



Energy Division

Raychem screened, separable  
connection system RSTI-58  
800 A up to 24 kV



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# Raychem screened, separable connection system RSTI-58 800 A up to 24 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 unintentional contact.
- The screened connector need not be removed for oversheath testing.
- The screened cable connector exceeds CENELEC HD 629.1 S2 requirements, which includes BS, VDE and other international specifications.
- Design fits 630/1250 A bushings type "C" as specified by EN50180 and EN50181.
- The compact design supports the use of double "T" connections inside standard terminal boxes.
- The wide application range covers cable cross-sections from 25 to 300 mm<sup>2</sup>.
- Conductor connection with mechanical or DIN 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.

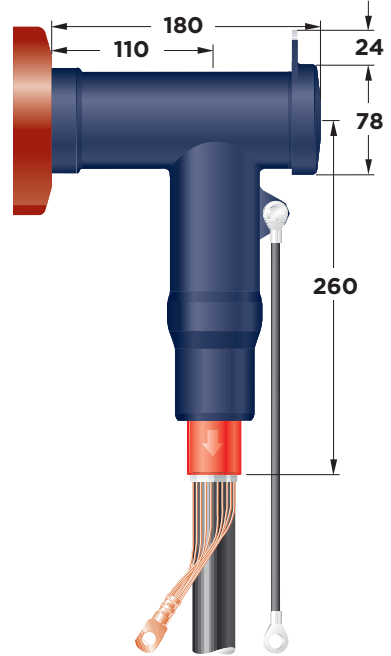


Raychem RSTI-58 screened separable connectors are designed to connect single- and three-core polymeric cables to medium-voltage gasinsulated switchgear and other equipment using CENELEC bushings type "C" specified for 630/1250 A up to 24 kV. Made of a highly modified silicone rubber and protected by a thin-walled outer conductive screen connected to earth, RSTI-58 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 25 to 300 mm<sup>2</sup>. The overall and cut-back dimensions are designed to take up minimum space in the terminal box. RSTI-58 connectors are equipped with a capacitive test point for determining whether the circuit is energised. This test point is protected by a conductive cap. After cable preparation and lubrication, the stress control adapter is simply slid into place, followed by the screened connector body. These two components can be installed under virtually any conditions. A separable mounting system ensures easy installation of the connector onto the bushing. All kits include high-performance multi-range mechanical or DIN compression lugs matching the design of the RSTI-58 connector.

## Applications

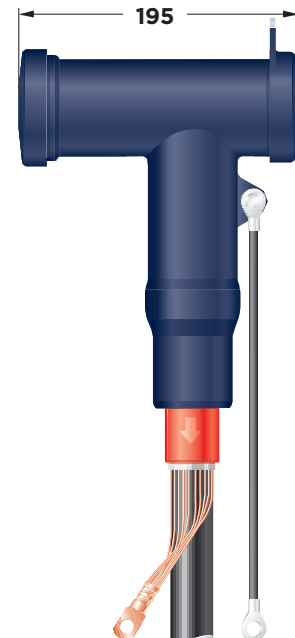
### Single connection

Material requested for 3 phases:  
1 x RSTI-58xx (kit)



### Live end seal

Material requested for 3 phases:  
1 x RSTI-58xx (kit)  
1 x RSTI 56TP (terminating plug-kit)



