

VAL-SEC-T2-3S-350VF-FM - Type 2 surge arrester

2909590

<https://www.phoenixcontact.com/us/products/2909590>



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Pluggable surge protective device free of leakage current, in accordance with Type 2/Class II, for 3-phase power supply networks with separate N and PE (5-conductor system: L1, L2, L3, N, PE), with remote indication contact.

Your advantages

- Surge protection family for universal use with optimum energy coordination from the lightning current arrester to the device protection
- Easy to maintain due to consistently pluggable protection modules
- Excellent level of information provided by mechanical/visual status indicator and remote indication contact
- More space in the control cabinet due to the narrow overall width of just 12 mm per position and use without separate backup fuse up to 200 A gG
- Suitable for use in insulation-monitored systems due to combination of varistor and gas discharge tube free of leakage current
- Extremely narrow design, just 12 mm per position
- Free of leakage current
- High-performance gas-filled surge arrester for N/PE protection

Commercial data

Item number	2909590
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	CL1351
GTIN	4055626371597
Weight per piece (including packing)	388.04 g
Weight per piece (excluding packing)	385 g
Country of origin	DE

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Technical data

Product properties

Product type	Surge arrester
Product family	SEC Family
IEC test classification	II T2
EN type	T2
IEC power supply system	TN-S TT
Type	DIN rail module, two-section, divisible
Number of positions	4
Surge protection fault message	Optical, remote indicator contact

Insulation characteristics

Overvoltage category	III
Pollution degree	2

Electrical properties

Nominal frequency f_N	50 Hz (60 Hz)
Indicator/remote signaling	
Connection name	Remote fault indicator contact
Switching function	Changeover contact
Operating voltage	5 V AC ... 250 V AC 125 V DC (200 mA DC)
Operating current	5 mA AC ... 1 A AC 1 A DC (30 V DC)

Connection data

Connection method	Screw connection
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	16 mm
Conductor cross-section flexible	2.5 mm ² ... 16 mm ²
Conductor cross-section rigid	2.5 mm ² ... 25 mm ²
Conductor cross-section AWG	12 ... 4
Connection method	Fork-type cable lug
Conductor cross-section flexible	1.5 mm ² ... 6 mm ²

Remote fault indicator contact

Connection method	Plug-in/screw connection via COMBICON
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm

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Conductor cross-section flexible	0.14 mm ² ... 1.5 mm ²
Conductor cross-section rigid	0.14 mm ² ... 1.5 mm ²
Conductor cross-section AWG	28 ... 16

Dimensions

Dimensional drawing	
Width	49.2 mm
Height	97.9 mm
Depth	74.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	2.7 Div.

Material specifications

Color (Male connector)	light gray (RAL 7035)
Color (Base element)	gray (RAL 7042)
Flammability rating according to UL 94	V-0
CTI value of material	600
Insulating material	PA6.6-FR 20% GF
	PBT-FR
Material group	I
Housing material	PA 6.6-FR 20 % GF
	PBT-FR

Protective circuit

Mode of protection	L-N
	L-PE
	N-PE
Direction of action	3L-N & N-PE
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 operating voltage U _C (L-PE)	350 V AC
Maximum continuous operating voltage U _C (N-PE)	264 V AC
Rated load current I _L	40 A (Biconnect M4 fork-type cable lug 6 mm ²)
	63 A (TWIN ferrule 2 x 10 mm ²)
Protective conductor current I _{PE}	≤ 1 µA
Nominal discharge current I _n (8/20) µs (L-N)	10 kA
Nominal discharge current I _n (8/20) µs (L-PE)	10 kA
Nominal discharge current I _n (8/20) µs (N-PE)	20 kA
Maximum discharge current I _{max} (8/20) µs (L-N)	20 kA

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Maximum discharge current I_{max} (8/20) μ s (L-PE)	20 kA
Maximum discharge current I_{max} (8/20) μ s (N-PE)	40 kA
Follow current interrupt rating I_{fi} (N-PE)	100 A (264 V AC)
Short-circuit current rating I_{SCCR}	50 kA
Voltage protection level U_p (L-N)	≤ 1.5 kV
Voltage protection level U_p (L-PE)	≤ 2.3 kV
Voltage protection level U_p (N-PE)	≤ 1.5 kV
Residual voltage U_{res} (L-N)	≤ 1.35 kV (at I_n) ≤ 1.1 kV (at 5 kA) ≤ 0.95 kV (at 2 kA) ≤ 0.9 kV (at 1 kA)
Residual voltage U_{res} (L-PE)	≤ 1.75 kV (at I_n) ≤ 1.2 kV (at 5 kA) ≤ 1.05 kV (at 2 kA) ≤ 0.95 kV (at 1 kA)
Residual voltage U_{res} (N-PE)	≤ 0.5 kV (at I_n) ≤ 0.5 kV (at 10 kA) ≤ 0.5 kV (at 5 kA) ≤ 0.5 kV (at 4 kA) ≤ 0.5 kV (at 2 kA)
TOV behavior at U_T (L-N)	457 V AC (5 s / withstand mode) 457 V AC (120 min / withstand mode)
TOV behavior at U_T (N-PE)	1200 V AC (200 ms / withstand mode)
Response time t_A	≤ 100 ns
Max. backup fuse with V-type through wiring	40 A (gG / Biconnect M4 fork-type cable lug, 6 mm ²) 63 A (gG / TWIN ferrule 2x 10mm ²)
Max. backup fuse with branch wiring	200 A (gG)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 2000 m (amsl)
Permissible humidity (operation)	5 % ... 95 %

