Type 1+2 protective device combination - 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).

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

Key Commercial Data

Packing unit	1 pc
GTIN	4 046356 950664
GTIN	4046356950664
Weight per Piece (excluding packing)	1,186.500 g
Custom tariff number	85363030
Country of origin	Germany

Technical data

Dimensions

Height	95.2 mm
Width	142.4 mm
Depth	74.5 mm (incl. DIN rail 7.5 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-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-S
	TT
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 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

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Protective circuit

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)
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)
Max. backup fuse with branch wiring	315 A (gG)

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Technical data

Additional technical data

Maximum discharge current I_{max} (8/20) µs	100 kA

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 mm² ... 1.5 mm²
Conductor cross section solid	0.14 mm² ... 1.5 mm²
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 mm² ... 35 mm²
Conductor cross section solid	2.5 mm² ... 35 mm²
Conductor cross section AWG	13 ... 2
Connection method	Fork-type cable lug
Conductor cross section flexible	1.5 mm² ... 16 mm²

UL specifications

SPD Type	2CA
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
Nom. voltage	240/415 V AC
Rated load current I_L	50 A
Mode of protection	L-L
	L-N
	L-G
	N-G
Power distribution system	Wye
Nominal frequency	50/60 Hz

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UL specifications

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
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_f-in.
Conductor cross section AWG	30 ... 14

UL connection data

Conductor cross section AWG	3 ... 2
Tightening torque	40 lb_f-in.

