

# Type 1/2 surge protection device - FLT-CP-1S-350 - 2859738

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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 1-phase power supply networks with separately installed PE and N (L1, 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
- Thermal disconnect device for each individual plug
- Optical, mechanical status indication for the individual arresters



## Key commercial data

Packing unit	1
Minimum order quantity	1
Catalog page	Page 29 (TT-2011)
GTIN	 4 017918 956455
Custom tariff number	85363030
Country of origin	GERMANY

## Technical data

### Standards

Housing material	PBT
Inflammability class according to UL 94	V0
Color	gray
Standards for air and creepage distances	DIN VDE 0110-1
Standards for air and creepage distances	IEC 60664-1
Standards for air and creepage distances	IEC 61643-1
Surge voltage category	III
Pollution degree	2
Degree of protection	IP20
Mounting type	DIN rail: 35 mm
Design	DIN rail module, two-section, divisible

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## Technical data

### Standards

Number of positions	2
Ambient temperature (operation)	-40 °C ... 80 °C
Arrester can be tested with CHECKMASTER from software version:	From SW rev. 3.00
Message: Surge protection fault	Optical, remote indicator contact
Direction of action	1L-N & N-PE
Width	71.6 mm
Height	95.8 mm
Depth	70 mm
Pitch unit	4 Div.

### Protective circuit

IEC category	I + II
IEC category	T1 + T2
EN type	T1 + T2
Lightning protection class	III-IV /50 kA (TT, TN-C-S)
Nominal voltage UN	240 V AC (230 V AC ... 240 V AC)
Arrester rated voltage UC (L-N)	350 V AC
Arrester rated voltage UC (N-PE)	350 V AC
UT (TOV-proof)	≤ 415 V AC (5 s / L-N)
UT (TOV-safe)	≤ 1200 V AC (200 ms / N-PE)
Nominal frequency fN	50 Hz (60 Hz)
Nominal load current IL	125 A (≤ 55°C)
Ground conductor current IPE	≤ 5 μA
Standby power consumption PC	≤ 3.5 mW
Nominal discharge surge current In (8/20) μs (L-N)	25 kA
Nominal discharge surge current In (8/20) μs (N-PE)	100 kA
Lightning test current (10/350) μs, charge	25 As
Lightning test current (10/350) μs, specific energy	625.00 kJ/Ω
Lightning test current (10/350) μs, peak value limp	50 kA
Lightning test current (10/350) μs, charge	50 As
Lightning test current (10/350) μs, specific energy	2.50 MJ/Ω
Lightning test current (10/350) μs, peak value limp	100 kA (N-PE)
Impulse operate voltage at 6 kV (1.2/50)μs (N-PE)	≤ 1.5 kV
Protection level UP (L-N)	≤ 1.5 kV
Protection level UP (N-PE)	≤ 1.5 kV
Residual voltage (L-N)	≤ 1.3 kV (at In)
Residual voltage (L-N)	≤ 1.1 kV (at 10 kA)
Residual voltage (L-N)	≤ 1 kV (at 5 kA)
Residual voltage (L-N)	≤ 1 kV (at 3 kA)
Residual voltage (L-PE)	≤ 2.2 kV (at In)
Residual voltage (L-PE)	≤ 2 kV (at 10 kA)
Residual voltage (L-PE)	≤ 1.8 kV (at 5 kA)
Residual voltage (L-PE)	≤ 1.6 kV (at 3 kA)

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## Technical data

### Protective circuit

Residual voltage (N-PE)	≤ 1.5 kV (at In)
Residual voltage (N-PE)	≤ 1 kV (at 10 kA)
Residual voltage (N-PE)	≤ 0.9 kV (at 5 kA)
Residual voltage (N-PE)	≤ 0.8 kV (at 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 IP with max. backup fuse (effective)	25 kA
Short-circuit current self-quenching	100 A (effective (N-PE))
Follow current quenching capacity If	100 A (350 V AC (N-PE))
Follow current quenching capacity If (L-N)	25 kA (264 V AC)
Follow current quenching capacity If (L-N)	3 kA (350 V AC)
Follow current quenching capacity If (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 <sup>2</sup>
Conductor cross section stranded max.	25 mm <sup>2</sup>
Conductor cross section solid min.	2.5 mm <sup>2</sup>
Conductor cross section solid max.	35 mm <sup>2</sup>
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 <sup>2</sup>
Conductor cross section stranded max.	1.5 mm <sup>2</sup>
Conductor cross section solid min.	0.14 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	28

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## Technical data

### Remote indicator contact

Conductor cross section AWG/kcmil max	16
Maximum operating voltage U <sub>max</sub> AC	250 V AC
Maximum operating voltage U <sub>max</sub> DC	125 V DC
Max. operating current I <sub>max</sub>	1 A AC (inductive)
Max. operating current I <sub>max</sub>	1 A AC (ohmic)
Max. operating current I <sub>max</sub>	30 mA DC (inductive)
Max. operating current I <sub>max</sub>	200 mA DC (ohmic)

### Standards

Standards/regulations	IEC 61643-1 2002
Standards/regulations	EN 61643-11 2005
Standards/regulations	UL 1449

## Classifications

### eclass

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

### 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

### Approvals

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

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## Approvals

Ex Approvals

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Approvals submitted

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### Approval details

UL Recognized

KEMA-KEUR

cUL Recognized

GOST

CCA

IECEE CB Scheme

GL

cULus Recognized

## Accessories

Accessories

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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### Accessories

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#### Zack marker strip - ZBN 18,LGS:L1-N,ERDE - 2749576



Zack marker strip, 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

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#### Zack marker strip - ZBN 18,LGS:ERDE - 2749589



Zack marker strip, 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

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



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

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## Accessories

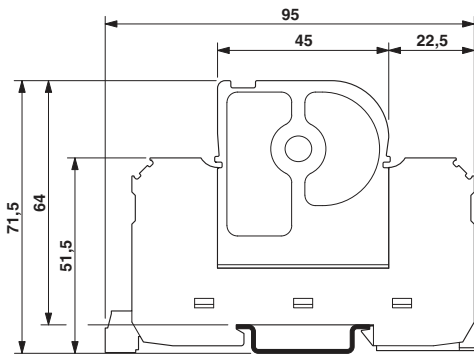
Type 2 surge protection connector - VAL-CP-350-ST - 2859602



Type 2 arrester replacement plug (surge arrester) with high-capacity varistor with low leakage current.

## Drawings

Dimensioned drawing



Circuit diagram

