



Energy Division

Raychem screened, separable  
connection system RSTI-68  
800 A up to 42 kV

## Raychem screened, separable connection system RSTI-68, 800 A up to 42 kV



### Features

- The insulation of the connector 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 accidental contact.
- The screened connector need not be removed for over sheath testing.
- The screened cable connector exceeds CENELEC HD 629.1 S2 requirements, which includes BS; VDE and other international specifications.
- Design fits 630 A and 1250 A bushings (Interface "C<sub>1</sub>" and "C<sub>2</sub>") as specified by EN 50180 and EN 50181.
- The compact design supports the use of double "T" connections inside standard terminal boxes.
- The wide application range covers cable cross sections from 35 to 300 mm<sup>2</sup>.
- Conductor connection with mechanical, DIN or deep indent lugs.
- Easily accessible rear plug with capacitive test point.
- Few accessories required for system test, double "T" and earth connection.
- Complete kit including lugs facilitates installation and storage.

Raychem RSTI screened separable connectors are designed to connect single- and three-core polymeric cables to medium-voltage gas insulated switchgear and other equipment using CENELEC bushings Type C<sub>1</sub>=630 A and C<sub>2</sub>=1250 A, specified up to 42 kV.

Made of a highly modified silicone rubber and protected by a thin walled outer conductive screen connected to earth, RSTI connectors are equally suited for indoor and outdoor installation.

Supporting a wide application range, the design incorporates one body and two stress cone adapters to cover all cross-sections from 35 to 300 mm<sup>2</sup>. The overall and cut back dimensions are designed to take up minimum space in the terminal box. RSTI connectors are equipped with a capacitive test point for determining whether the circuit is energised. A conductive cap protects this test point.

### Accessories

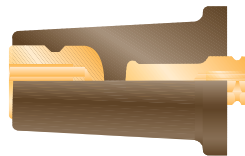
#### Test rod

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



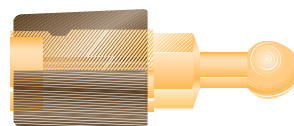
#### Terminating plug

Ref. no.: RSTI-68TP



#### Earthing adapter

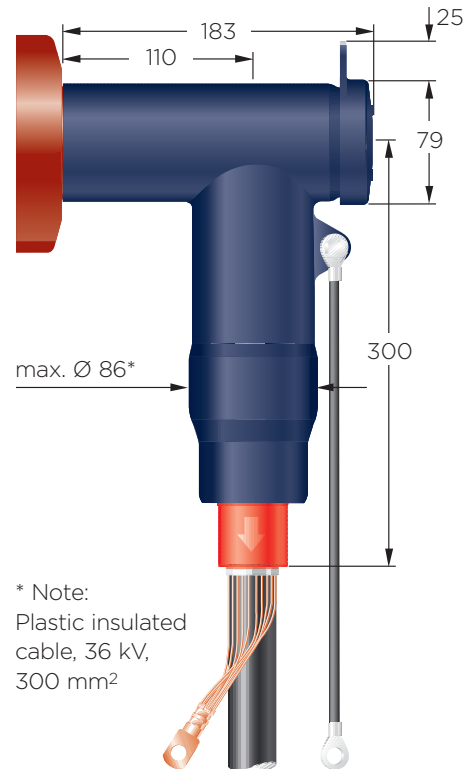
Ref. no.: RSTI-68EA20;  
Ball diameter: 20 mm  
RSTI-68EA25;  
Ball diameter: 25 mm



### Applications

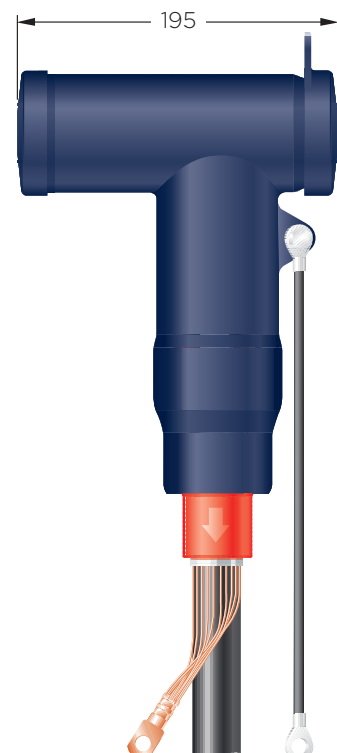
#### Single connection

Material requested for 3 phases:  
1 x RSTI-68xx (Kit)