Standards and Regulations

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

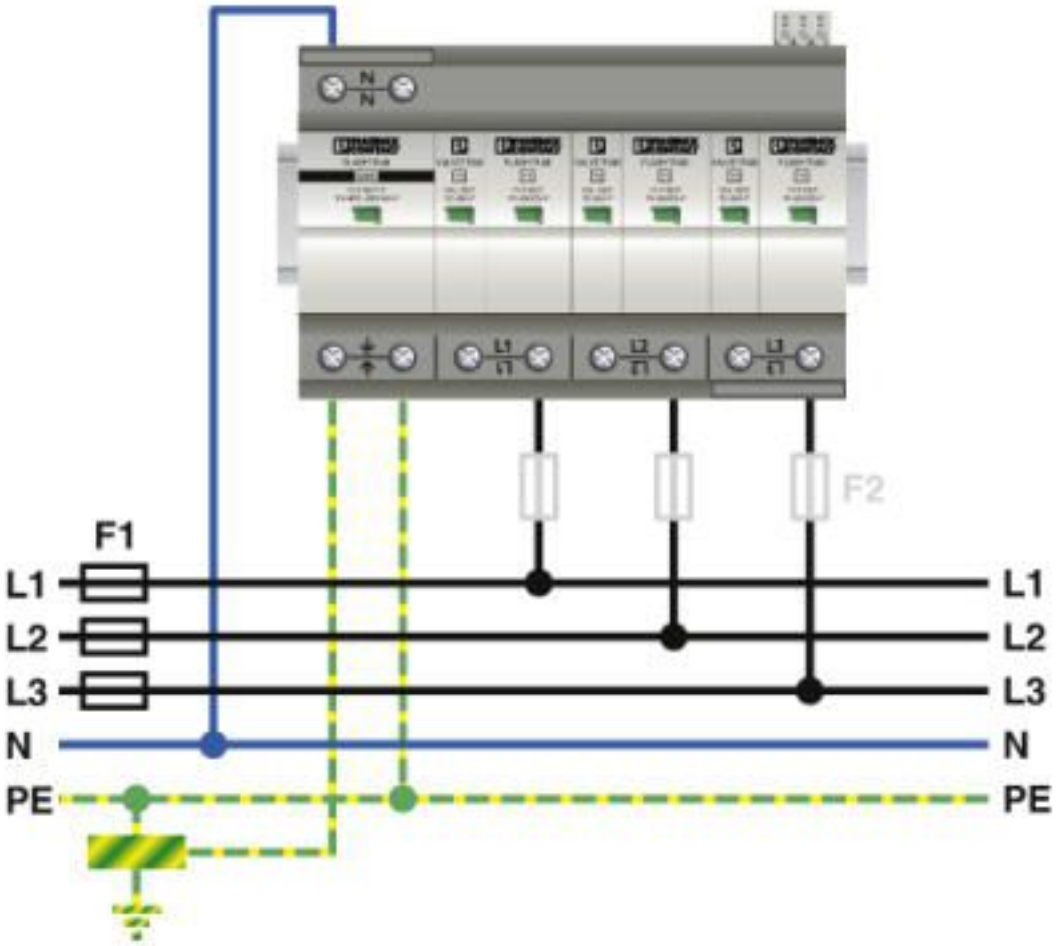
Environmental Product Compliance

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

Drawings

Type 1+2 protective device combination - FLT-SEC-T1+T2-3S-350/25-FM - 2905470

Application drawing



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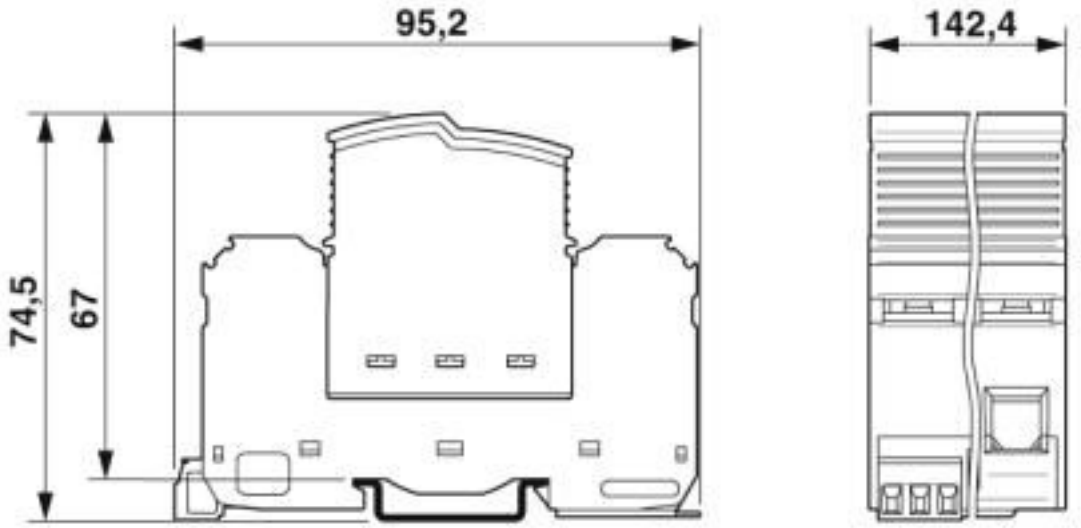
Dimensional drawing



Product drawing

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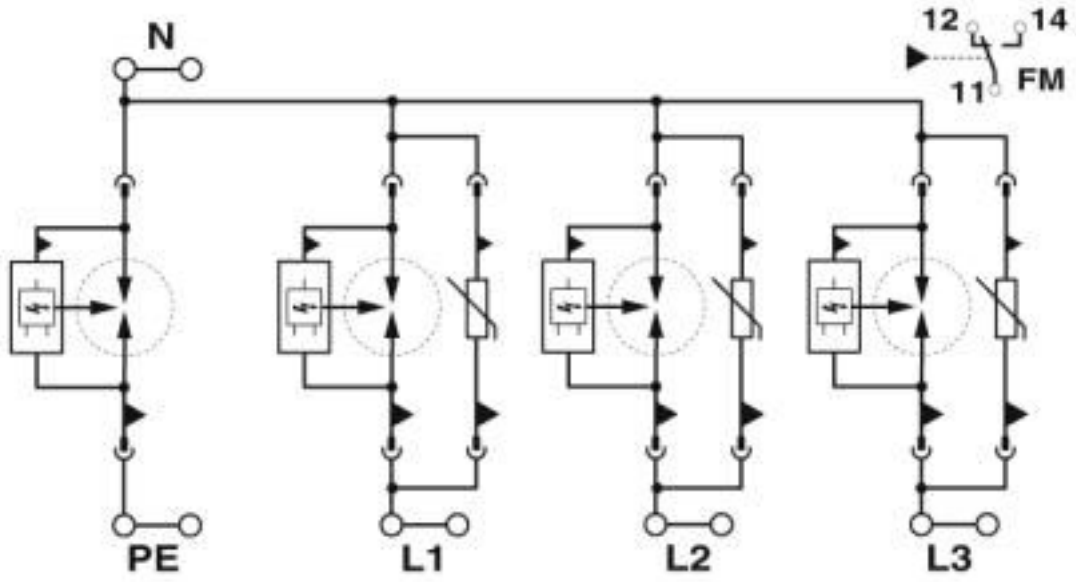
Circuit diagram



