

TE CONNECTIVITY'S (TE) RAYCHEM RSTI-SA-10 SCREENED, SEPARABLE SURGE ARRESTER

with I_N 10 kA and U_c up to 41 kV

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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 is a "T"-shaped product. It is 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 arrester is 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 arrester 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 arrester, 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)



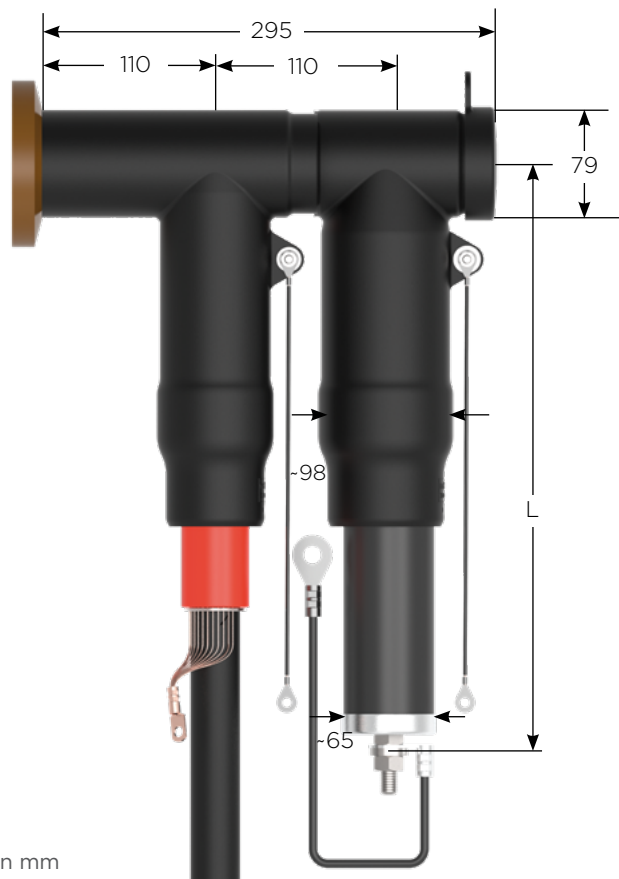
Parallel connection

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

This technical diagram illustrates the internal structure of a cable-stayed bridge pylon and stay cables. The pylon is shown in a cross-section, revealing its internal components. The stay cables are shown in a longitudinal section, revealing their internal structure. The diagram is labeled with numbers 1 through 10, indicating specific components:

- 1: Stay cable (longitudinal section)
- 2: Stay cable (cross-section)
- 3: Stay cable (cross-section)
- 4: Stay cable (cross-section)
- 5: Stay cable (cross-section)
- 6: Stay cable (cross-section)
- 7: Stay cable (cross-section)
- 8: Stay cable (cross-section)
- 9: Stay cable (cross-section)
- 10: Stay cable (cross-section)

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

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

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

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

Provides a connection point for earthing the screen.

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.

Removable rear plug with capacitive test point.

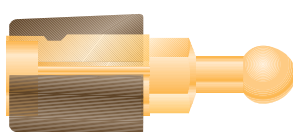
The test point is used to determine whether the circuit is energised; alternatively it can be used for phasing.

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

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



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



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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)	212 A							
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)

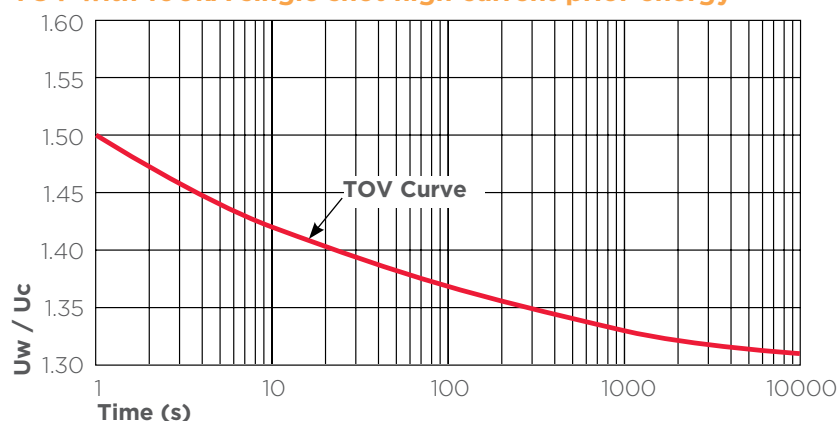
5 kA	39.1	58.6	78.2	97.7	107.5	117.3	127.1	133.6
10 kA	41.5	62.2	83.0	103.7	114.0	124.5	134.9	141.8
20 kA	45.7	68.5	91.4	114.2	125.6	137.1	148.5	156.1

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 100kA 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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**FOR MORE INFORMATION:
TE Technical Support Centers**

USA: +1 800 327 6996
Canada: +1 (905) 475-6222
Mexico: +52 (0) 55-1106-0800
Latin/S. America: +54 (0) 11-4733-2200
France: +33 380 583 200
UK: +44 0870 870 7500
Germany: +49 896 089 903
Spain: +34 916 630 400
Italy: +39 333 250 0915
Benelux: +32 16 508 695
Russia: +7 495-790 790 2-200
China: +86 (0) 400-820-6015