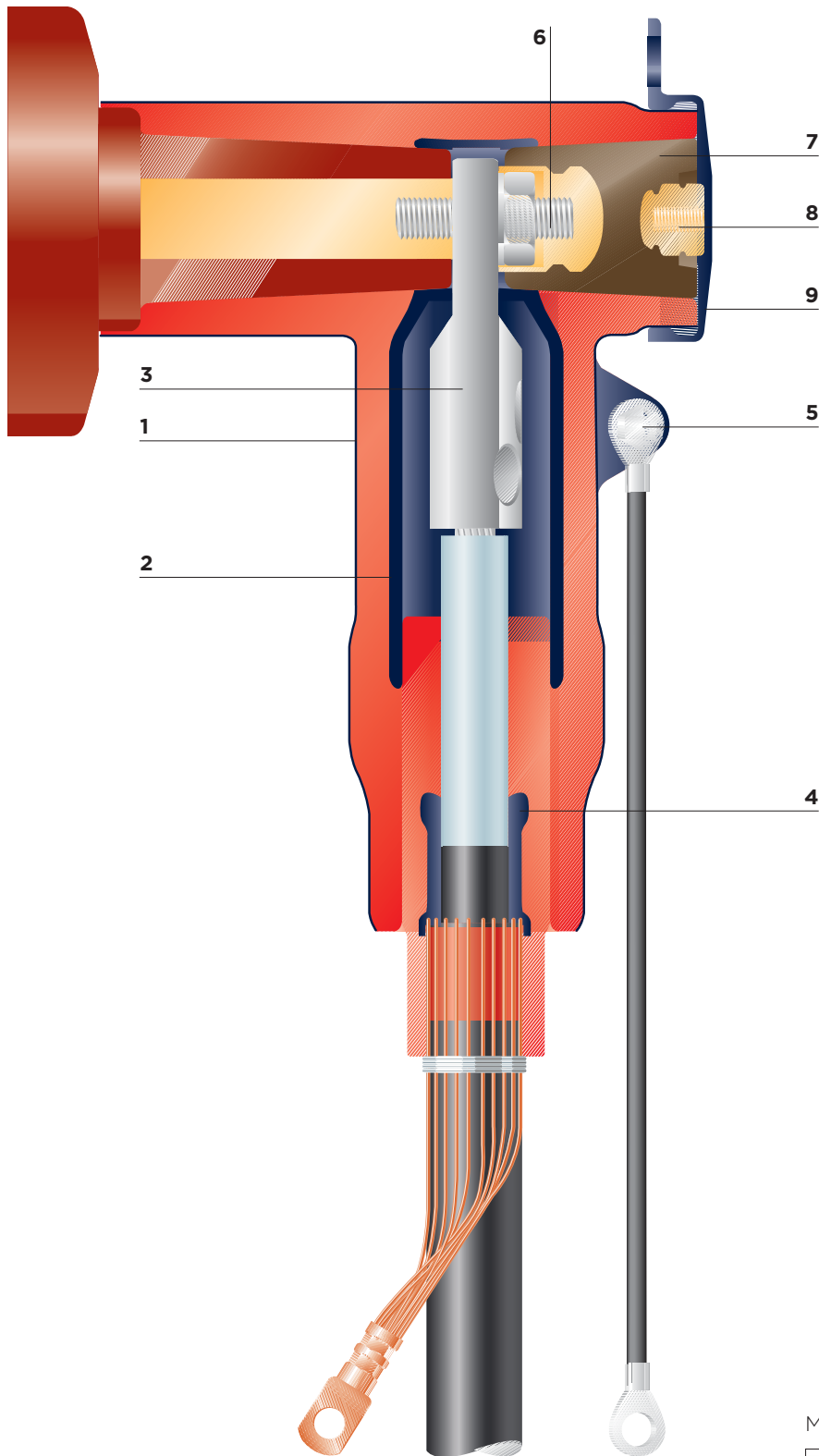


#### Live end seal

Material requested for 3 phases:  
1 x RSTI-68xx (Kit)  
1 x RSTI-68TP (Terminating plug kit)



