

TE'S RAYCHEM SCREENED SURGE ARRESTERS RSTI-SA-10

with I_N 10 kA and U_C up to 41 kV

Product Features

- Tested in accordance with IEC60099-4 (May 2004)
- State-of-the-art gapless design
- Excellent protection margins
- Low residual voltages
- Excellent short circuit performance
- Excellent TOV performance
- Maintenance free

The screened gapless surge arrester are “T”-shaped products. They are designed for direct connection onto outer cone bushings in accordance with EN50180 or EN50181 with interface type “C” or for parallel connection mating to the rear entry of the RSTI base screened connector system designed for system voltage up to 41 kV.

Easily accessible rear plug with capacitive test point.

The insulation of the screened surge arresters are made of a highly modified silicone rubber characterised by high tracking resistance, elongation at break and non-flammability.

A thin-walled screen is permanently bonded onto the insulation and protects the connection system against unintentional contact.

The active part is a metal oxide arrester which meets the requirements of IEC-60099-4 for separable and dead-front arresters.

The combination of screened connector and surge arresters exceeds CENELEC HD 629.1 S2 requirements, which includes BS, VDE and other international specifications.

Few accessories required for system test and earth connection.

Complete kit including screened surge arresters, threaded pin and ground lead for three phases facilitates installation and storage.

RSTI-SA-10 Applications

Single connection

Material required for 3 phases:

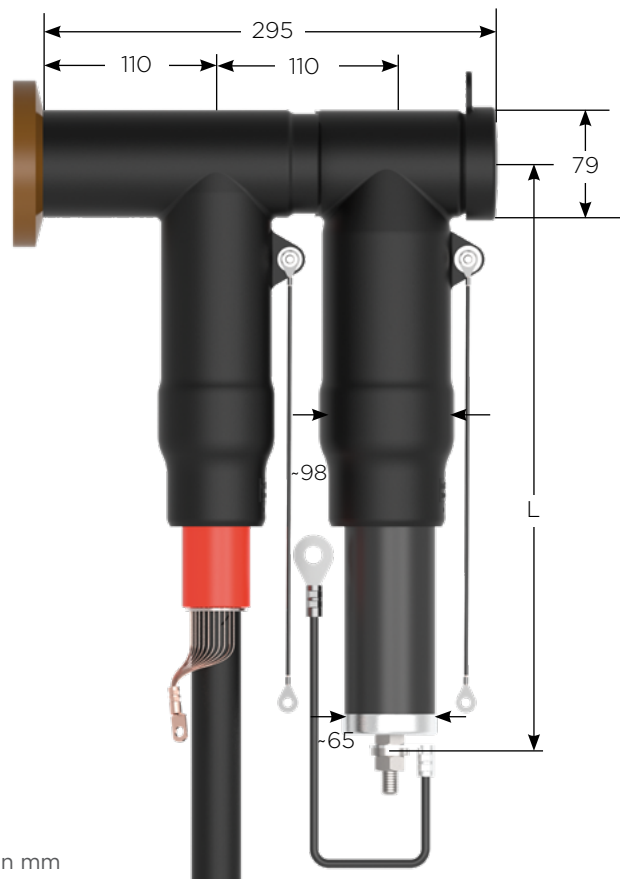
1 x RSTI-68SAxx10
(screened surge arrester kit for direct bushing connection)



