

Lightning/surge arrester combination type 1+2 - 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).

Why buy this product

- 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
Weight per Piece (excluding packing)	1456.91 g
Weight per piece (including packing)	1529.7 g
Custom tariff number	85363030
Country of origin	Germany
Sales Key	K1 - Overvoltage Protect.

Technical data

Dimensions

Height	95.8 mm
Width	142.8 mm
Depth	70 mm
Horizontal pitch	8 Div.

Ambient conditions

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Technical data

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 80 °C

General

IEC power supply system	TN-S
Housing material	PBT
Inflammability class according to UL 94	V0
Color	gray
Standards for air and creepage distances	DIN VDE 0110-1
	IEC 60664-1
	IEC 61643-1
Surge voltage category	III
Pollution degree	2
Mounting type	DIN rail: 35 mm
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
Direction of action	3L-N & N-PE

Protective circuit

IEC test classification	I + II
	T1 + T2
EN type	T1 + T2
Lightning protection class	I / 100 kA (TT, TN-C-S)
Nominal voltage U_N	240 V AC (230/400 V AC ... 240/415 V AC)
	415 V AC (L-L)
Maximum continuous operating voltage U_C (L-N)	350 V AC
Maximum continuous operating voltage U_C (N-PE)	350 V AC
U_T (TOV-proof)	415 V AC (5 s / L-N)
	1200 V AC (200 ms / N-PE)
Nominal frequency f_N	50 Hz
	60 Hz
Rated load current I_L	125 A ($\leq 55^\circ\text{C}$)
Residual current I_{PE}	$\leq 5 \mu\text{A}$ (Residual current I_{PE})
Standby power consumption P_C	$\leq 3.5 \text{ mW}$ ($\leq 150 \text{ mVA}$)
Power consumption without load P_c	$\leq 3.5 \text{ mW}$
Nominal discharge current I_n (8/20) μs (L-N)	25 kA
Nominal discharge current I_n (8/20) μs (N-PE)	100 kA
Impulse discharge current (10/350) μs , charge	50 As

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Protective circuit

Impulse discharge current (10/350) μ s, specific energy	2.50 MJ/ Ω
Impulse discharge current (10/350) μ s, peak value I_{imp}	100 kA
Impulse discharge current (10/350) μ s, charge	50 As
Impulse discharge current (10/350) μ s, specific energy	2.50 MJ/ Ω
Impulse discharge current (10/350) μ s, peak value I_{imp}	100 kA (N-PE)
Front of wave sparkover voltage at 6 kV (1.2/50) μ s (N-PE)	≤ 1.5 kV
Voltage protection level U_p (L-N)	≤ 1.5 kV
Voltage protection level U_p (N-PE)	≤ 1.5 kV
Residual voltage (L-N)	≤ 1.3 kV (at I_n)
	≤ 1.1 kV (at 10 kA)
	≤ 1 kV (at 5 kA)
	≤ 1 kV (at 3 kA)
Residual voltage (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 (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)
Clamping voltage ringwave (L-N)	≤ 1.1 kV (category C3 20 kV/10 kA)
	≤ 1 kV (category C2 10 kV/5 kA)
	≤ 0.9 kV (category B3/C1 6 kV/3 kA)
Clamping voltage ringwave (L-PE)	≤ 2 kV (category C3 20 kV/10 kA)
	≤ 1.8 kV (category C2 10 kV/5 kA)
	≤ 1.5 kV (category B3/C1 6 kV/3 kA)
Clamping voltage ringwave (N-PE)	≤ 1.3 kV (category C3 20 kV/10 kA)
	≤ 1.2 kV (category C2 10 kV/5 kA)
	≤ 1.1 kV (category B3/C1 6 kV/3 kA)
Response time (L-N)	≤ 25 ns
Response time (L-PE)	≤ 100 ns
Response time (N-PE)	≤ 100 ns
Max. required backup fuse with branch wiring	315 A (gL/gG)
Max. required backup fuse with V-type through wiring	125 A (gL/gG)
Recommended backup fuse maximum	160 A (gL/gG, 125 A with serial through wiring)
Short-circuit resistance I_p with max. backup fuse (effective)	25 kA
Short-circuit current self-quenching	100 A (effective (N-PE))
Follow current quenching capacity I_f	100 A (350 V)
Follow current quenching capacity I_f (L-N)	25 kA (264 V AC)

