



Energy Division

RSTI-SA-10
Raychem screened, separable
surge arrester up to 41 kV

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Product Features:

- Tested in accordance with IEC60099-4 (May 2004)
- State of 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 to EN50180 or EN50181 with interface type "C" or for parallel connection mating to the rear entry of the base screened connector system RSTI designed for system voltage up to 41 kV.

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.

Easily accessible rear plug with capacitive test point.

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.

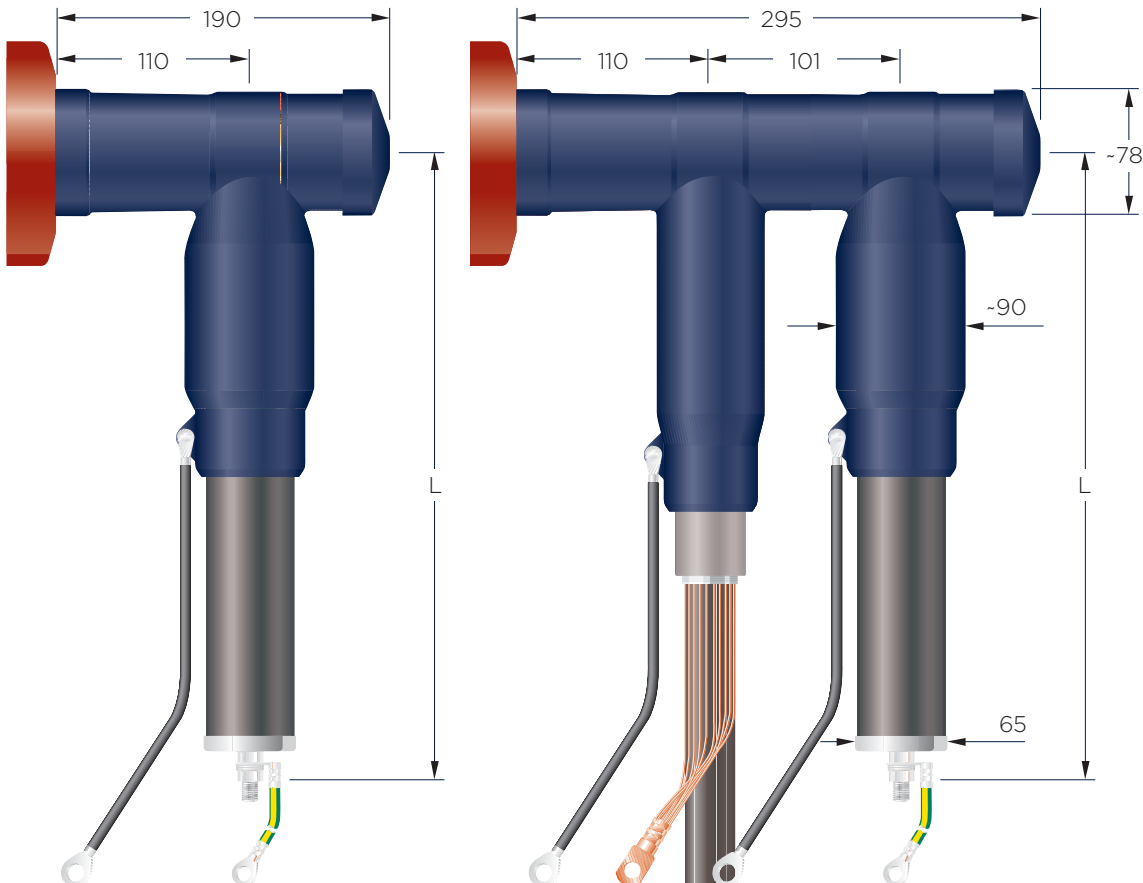
RSTI-SA-10 Applications

Single connection

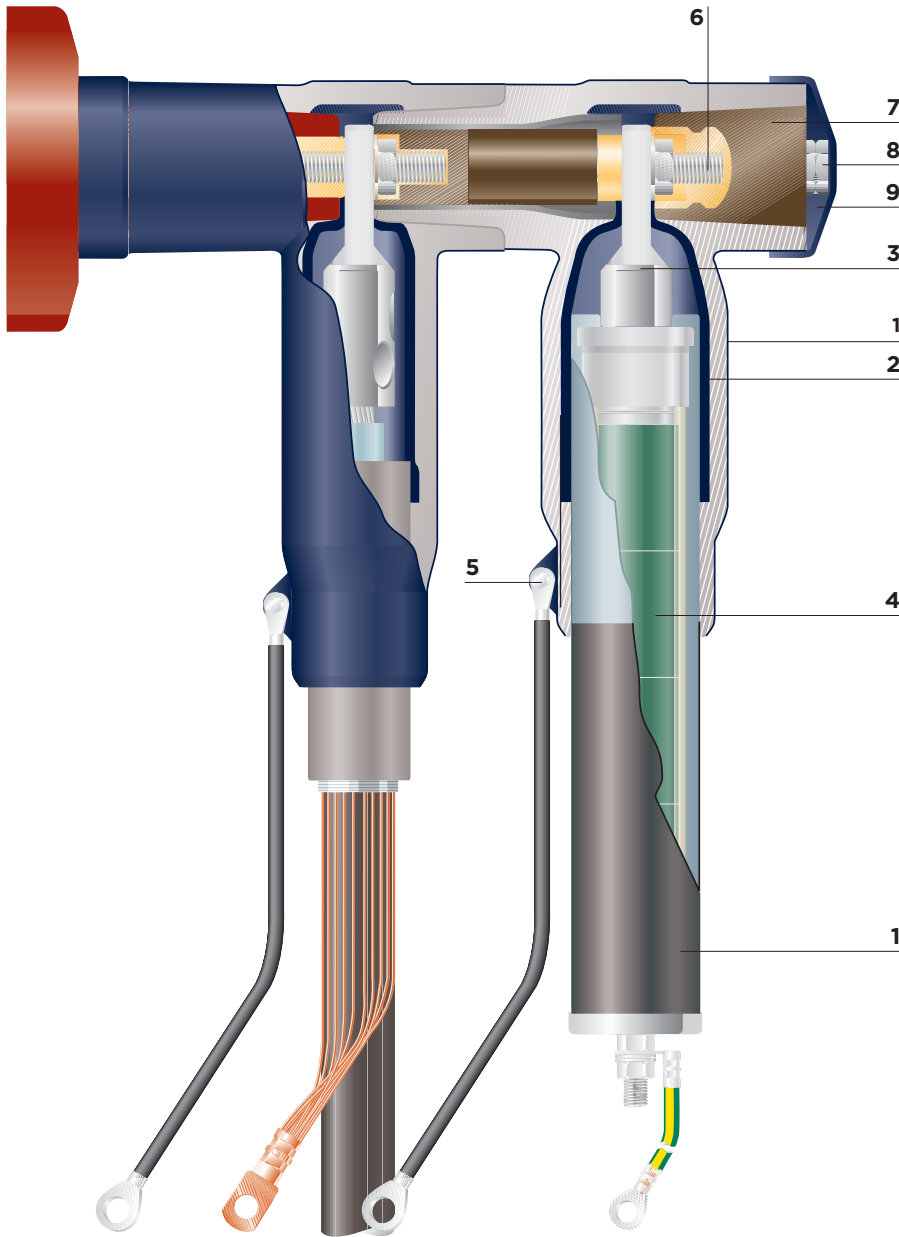
Material requested for 3 phases:
1 x RSTI-66SAxx10
(Screened surge arrester kit for direct bushing connection)

Parallel connection

Material requested for 3 phases:
1 x RSTI-L56xx or RSTI-66xx (Base connector kit)
1 x RSTI-CC-66SAxx10
(Screened surge arrester kit with coupling connection)



Dimensions in mm



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.

RSTI-SA-10 Accessories

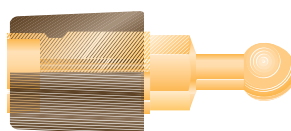
Test rod

Ref. no.: RSTI-56TR; Length: 310 mm
 RSTI-56TRL; Length: 460 mm
 RSTI-56TRA; Kit includes
 2 short and 1 long testrod



Earthing adapter

Ref. no.: RSTI-56EA20;
 Ball diameter: 20 mm
 RSTI-56EA25;
 Ball diameter: 25 mm



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

RSTI-SA-10

Raychem screened, separable surge arrester up to 41 kV Technical data and ordering information

