

## Type 2 surge arrester - VAL-SEC-T2-2S-350-FM - 2905338

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)




Plug-in surge arrester, in accordance with Type 2/Class II, for 2-phase power supply networks with separate N and PE (4-conductor system: L1, L2, N, PE), with remote indication contact.

### Your advantages

- ✔ Varistor arrester with a low leakage current
- ✔ High-performance gas-filled surge arrester for N/PE protection
- ✔ Extremely narrow design, just 12 mm per position
- ✔ High continuous voltage of 350 V AC for 230/400 V AC networks with high voltage fluctuations
- ✔ Pluggable
- ✔ Low voltage protection level of 1.5 kV
- ✔ Optical, mechanical status indicator
- ✔ With floating remote indication contact as an option
- ✔ Plugs can be checked with CHECKMASTER 2



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 948067
GTIN	4046356948067

### Technical data

#### Dimensions

Height	97.9 mm
Width	37.3 mm
Depth	74.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	2 Div.

#### Ambient conditions

Degree of protection	IP20
----------------------	------

# Type 2 surge arrester - VAL-SEC-T2-2S-350-FM - 2905338

## Technical data

### Ambient conditions

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 %
Shock (operation)	30g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z)
Vibration (operation)	5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

### General

IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN-S
	TT
Mode of protection	L-N
	L-PE
	N-PE
Mounting type	DIN rail: 35 mm
Color	light grey RAL 7035
	traffic grey A RAL 7042
Housing material	PA 6.6-FR 20% GF
	PBT-FR
Degree of pollution	2
Flammability rating according to UL 94	V-0
Type	DIN rail module, two-section, divisible
Number of positions	3
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 operating voltage $U_C$ (L-PE)	350 V AC
Maximum continuous voltage $U_C$ (N-PE)	264 V AC
Rated load current $I_L$	40 A (Biconnect M4 fork-type cable lug 6 mm <sup>2</sup> )
	63 A (TWIN ferrule 2 x 10 mm <sup>2</sup> )
Residual current $I_{PE}$	≤ 1 μA
Nominal discharge current $I_n$ (8/20) μs	20 kA
Maximum discharge current $I_{max}$ (8/20) μs	40 kA
Follow current interrupt rating $I_{fi}$ (N-PE)	100 A (264 V AC)
Short-circuit current rating $I_{SCCR}$	25 kA (in case of 315 A gG backup fuse)

# Type 2 surge arrester - VAL-SEC-T2-2S-350-FM - 2905338

## Technical data

### Protective circuit

	50 kA (in case of 200 A gG backup fuse)
Voltage protection level $U_p$ (L-N)	$\leq 1.5$ kV
Voltage protection level $U_p$ (L-PE)	$\leq 1.9$ kV
Voltage protection level $U_p$ (N-PE)	$\leq 1.5$ kV
Residual voltage $U_{res}$ (L-N)	$\leq 1.5$ kV (at $I_n$ )
	$\leq 1.3$ kV (at 10 kA)
	$\leq 1.2$ kV (at 5 kA)
	$\leq 1.1$ kV (at 4 kA)
	$\leq 1$ kV (at 2 kA)
Residual voltage $U_{res}$ (N-PE)	$\leq 0.5$ kV (at $I_n$ )
	$\leq 0.5$ kV (at 10 kA)
	$\leq 0.5$ kV (at 5 kA)
	$\leq 0.5$ kV (at 4 kA)
	$\leq 0.5$ kV (at 2 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)	$\leq 25$ ns
Response time $t_A$ (L-PE)	$\leq 100$ ns
Response time $t_A$ (N-PE)	$\leq 100$ ns
Max. backup fuse with V-type through wiring	40 A (gG / Biconnect M4 fork-type cable lug, 6 mm <sup>2</sup> )
	63 A (gG / TWIN ferrule 2x 10mm <sup>2</sup> )
Max. backup fuse with branch wiring	315 A (gG)

