

Type 1+2 protective device combination - FLT-CP-3S-350 - 2859712

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Pluggable lightning current and surge arrester combination, in acc. with typ 1+2 / Class I+II / B+C arresters. Arresters coordinated following the AEC principle, for 3-phase power supply networks with separately installed PE and N (L1, L2, L3, PE, N).

Your advantages

- Plugs can be checked with CHECKMASTER
- High continuous voltage of 350 V AC for 230/400 V AC networks with high voltage fluctuations
- With floating remote indication contact
- Optical, mechanical status indication for the individual arresters
- Thermal disconnect device for each individual plug



Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 956431
GTIN	4017918956431

Technical data

Dimensions

Height	95 mm
Width	142.4 mm
Depth	71.5 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
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 2000 m (amsl (above mean sea level))
Permissible humidity (operation)	5 % ... 95 %

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Technical data

Ambient conditions

Shock (operation)	25g (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
	T1 + T2
EN type	T1 + T2
IEC power supply system	TN-S
	TT
Mode of protection	L-N
	L-PE
	N-PE
Mounting type	DIN rail: 35 mm
Color	gray/blue
	black
Housing material	PBT
Degree of pollution	2
Flammability rating 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)
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
Standby power consumption P_C	≤ 300 mVA
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

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Technical data

Protective circuit

Impulse discharge current (10/350) μ s (N-PE), charge	50 As
Impulse discharge current (10/350) μ s (N-PE), specific energy	2500 kJ/ Ω
Impulse discharge current (10/350) μ 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)	≤ 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 (N-PE)	≤ 100 ns
Max. backup fuse with V-type through wiring	125 A (gG)
Max. backup fuse with branch wiring	315 A (gG)

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

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Indicator/remote signaling

Stripping length	7 mm
Conductor cross section flexible	0.14 mm ² ... 1.5 mm ²
Conductor cross section solid	0.14 mm ² ... 1.5 mm ²
Conductor cross section AWG	28 ... 16

Connection data

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

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
Mode of protection	L-L
	L-N
	L-G
	N-G
Power distribution system	Wye
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 _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