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Protective circuit

	3 kA (350 V AC)
Follow current quenching capacity I_f (N-PE)	100 A

Connection, protective circuit

Connection method	Screw terminal blocks
Connection type IN	Biconnect screw terminal block
Connection type OUT	Biconnect screw terminal block
Connection method	Biconnect terminal block
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	18 mm
Conductor cross section stranded min.	2.5 mm ²
Conductor cross section stranded max.	25 mm ²
Conductor cross section solid min.	2.5 mm ²
Conductor cross section solid max.	35 mm ²
Conductor cross section AWG/kcmil min.	13
Conductor cross section AWG/kcmil max	2

Remote indicator contact

Connection name	Remote fault indicator contact
Switching function	PDT contact
Connection method	Plug-in/screw connection via COMBICON
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section stranded min.	0.14 mm ²
Conductor cross section stranded max.	1.5 mm ²
Conductor cross section solid min.	0.14 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section AWG/kcmil min.	28
Conductor cross section AWG/kcmil max	16
Maximum operating voltage U_{max} AC	250 V AC
Maximum operating voltage U_{max} DC	125 V DC
Max. operating current I_{max}	1 A AC (inductive)
	1 A AC (ohmic)
	30 mA DC (inductive)
	200 mA DC (ohmic)
Min. permissible switching capacity	0.12 VA (12 V, 10 mA)

Standards and Regulations

Standards/regulations	IEC 61643-1 2005
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Standards and Regulations

	EN 61643-11 2002
	UL 1449

Classifications

eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27140201
eCl@ss 5.0	27140201
eCl@ss 5.1	27140201
eCl@ss 6.0	27140201
eCl@ss 7.0	27140201
eCl@ss 8.0	27140201

ETIM

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

UNSPSC

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

Approvals

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

Ex Approvals

Approvals submitted

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Approvals

Approval details

UL Recognized

KEMA-KEUR

cUL Recognized

GOST

CCA

IECEE CB Scheme

GL

cULus Recognized

Accessories

Accessories

Device marking

Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128



Zack marker strip, Strip, white, Unlabeled, can be labeled with: Plotter, Mounting type: Snap into tall marker groove, for terminal block width: 18 mm, Lettering field: 18 x 5 mm

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Zack marker strip - ZBN 18:UNBEDRUCKT - 2809128



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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: 18 x 5 mm

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: 18 x 5 mm

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

Terminal marking

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

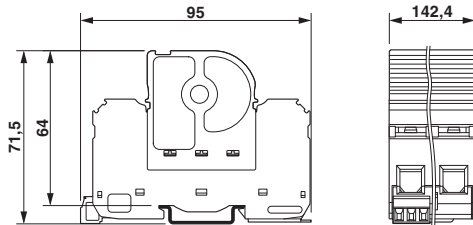


Flat zack marker sheet, Sheet, white, Unlabeled, can be labeled with: Plotter, Mounting type: Snap into flat marker groove, for terminal block width: 5.2 mm, Lettering field: 5 x 4.5 mm

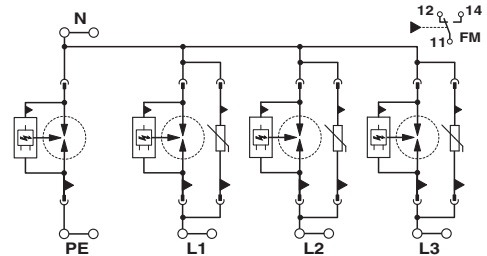
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Drawings

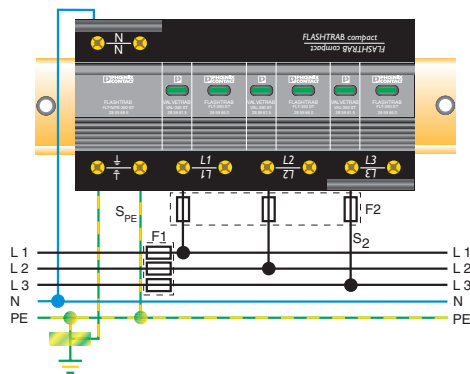
Dimensioned drawing



Circuit diagram

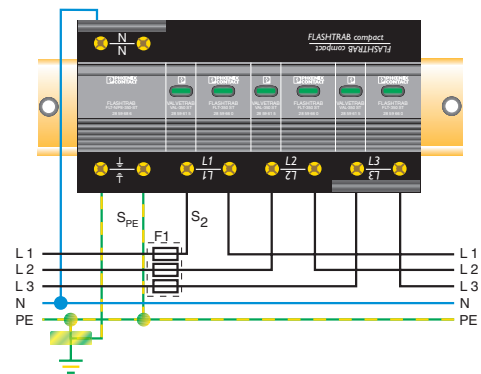


Application drawing



Connection in the line

Application drawing



V wiring connection