

Energy Division

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

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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 "C₁" and "C₂") 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 mm².
- 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 C₁=630 A and C₂=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 mm². 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

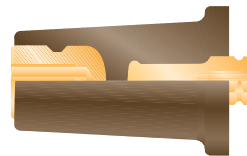
Test rod

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



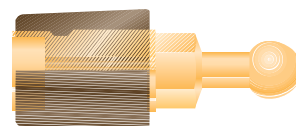
Terminating plug

Ref. no.: RSTI-68TP



Earthing adapter

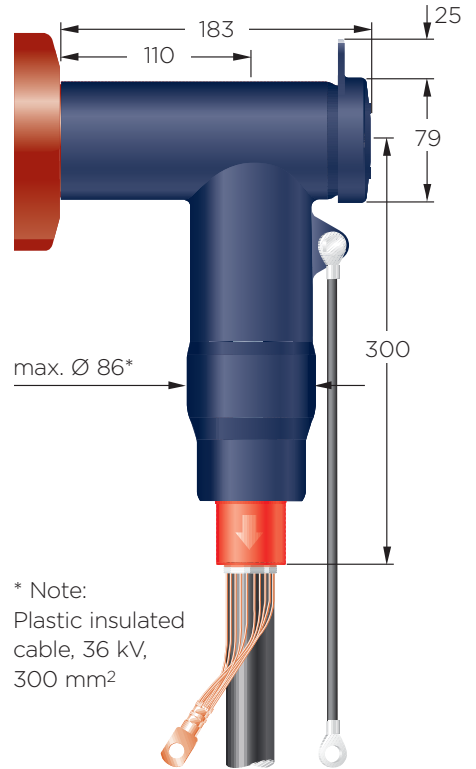
Ref. no.: RSTI-68EA20;
 Ball diameter: 20 mm
 RSTI-68EA25;
 Ball diameter: 25 mm



Applications

Single connection

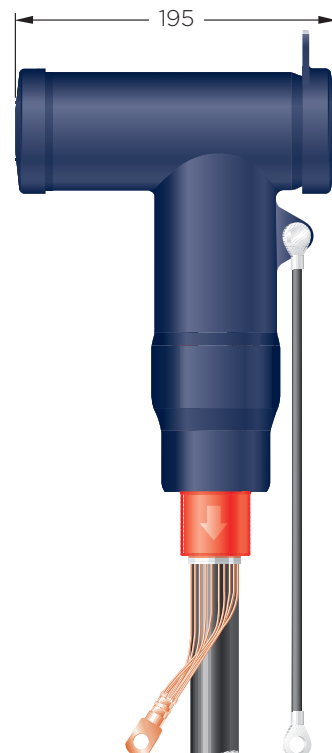
Material requested for 3 phases:
 1 x RSTI-68xx (Kit)