### Indicator/remote signaling

Switching function	PDT 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 method	Plug-in/screw connection via COMBICON
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section solid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	28 ... 16

### Connection data

Connection method	Screw connection
Screw thread	M5

# Type 2 surge arrester - VAL-SEC-T2-2S-350-FM - 2905338

## Technical data

### Connection data

Tightening torque	4.5 Nm
Stripping length	16 mm
Conductor cross section flexible	2.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Conductor cross section solid	2.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>
Conductor cross section AWG	12 ... 4
Connection method	Fork-type cable lug
Conductor cross section flexible	1.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>

### UL specifications

SPD Type	4CA
Maximum continuous operating voltage MCOV (L-L)	700 V AC
Maximum continuous operating voltage MCOV (L-N)	350 V AC
Maximum continuous operating voltage MCOV (L-G)	350 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)	3280 V
Measured limiting voltage MLV (L-N)	2000 V
Measured limiting voltage MLV (L-G)	2080 V
Measured limiting voltage MLV (N-G)	950 V
Nominal discharge current I <sub>n</sub> (L-L)	20 kA
Nominal discharge current I <sub>n</sub> (L-N)	20 kA
Nominal discharge current I <sub>n</sub> (L-G)	20 kA
Nominal discharge current I <sub>n</sub> (N-G)	20 kA

### UL indicator/remote signaling

Operating voltage	125 V AC
Operating current	1 A AC
Tightening torque	2 lb <sub>F</sub> -in. ... 4 lb <sub>F</sub> -in.
Conductor cross section AWG	30 ... 14

### UL connection data

Conductor cross section AWG	14 ... 2 (solid)
	14 ... 4 (flexible)
Tightening torque	40 lb <sub>F</sub> -in. ... 50 lb <sub>F</sub> -in.

### Standards and Regulations

Standards/regulations	IEC 61643-11 2011
-----------------------	-------------------

