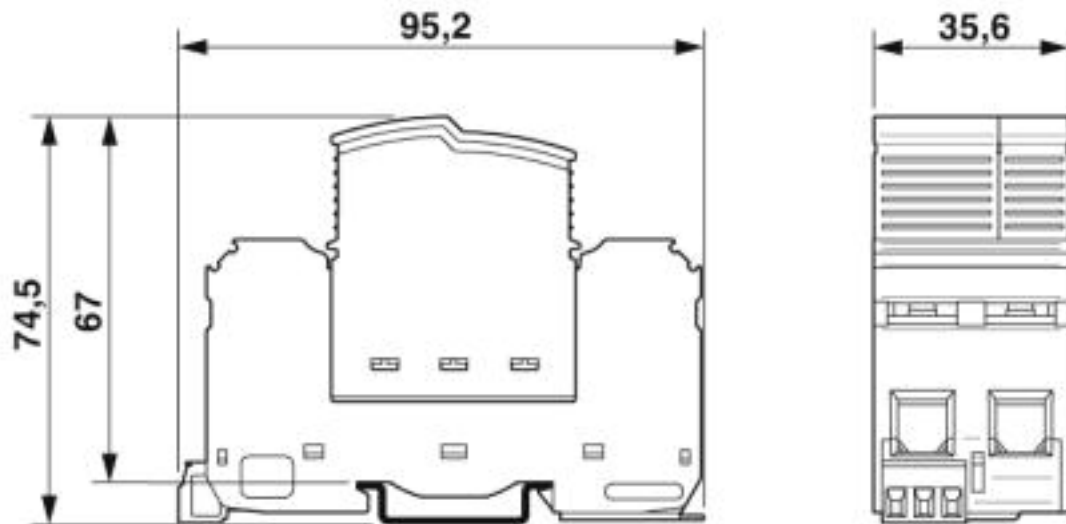
### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

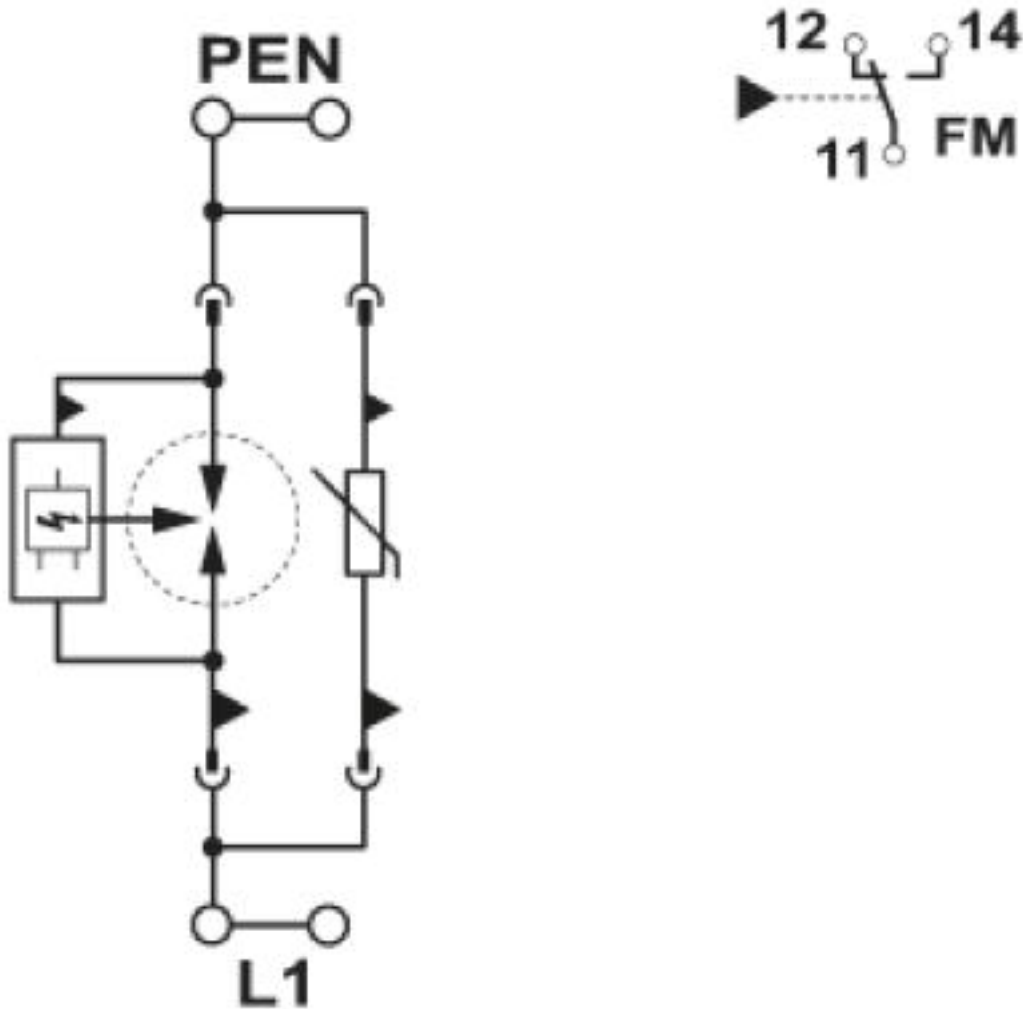
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Dimensional drawing



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Circuit diagram



## Approvals

Approvals

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Approvals

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

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Ex Approvals

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Approval details

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## Approvals

GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	13946-15 HH
CCA			NTR-NL 7736
UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 330181
KEMA-KEUR		<a href="http://www.dekra-certification.com">http://www.dekra-certification.com</a>	71-106983
cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 330181
IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	NL-58252
EAC			RU C- DE.A*30.B01561
cULus Recognized			

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