Parallel connection

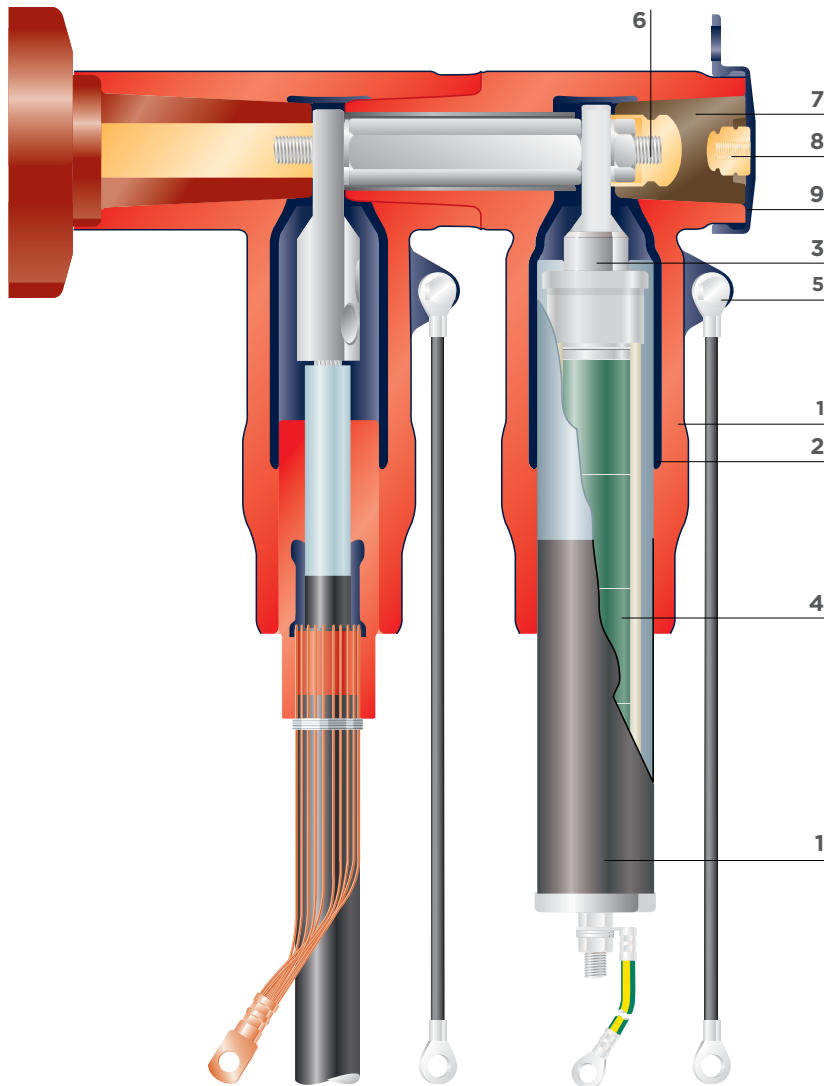
Material required for 3 phases:

1 x RSTI-58xx or RSTI-68xx (Base connector kit)
1 x RSTI-CC-68SAxx10
(screened surge arrester kit with coupling connection)



Dimensions in mm

Design and construction



1 Screened body

A thin walled conductive outer screen is permanently bonded to the silicone rubber insulating material.

2 Inner screen

A conductive inner layer, as a Faraday cage around the top end electrode prevents corona at rated voltage.

3 Threaded lug

Pre-installed threaded lug, specially designed, facilitates the connection of the surge arrester to the base connector or bushing.

4 Surge arrester core

Gapless surge arrester core assembly consisting of ZnO (Zinc Oxide) varistors and a mechanical robust structure.

5 Earthing eye and ground lead

Provides a connection point for earthing the screen.

6 Threaded pin

A threaded pin together with a spring washer and hex nut ensure a high performance electrical and mechanical contact with the base connector or bushing.

7 Rear plug with test point

Removable rear plug with capacitive test point.

8 Test point

The test point is used to determine whether the circuit is energised; alternatively it can be used for phasing.

9 Conductive end cap

Electrical screen and protection of the rear end of the separable surge arrester.

Accessories

Test rod

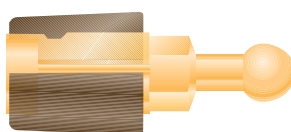
Ref. no.: RSTI-68TR; Length: 310 mm
RSTI-68TRL; Length: 460 mm
RSTI-68TRA; Kit includes
2 short and 1 long test rod



Note: When test rod is in use, surge arrester assembly must be removed.

