Type 2 surge protection device - VAL-CP-3S-350 - 2859521

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Plug-in type 2 arrester (surge arrester) for 3-phase power supply networks with separate N and PE (5-conductor system: L1, L2, L3, N, PE), with remote indication contact.

Why buy this product

- Plugs can be checked with CHECKMASTER
- With or without floating remote indication contact
- High continuous voltage of 350 V AC for 230/400 V AC networks with high voltage fluctuations
- Optical, mechanical status indication for the individual arresters
- Type 2 consistent plug-in surge arresters
- Mechanical coding of all slots
- Modular arrester blocks with ultra-narrow design
- Use of varistors that are free of leakage current
- Disconnect device on each individual plug

Key commercial data

Packing unit	1 PCE
GTIN	4 017918 977610
Weight per Piece (excluding packing)	388.83 GRM
Weight per piece (including packing)	412.8 GRM
Custom tariff number	85363030
Country of origin	Germany
Sales Key	K1 - Overvoltage Protect.

Technical data

Dimensions

Height	98.5 mm
Width	49.2 mm
Depth	70 mm

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Technical data

Ambient conditions

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

General

IEC power supply system	TT
	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
Design	DIN rail module, two-section, divisible
Number of positions	4
Message: Surge protection fault	Optical, remote indicator contact
Direction of action	3L-N & N-PE

Protective circuit

IEC test classification	II
	T2
EN type	T2
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)	264 V AC
U_T (TOV-proof)	415 V AC (5 s)
	1200 V AC (200 ms / N-PE)
Nominal frequency f_N	50 Hz
	60 Hz
Rated load current I_L	40 A (biconnect, 6 mm²)
	63 A (2x 10 mm²)
Residual current I_{PE}	≤ 1 µA
Standby power consumption P_C	≤ 3.5 mW
Power consumption without load Pc	≤ 3.5 mW
Max. discharge current I_{max} (8/20) µs maximum (L-N)	120 kA (all channels)
Max. discharge current I_{max} (8/20) µs maximum (N-PE)	40 kA
Nominal discharge current I_n (8/20) µs (L-N)	20 kA
	60 kA (all channels)

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Protective circuit

Nominal discharge current I_n (8/20) µs (N-PE)	20 kA
Front of wave sparkover voltage at 6 kV (1.2/50) µs (N-PE)	≤ 1.5 kV
Voltage protection level U_P (L-N)	≤ 1.4 kV
Voltage protection level U_P (N-PE)	≤ 1.5 kV
Residual voltage (L-N)	≤ 1.4 kV (at I_n)
	≤ 1.2 kV (at 10 kA)
	≤ 1.1 kV (at 5 kA)
	≤ 1 kV (at 3 kA)
Residual voltage (L-PE)	≤ 1.6 kV (at I_n)
	≤ 1.3 kV (at 10 kA)
	≤ 1.2 kV (at 5 kA)
	≤ 1.1 kV (at 3 kA)
Residual voltage (N-PE)	≤ 0.5 kV (at I_n)
	≤ 0.3 kV (at 10 kA)
	≤ 0.25 kV (at 5 kA)
	≤ 0.2 kV (at 3 kA)
Clamping voltage ringwave (L-N)	≤ 1.2 kV (category C3 20 kV/10 kA)
	≤ 1.1 kV (category C2 10 kV/5 kA)
	≤ 1 kV (category B3/C1 6 kV/3 kA)
Clamping voltage ringwave (L-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)
Clamping voltage ringwave (N-PE)	≤ 1.5 kV (category C3 20 kV/10 kA)
	≤ 1.4 kV (category C2 10 kV/5 kA)
	≤ 1.2 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	125 A (gL/gG)
Max. required backup fuse with V-type through wiring	40 A (gL/gG)
Short-circuit resistance I_P with max. backup fuse (effective)	25 kA
Follow current quenching capacity If (N-PE)	100 A

Connection, protective circuit

Connection method	Screw connection
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	16 mm

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Connection, protective circuit

Conductor cross section stranded min.	2.5 mm²
Conductor cross section stranded max.	16 mm²
Conductor cross section solid min.	2.5 mm²
Conductor cross section solid max.	25 mm²
Conductor cross section AWG/kcmil min.	12
Conductor cross section AWG/kcmil max	4

Remote indicator contact

Connection name	Remote fault indicator contact
Switching function	PDT, 1-pos.
Connection method	Pluggable screw connection
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section stranded min.	0.14 mm²
Conductor cross section stranded max.	1.5 mm²
Conductor cross section solid min.	0.14 mm²
Conductor cross section solid max.	1.5 mm²
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
	DIN EN 61643-11 2002
	DIN EN 61643-11/A11 2007
	IEEE C62.1 / C62.34 / C62.45