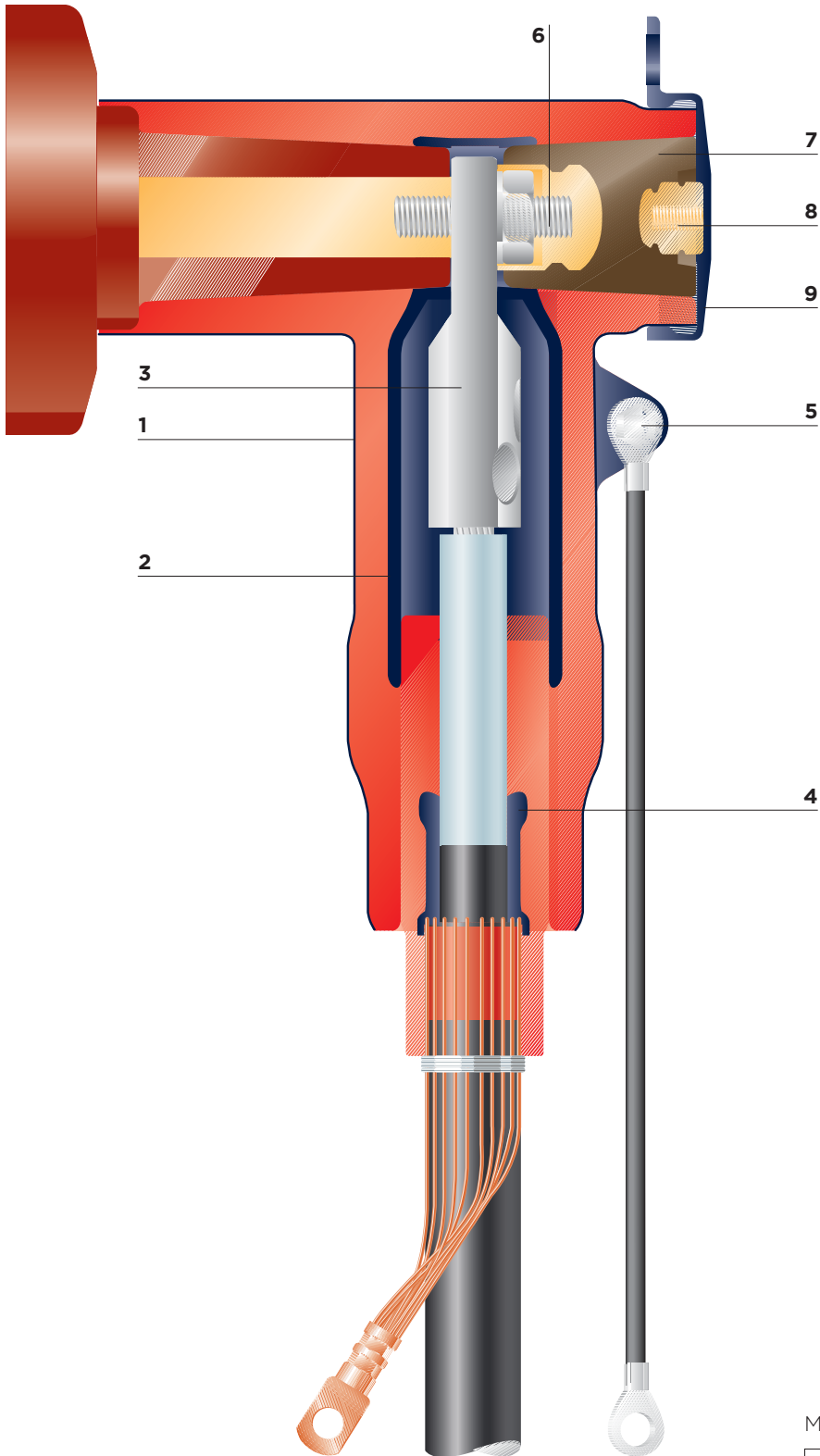
* Note:
 Plastic insulated cable, 36 kV,
 300 mm²

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

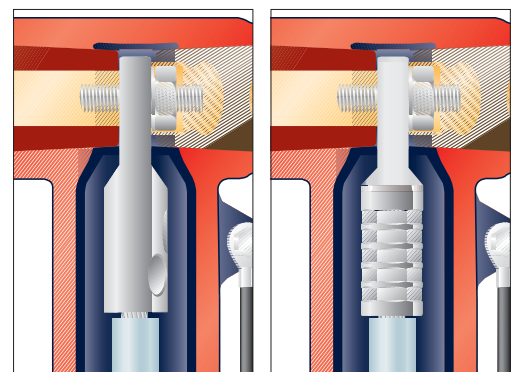
The test point is used to determine whether the circuit is energised; alternatively it can be used for phasing.

9 Conductive end cap

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

Mechanical lug

Compression lug



Note:

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

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Technical data	Cable insulation diameter range	22.4 - 42.0 mm
	Connector cross-section range	35 - 300 mm ²
	Maximum system voltage	42 kV
	Continuous current rating	800 A
	Basic impulse level	200 kV
	Partial discharge at 2 U ₀	< 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 ²	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 ²	Diameter Reference number Core insulation		Conductor material
	min mm	max mm	Al or Cu
35 - 95	22.4 -	35.5	RSTI-6851
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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