Standards and regulations

Standards/specifications	IEC 61643-11
Note	2011
EN 61643-11	
Standards/specifications	EN 61643-11
Note	2012

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Mounting

Mounting type

DIN rail: 35 mm

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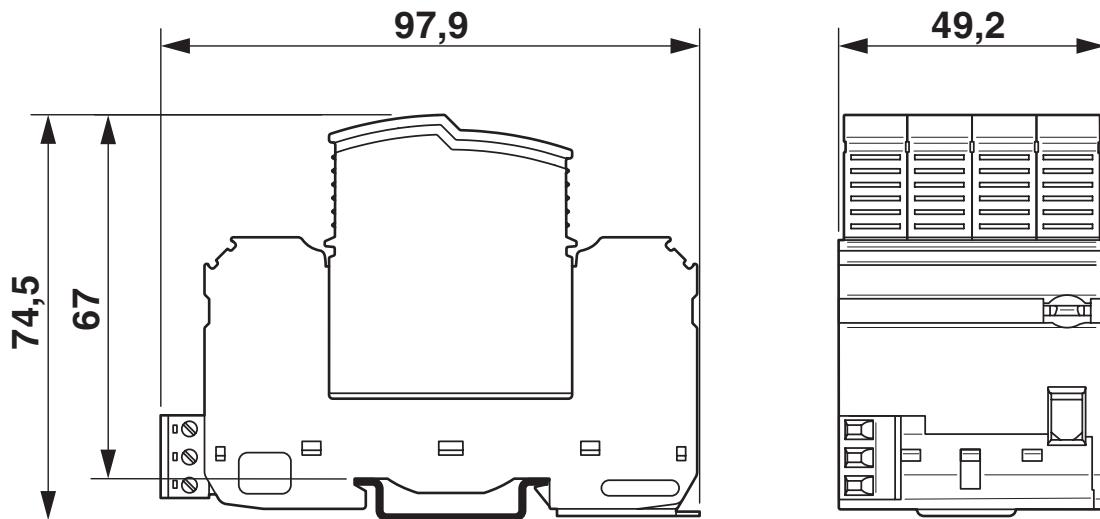
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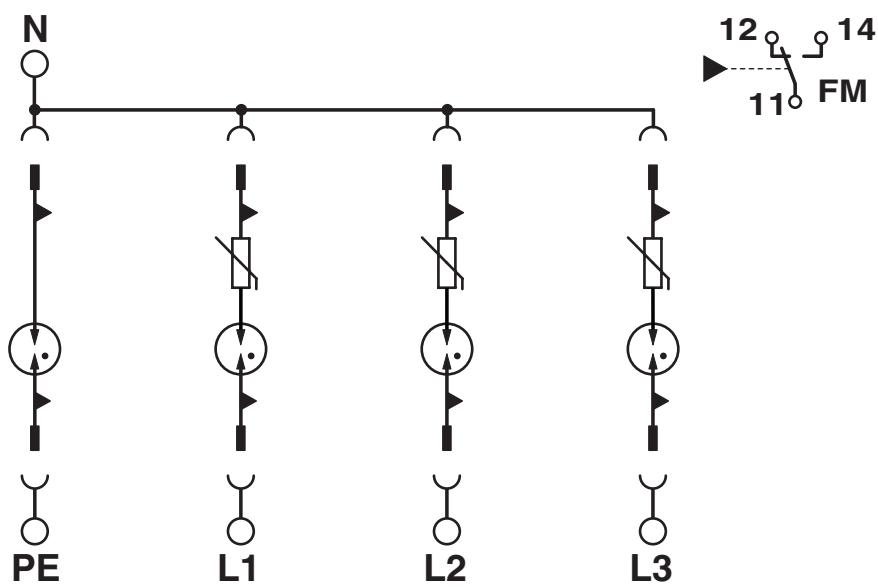


Drawings

Dimensional drawing



Circuit diagram



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Approvals

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UAE-RoHS

Approval ID: 23-10-88707

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Classifications

ECLASS

ECLASS-13.0	27171202
ECLASS-15.0	27171202

ETIM

ETIM 9.0	EC000941
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UNSPSC

UNSPSC 21.0	39121600
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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