Classifications

eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801

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Classifications

eCl@ss

eCl@ss 6.0	27130805
eCl@ss 7.0	27130805
eCl@ss 8.0	27130805

ETIM

ETIM 2.0	EC000941
ETIM 3.0	EC000941
ETIM 4.0	EC000941
ETIM 5.0	EC000941

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 / GL / IECEE CB Scheme / cULus Recognized

Ex Approvals

Approvals submitted

Approval details

UL Recognized

KEMA-KEUR

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cUL Recognized

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Accessories

Accessories

Bridge

Wiring bridge - MPB SET VAL-CP-3S - 2880684

Wiring bridge set, consisting of three flexible bridges 15 cm black, 1 bridge 27 cm blue.

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

Terminal marking

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Accessories

Zack Marker strip, flat - ZBF 12:UNBEDRUCKT - 0809735

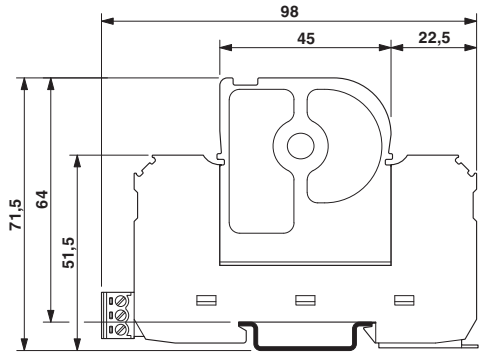
Zack Marker strip, flat, Strip, white, Unlabeled, Can be labeled with: Plotter, Mounting type: Snap into flat marker groove, For terminal block width: 12 mm, Lettering field: 5.15 x 12.15 mm

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

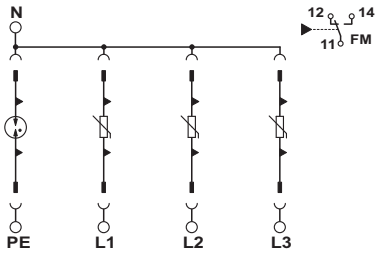
Flat zack marker sheet, Sheet, white, Unlabeled, Can be labeled with: Plotter, Mounting type: Snap into flat marker groove, For terminal block width: 5.2 mm, Lettering field: 5 x 4.5 mm

Drawings

Dimensioned drawing



Circuit diagram



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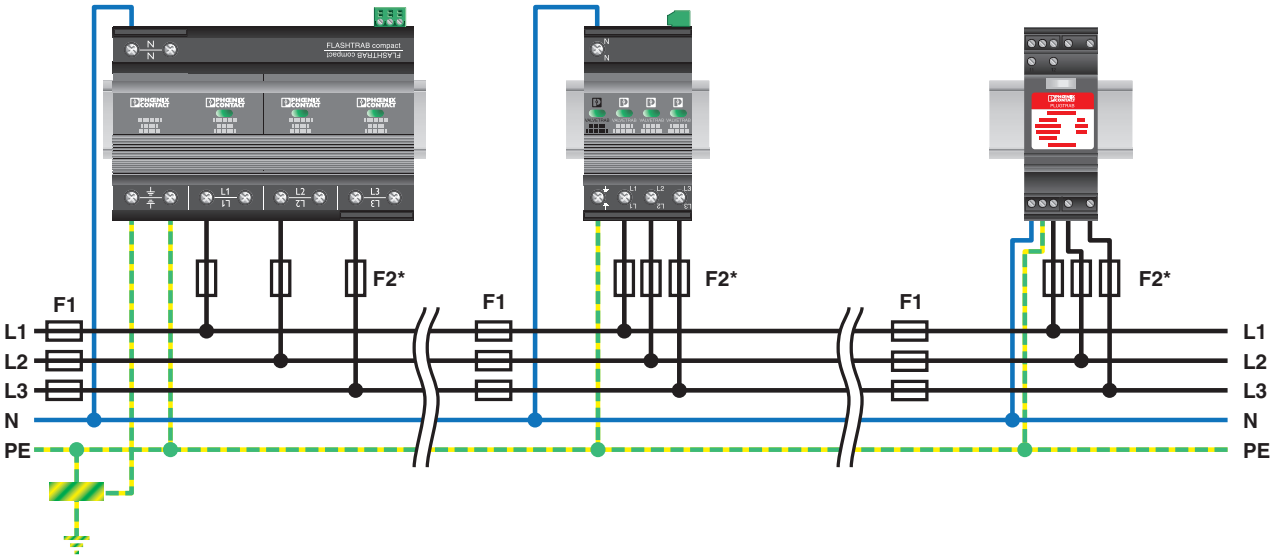
Application drawing



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Application drawing