## Design and construction



### 1 Screened body

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

### 2 Inner screen

A conductive inner layer, as a Faraday cage around the compression or mechanical lug, prevents corona at rated voltage.

### 3 Compression or mechanical lugs

Specially designed DIN and deep indent compression lugs, as well as tinned, mechanical lugs with shear bolts for connecting either aluminium or copper conductor cables.

### 4 Stress cone adapter

Relieves electrical stress at the point where the cable screen is cut. The insulated section, extending beyond the wire shielding, provides a convenient point for over sheath testing.

### 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 (wave type) and hex nut ensure a high performance electrical and mechanical contact with the 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

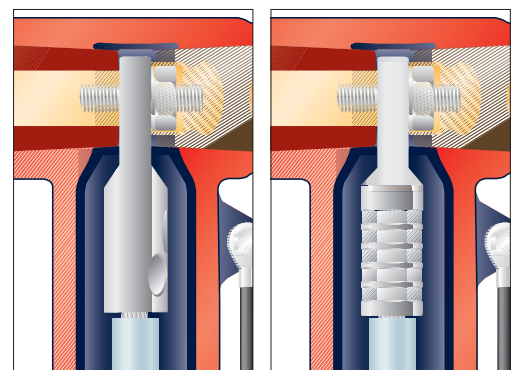
Electrical screen and protection of the rear end of the separable connector.

#### Note:

All applications as shown in the brochure need to have a mechanical support, based on the requirements for dynamic short circuit.

Mechanical lug

Compression lug



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<b>Technical data</b>	Cable insulation diameter range	22.4 - 42.0 mm
	Connector cross-section range	35 - 300 mm <sup>2</sup>
	Maximum system voltage	42 kV
	Continuous current rating	<b>800 A</b>
	Basic impulse level	200 kV
	Partial discharge at 2 U <sub>0</sub>	< 2 pC
	AC voltage withstand, 5 min	93.5 kV
	DC voltage withstand, 15 min	125 kV
	Thermal short circuit, 1 s	55 kA
	Thermal short circuit, 3 s	32 kA
	Dynamic short circuit	125 kA
	The adapters meet the international CENELEC HD 629.1 S2 specification	

### Selection table

#### Screened separable connection system 36 kV and 42 kV with DIN compression lugs

Cross Section  mm <sup>2</sup>	Diameter Reference number Core insulation		Conductor material	
	min mm	max mm	Al	Cu
50	22.4 -	35.5	RSTI-6811	RSTI-6821
70	22.4 -	35.5	RSTI-6812	RSTI-6822
95	22.4 -	35.5	RSTI-6813	RSTI-6823
120	22.4 -	35.5	RSTI-6814	RSTI-6824
150	28.9 -	42.0	RSTI-6815	RSTI-6825
185	28.9 -	42.0	RSTI-6816	RSTI-6826
240	28.9 -	42.0	RSTI-6817	RSTI-6827
300	28.9 -	42.0	RSTI-6818	RSTI-6828

Kits with deep indent compression lugs on request. Contact your local sales representative.

#### Screened separable connection system 36 kV and 42 kV with mechanical lugs and shear bolts

Cross Section  mm <sup>2</sup>	Diameter Reference number Core insulation		Conductor material
	min mm	max mm	Al or Cu
<b>35 - 95</b>	<b>22.4 -</b>	<b>35.5</b>	<b>RSTI-6851</b>
95 - 150	22.4 -	35.5	RSTI-6852
120 - 240	28.9 -	42.0	RSTI-6853
185 - 300	28.9 -	42.0	RSTI-6855

Kits for 3-core applications on request. Contact your local sales representative

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