Earthing adapter

Ref. no.: RSTI-68EA20;
Ball diameter: 20 mm
RSTI-68EA25;
Ball diameter: 25 mm



TECHNICAL DATA FOR SINGLE AND PARALLEL CONNECTIONS

Rated Discharge Current I_N	10 kA							
Operating duty High current Impulse 4/10 μ s	100 kA							
Short Circuit Current I_s	20 kA							
Long duration current impulse (2ms)	212A							
Continuous operating voltage U_c	12.0	18.0	24.0	30.0	33.0	36.0	39.0	41.0
Rated voltage U_R	15.0	22.5	30.0	37.5	41.3	45.0	48.8	51.3

LIGHTNING CURRENT IMPULSE 8/20 μ s

Residual Voltage (kV)

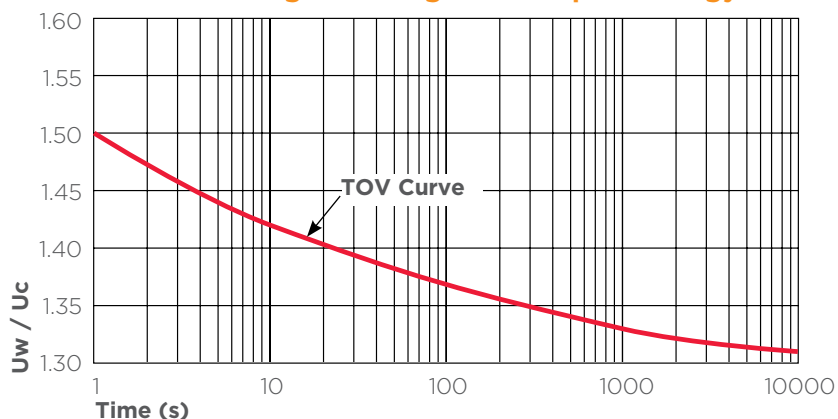
5 kA	39.1	58.6	78.2	97.7	107.5	117.3	127.1	133.6
10 kA	41.5	62.2	83.0	103.7	114.0	124.5	134.9	141.8
20 kA	45.7	68.5	91.4	114.2	125.6	137.1	148.5	156.1

STEEP LIGHTNING CURRENT IMPULSE 1/20 μ s

Residual Voltage (kV)

10 kA	43.9	65.8	87.8	109.8	120.8	131.7	142.7	150.0
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TOV with 100 kA single shot high current prior energy



Temperature of samples (pre-heated): 60° C according to IEC 60099-4, Ed 2.0 2004. TOV Curve applies to an arrester which has a pre-stress applied prior to TOV verification. This prestress is equivalent to one high current impulse of 100kA, 4/10 as per the switching surge operating duty test.

U_w = TOV withstand voltage
 U_c = continuous operating voltage

ORDERING INFORMATION

VOLTAGE CLASS (kV)	12.0	18.0	24.0	30.0	33.0	36.0	39.0	41.0
Reference Number Single connection	RSTI-68SA1210	RSTI-68SA1810	RSTI-68SA2410	RSTI-68SA3010	RSTI-68SA3310	RSTI-68SA3610	RSTI-68SA3910	RSTI-68SA4110
Reference Number Parallel connection	RSTI-CC-68SA1210	RSTI-CC-68SA1810	RSTI-CC-68SA2410	RSTI-CC-68SA3010	RSTI-CC-68SA3310	RSTI-CC-68SA3610	RSTI-CC-68SA3910	RSTI-CC-68SA4110

DIMENSION AND WEIGHT

Length L* (mm)	285.0	400.0	400.0	520.0	520.0	520.0	530.0	530.0
Weight (kg/pc)								
(68SA)	3.5	3.7	3.9	4.1	4.2	4.2	4.3	4.4
(-CC-68SA)	4.4	4.6	4.8	5.0	5.1	5.1	5.2	5.3

* see page 2

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