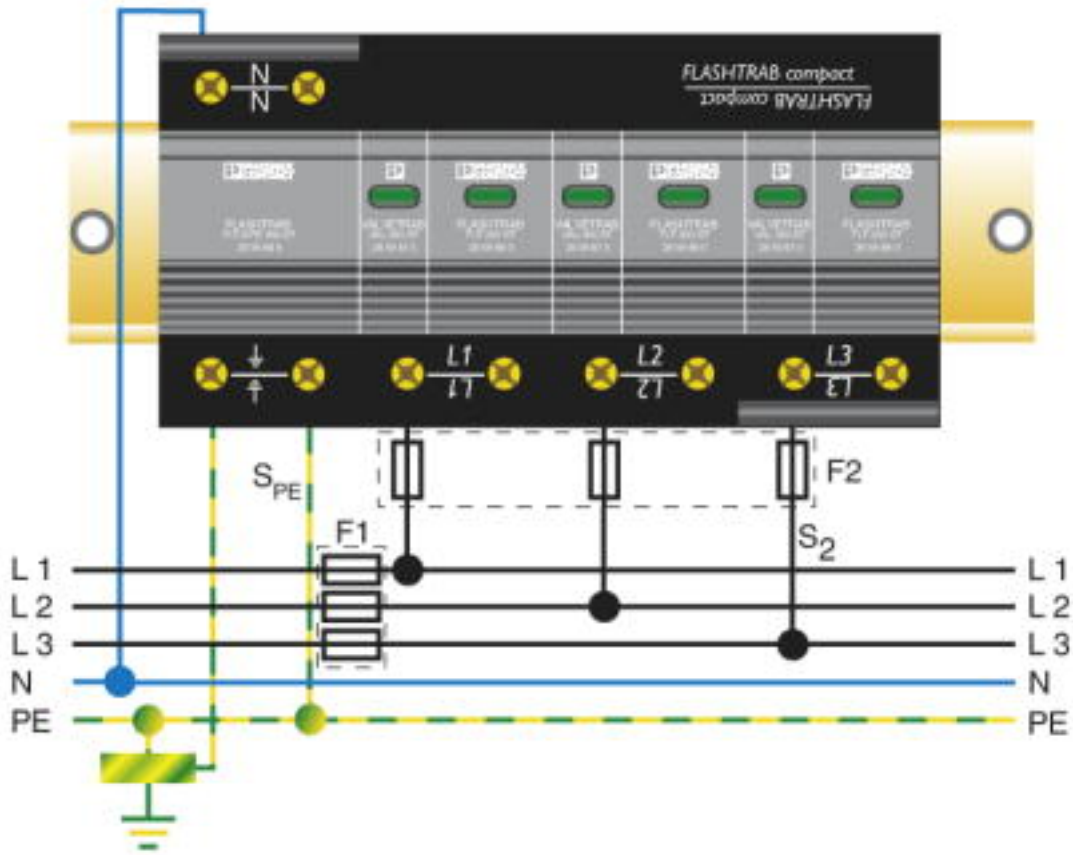
Environmental Product Compliance

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-CP-3S-350 - 2859712

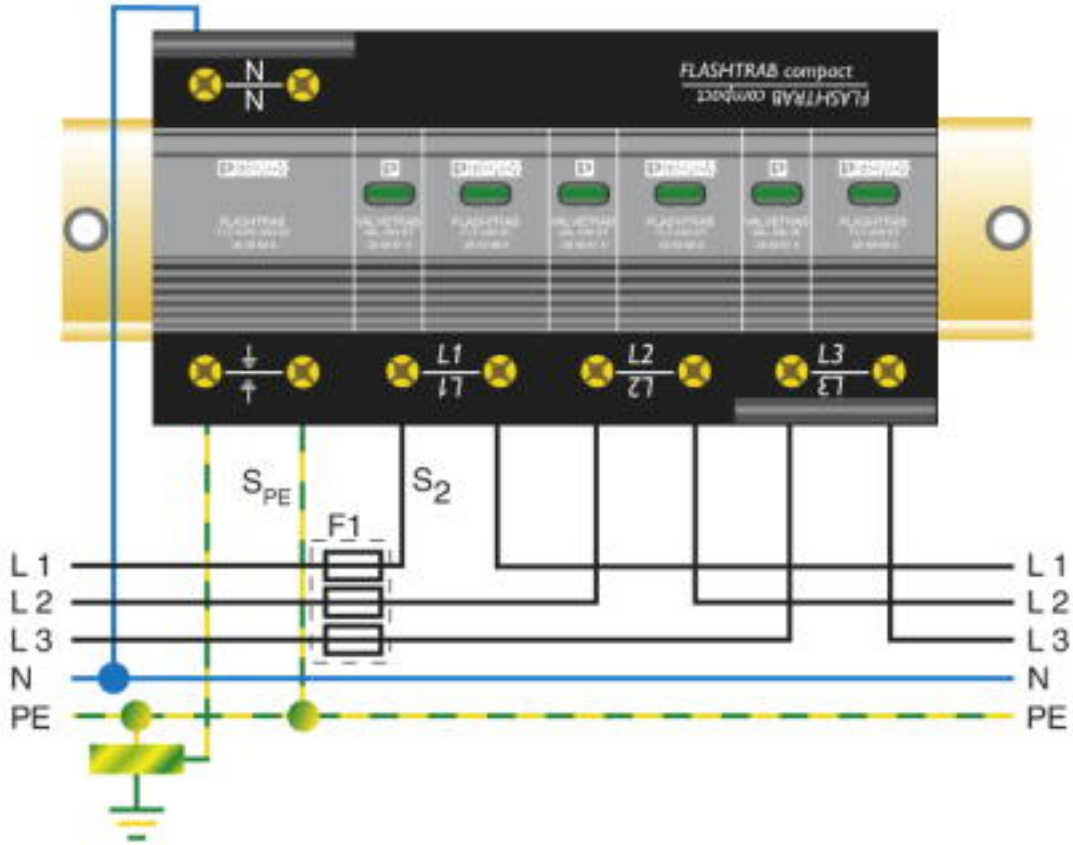
Application drawing



Connection in the line

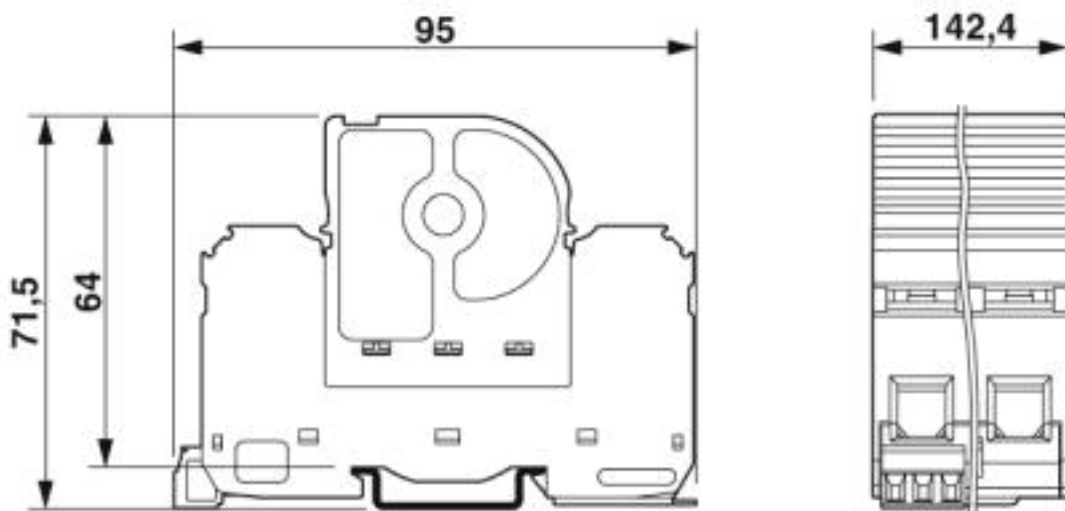
Type 1+2 protective device combination - FLT-CP-3S-350 - 2859712

Application drawing



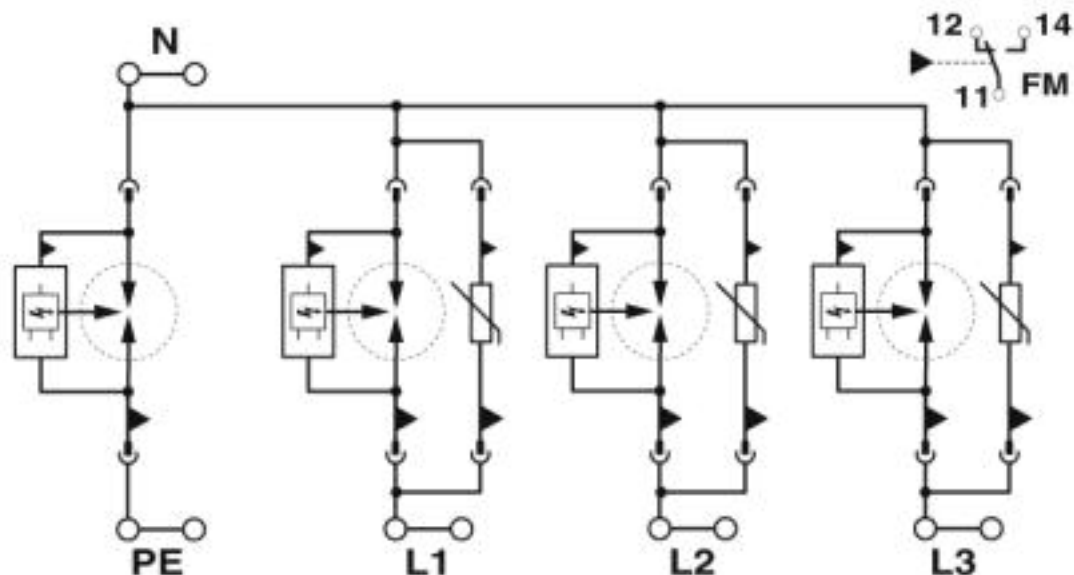
V wiring connection

Dimensional drawing



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Circuit diagram



Classifications

eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130800
eCl@ss 6.0	27130800
eCl@ss 7.0	27130808
eCl@ss 8.0	27130808
eCl@ss 9.0	27130808

ETIM

ETIM 2.0	EC001457
ETIM 3.0	EC001457
ETIM 4.0	EC001457
ETIM 5.0	EC001457
ETIM 6.0	EC001457

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620
UNSPSC 19.0	39121620

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Accessories

Accessories

Device marking

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

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 - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

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Accessories

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 2 surge protection plug - VAL-CP-350-ST - 2859602



Replacement plug for VAL-CP surge protective device with high-capacity varistor with a low leakage current.

Type 1 surge protection plug - FLT-CP-350-ST - 2881887



Type 1 / Class I / B arrester (lightning current arrester) replacement plug for paths L-N and L-PEN, can be combined with FLASHTRAB compact series of products.

Type 1 surge protection plug - FLT-CP-N/PE-350-ST - 2859686



Type 1 / Class I / B arrester (lightning current arrester) replacement plug for path N-PE, can be combined with FLASHTRAB compact series of products.