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 pc
GTIN	4 046356 950664
Weight per Piece (excluding packing)	222.22 g
Custom tariff number	85363030
Country of origin	Germany

Technical data

Dimensions

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

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Technical data

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 (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
Lightning protection class	I
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
Pollution degree	2
Inflammability class according to UL 94	V-0
Type	DIN rail module, two-section, divisible
Number of positions	4
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 3.00
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)

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Protective circuit

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)
Residual current I_{PE}	≤ 0.01 mA
Power consumption without load Pc	≤ 3.5 mW
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 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)	≤ 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)

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Protective circuit

Front of wave sparkover voltage at 6 kV (1.2/50) µs (L-N)	≤ 1.5 kV
Front of wave sparkover voltage at 6 kV (1.2/50) µs (L-PE)	≤ 2.2 kV
Front of wave sparkover voltage at 6 kV (1.2/50) µs (N-PE)	≤ 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)
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 (N-PE)	≤ 100 ns
Max. backup fuse with branch wiring	315 A AC (gG)
Max. backup fuse with V-type through wiring	125 A AC (gG)

Indicator/remote signaling

Connection name	Remote fault indicator contact
Switching function	PDT contact
Operating voltage	12 V AC ... 250 V AC
	125 V AC (UL)
	125 V DC (200 mA DC)
Operating current	10 mA AC ... 1 A AC
	1 A AC (UL)
	1 A DC (30 V DC)
Connection method	Plug-in/screw connection via COMBICON
Screw thread	M2
Tightening torque	0.25 Nm
	4 lb_f-in. (UL)
Stripping length	7 mm
Conductor cross section flexible min.	0.14 mm²
Conductor cross section flexible max.	1.5 mm²
Conductor cross section solid min.	0.14 mm²
Conductor cross section solid max.	1.5 mm²
AWG conductor cross section	28 ... 16
	30 ... 14 (UL)

Connection data

Connection method	Screw terminal blocks
Conductor cross section flexible min.	2.5 mm²
Conductor cross section flexible max.	25 mm²
Conductor cross section solid min.	2.5 mm²
Conductor cross section solid max.	35 mm²
AWG conductor cross section	13 ... 2
	12 ... 2 (UL)

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Technical data

Connection data

Screw thread	M5
Tightening torque	4.5 Nm
	40 lb_F-in. (UL)
Stripping length	18 mm

UL specifications

UL class	Type 4 SPD for Type 2 applications
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
Mode of protection	L-L
	L-N
	L-G
	N-G
Power distribution system	3Y
Nominal frequency	50/60 Hz
Voltage protection rating VPR (L-L)	2 kV
Voltage protection rating VPR (L-N)	1.2 kV
Voltage protection rating VPR (L-G)	1.8 kV
Voltage protection rating VPR (N-G)	1.5 kV
Nominal discharge current I_n (L-L)	20 kA
Nominal discharge current I_n (L-N)	20 kA
Nominal discharge current I_n (L-G)	20 kA
Nominal discharge current I_n (N-G)	20 kA
Follow current (L-N)	10 kA (264 V AC)
Follow current (N-G)	200 A (264 V AC)

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

Ex Approvals

Approvals submitted

Approval details

UL Recognized

KEMA-KEUR

cUL Recognized

CCA

IECEE CB Scheme

GL

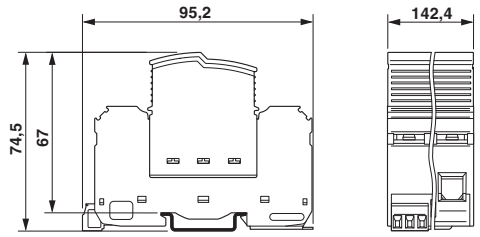
EAC

cULus Recognized

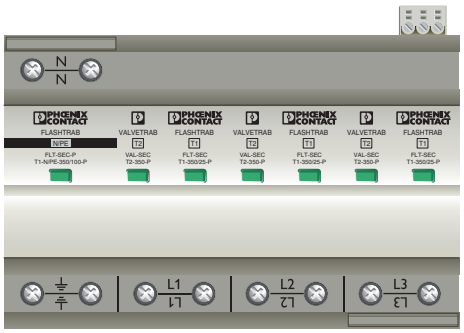
Drawings

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

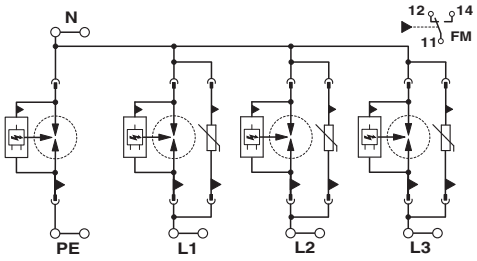
Dimensional drawing



Product drawing



Circuit diagram



Application drawing