Technical data for single and parallel connection

| | |
|-------------------------------------|--------|
| 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 |

Residual Voltages (kV)

| | | | | | | | |
|------------------------------------|------|------|------|------|------|------|------|
| Continuous operating voltage U_C | 12.0 | 18.0 | 24.0 | 30.0 | 36.0 | 39.0 | 41.0 |
| Rated voltage U_R | 15.0 | 22.5 | 30.0 | 37.5 | 45.0 | 48.8 | 51.3 |

Lightning Current Impulse 8/20 μ s

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

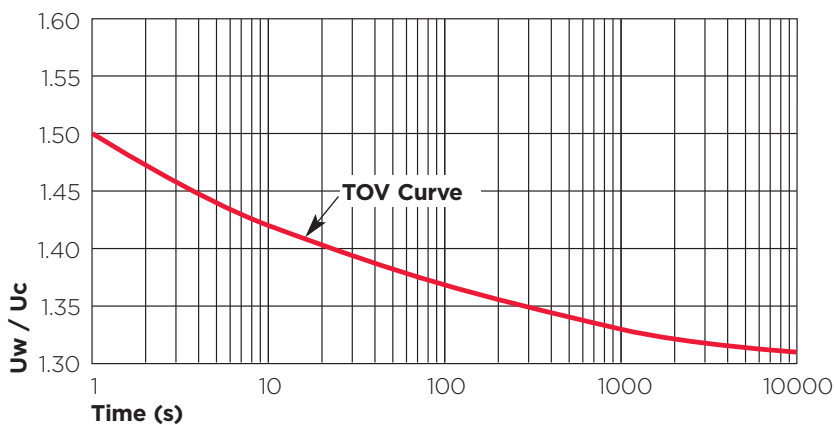
Steep lightning current impulse 1/20 μ s

| | | | | | | | |
|-------|------|------|------|-------|-------|-------|-------|
| 10 kA | 43.9 | 65.8 | 87.8 | 109.8 | 131.7 | 142.7 | 150.0 |
|-------|------|------|------|-------|-------|-------|-------|

Switching impulse 30/60 μ s

| | | | | | | | |
|-------|------|------|------|------|------|-------|-------|
| 125 A | 31.5 | 47.3 | 63.1 | 78.9 | 94.7 | 102.5 | 107.8 |
| 500 A | 32.4 | 48.7 | 64.9 | 81.1 | 97.4 | 105.5 | 110.9 |

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 pre-stress 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 | 36.0 | 39.0 | 41.0 |
|----------------------------|----------|----------|----------|----------|----------|----------|----------|
| Reference Number | RSTI- | RSTI- | RSTI- | RSTI- | RSTI- | RSTI- | RSTI- |
| Single connection | 66SA1210 | 66SA1810 | 66SA2410 | 66SA3010 | 66SA3610 | 66SA3910 | 66SA4110 |
| Reference Number | RSTI-CC- | RSTI-CC- | RSTI-CC- | RSTI-CC- | RSTI-CC- | RSTI-CC- | RSTI-CC- |
| Parallel connection | 66SA1210 | 66SA1810 | 66SA2410 | 66SA3010 | 66SA3610 | 66SA3910 | 66SA4110 |

Dimension and Weight

| | | | | | | | |
|----------------|-------|-------|-------|-------|-------|-------|-------|
| Length L* (mm) | 285.0 | 400.0 | 400.0 | 520.0 | 520.0 | 530.0 | 530.0 |
| Weight (kg/pc) | | | | | | | |
| (66SA) | 3.5 | 3.7 | 3.9 | 4.1 | 4.2 | 4.3 | 4.4 |
| (-CC-66SA) | 4.4 | 4.6 | 4.8 | 5.0 | 5.1 | 5.2 | 5.3 |

* see page 2

All of the above information, including drawings, illustrations and graphic designs, reflects our present understanding and is to the best of our knowledge and belief correct and reliable. Users, however, should independently evaluate the suitability of each product for the desired application. Under no circumstances does this constitute an assurance of any particular quality or performance. Such an assurance is only provided in the context of our product specifications or explicit contractual arrangements. Our liability for these products is set forth in our standard terms and conditions of sale. Raychem, TE Logo and Tyco Electronics are trademarks.

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