# Type 2 surge arrester - VAL-SEC-T2-2S-350-FM - 2905338

## Technical data

### Standards and Regulations

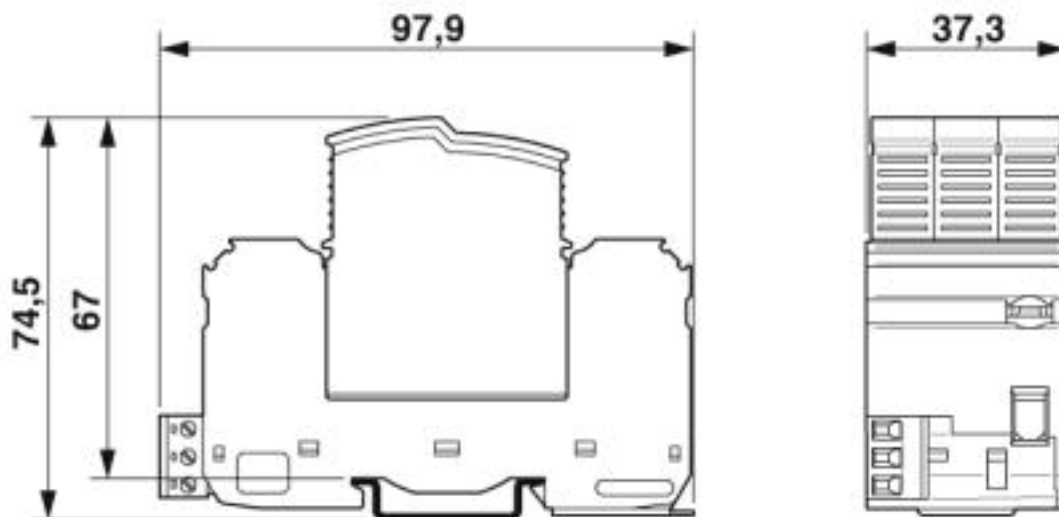
	EN 61643-11 2012
--	------------------

### Environmental Product Compliance

	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

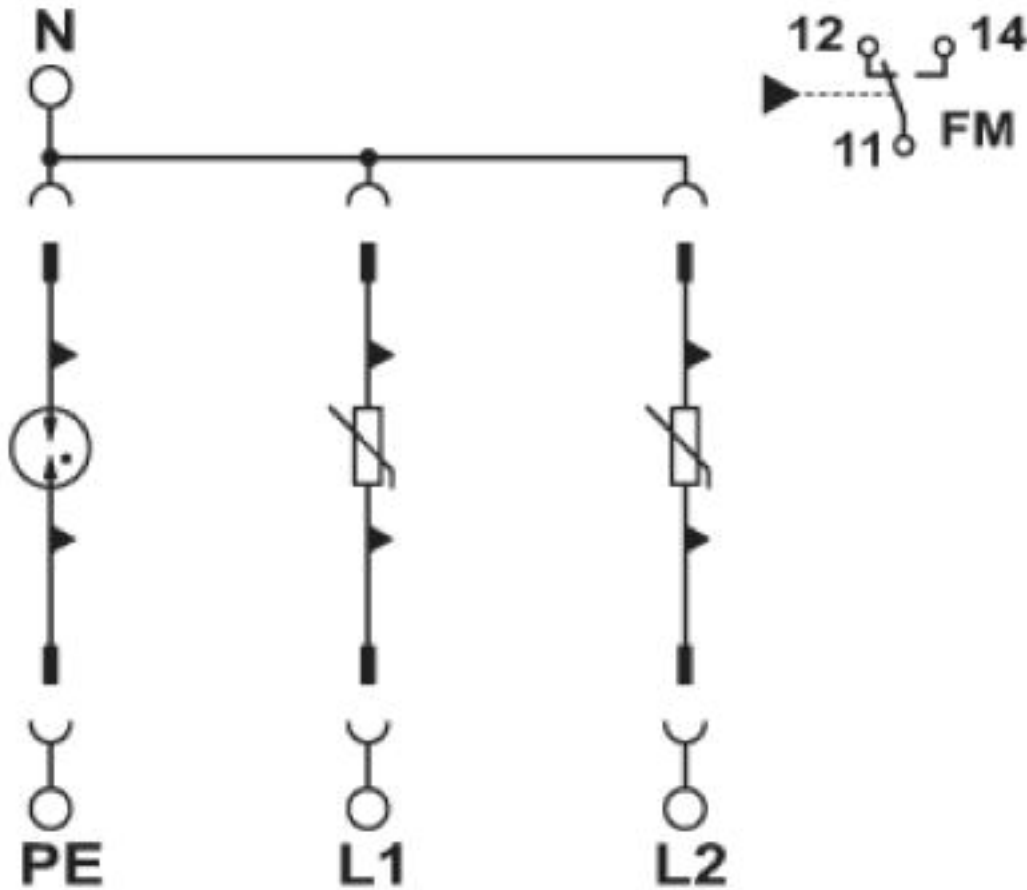
## Drawings

Dimensional drawing



# Type 2 surge arrester - VAL-SEC-T2-2S-350-FM - 2905338

Circuit diagram



## Approvals

Approvals

---

Approvals

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

---

Ex Approvals

## Approval details

DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAE000023D
--------	--	---	------------

CCA	NTR-NL 7347
-----	-------------

# Type 2 surge arrester - VAL-SEC-T2-2S-350-FM - 2905338

## Approvals

UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 330181
KEMA-KEUR		<a href="http://www.dekra-certification.com">http://www.dekra-certification.com</a>	2196453.01
cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 330181
IECEE CB Scheme		<a href="http://www.iecee.org/">http://www.iecee.org/</a>	NL-34356
EAC			RU C- DE.A*30.B01561
cULus Recognized			

Phoenix Contact 2019 © - all rights reserved  
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>