Classifications

eCl@ss

eCl@ss 10.0.1	27130808
eCl@ss 4.0	27140200
eCl@ss 4.1	27140200
eCl@ss 5.0	27140200
eCl@ss 5.1	27140200
eCl@ss 6.0	27130800
eCl@ss 7.0	27130808
eCl@ss 8.0	27130808
eCl@ss 9.0	27130808

ETIM

ETIM 5.0	EC001457
ETIM 6.0	EC001457
ETIM 7.0	EC001457

UNSPSC

UNSPSC 13.2	39121620
UNSPSC 18.0	39121620
UNSPSC 19.0	39121620
UNSPSC 20.0	39121620
UNSPSC 21.0	39121620

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Approvals

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

Ex Approvals

Approval details

GL	https://approvalfinder.dnvgl.com/	13946-15 HH
CCA		NTR-NL 7736
UL Recognized	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 330181
KEMA-KEUR	http://www.dekra-certification.com	71-106983
cUL Recognized	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 330181
IECEE CB Scheme	http://www.iecee.org/	NL-58252
EAC		RU C-DE.*09.B.00169
cULus Recognized		

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Accessories

Accessories

Device marking

Label - EML (20XE)R - 0803452

Label, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: adhesive, lettering field size: continuous x 20#mm

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Label - EML (20XE)R YE - 0803453

Label, Roll, yellow, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: adhesive, lettering field size: continuous x 20#mm

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Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128

Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128

Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

End block

End clamp - CLIPFIX 35 - 3022218

Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, width: 9.5 mm, color: gray

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Accessories

Labeled device marker

Marker for terminal blocks - ZBN 18,LGS:L1-N,ERDE - 2749576

Marker for terminal blocks, Strip, white, labeled, horizontal: L1, L2, L3, N, GND, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

Marker for terminal blocks - ZBN 18,LGS:ERDE - 2749589

Marker for terminal blocks, Strip, white, labeled, horizontal: Grounding symbol, mounting type: snap into tall marker groove, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

Marker pen

Marker pen - X-PEN 0,35 - 0811228

Marker pen without ink cartridge, for manual labeling of markers, labeling extremely wipe-proof, line thickness 0.35 mm

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Terminal marking

Flat zack marker sheet - ZBFM 5/WH:UNBEDRUCKT - 0803595

Flat zack marker sheet, Sheet, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into flat marker groove, for terminal block width: 5.2 mm, lettering field size: 5 x 4.5 mm, Number of individual labels: 120

Spare parts

Type 1/2 surge protection plug - FLT-SEC-T1-350/25-P - 2905471

Replacement plug for lightning and surge arresters from the FLASHTRAB SEC product range, for L-N and L-PEN paths.

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Accessories

Type 2 surge protection plug - VAL-SEC-T2-350-P - 2905346

Replacement plug for surge arresters from the VALVETRAB SEC product range for L-N and L-PEN paths.

Type 1 surge protection plug - FLT-SEC-P-T1-N/PE-350/100-P - 2905473

Replacement plug for lightning current arresters from the FLASHTRAB SEC product range, for the N-PE path.