## Accessories

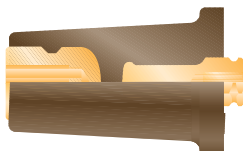
### Test rod

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



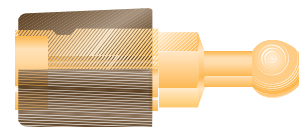
### Terminating plug

Ref. no.:  
RSTI-56TP

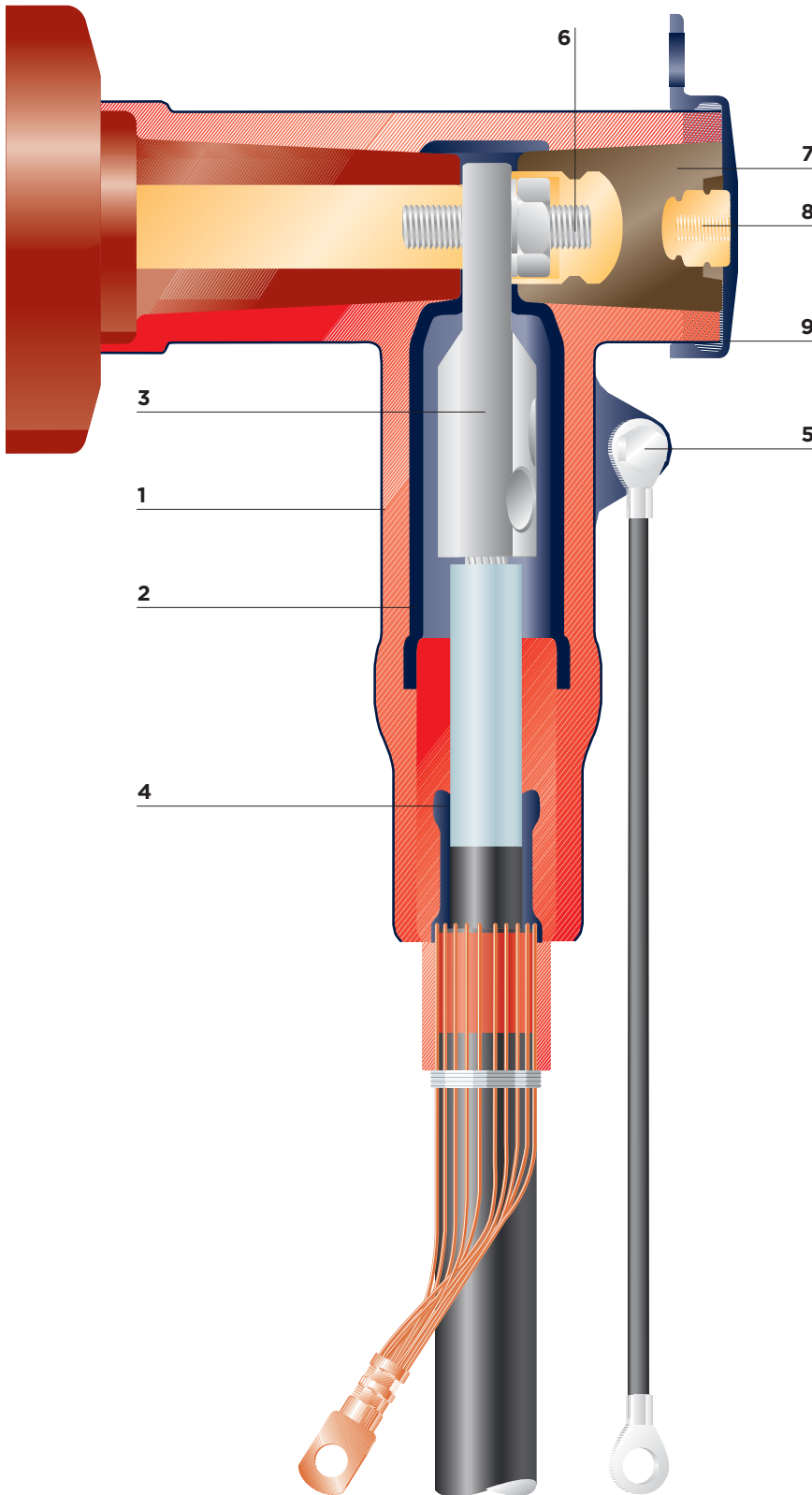


### Earthing adapter

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



## 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 (see detail below) and deep indent compression lugs, as well as 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 overshoot 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 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

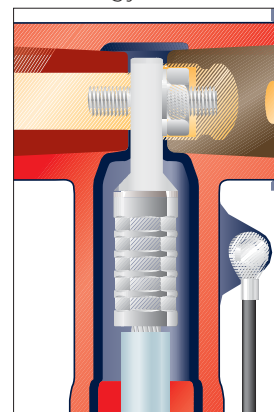
The test point is used to determine whether the circuit is energised; alternatively it can be used for phasing.

### 9 Conductive endcap

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.

DIN compression technology



# Raychem screened, separable connection system RSTI-58

## 800 A up to 24 kV

### Technical data

Cable insulation diameter range	12.7 - 34.6 mm
Connector cross-section range	25 - 300 mm <sup>2</sup>
Maximum system voltage	24 kV
Continuous current rating	800 A
Basic impulse level	150 kV
Partial discharge at 2 U <sub>0</sub>	< 2 pC
AC voltage withstand, 1 min	57 kV
DC voltage withstand, 15 min	76 kV
Thermal short circuit, 1 s	54 kA
Dynamic short circuit	125 kA

The adapters meet the international CENELEC HD 629.1 S2 specification.

### Selection table

#### Screened separable connection system with DIN compression lugs

Cross section mm <sup>2</sup>	12 kV Diameter core insulation		Reference number Conductor material		Cross section mm <sup>2</sup>	24 kV Diameter core insulation		Reference number Conductor material	
	min mm	max mm	Al	Cu		min mm	max mm	Al	Cu
25	12.7-	25.0	RSTI-5810	RSTI-5830	25	12.7-	25.0	RSTI-5810	RSTI-5830
35	12.7-	25.0	RSTI-5811	RSTI-5831	35	12.7-	25.0	RSTI-5811	RSTI-5831
50	12.7-	25.0	RSTI-5812	RSTI-5832	50	12.7-	25.0	RSTI-5812	RSTI-5832
70	12.7-	25.0	RSTI-5813	RSTI-5833	70	12.7-	25.0	RSTI-5813	RSTI-5833
95	12.7-	25.0	RSTI-5814	RSTI-5834	95	21.3-	34.6	RSTI-5824	RSTI-5844
120	12.7-	25.0	RSTI-5815	RSTI-5835	120	21.3-	34.6	RSTI-5825	RSTI-5845
150	21.3-	34.6	RSTI-5826	RSTI-5846	150	21.3-	34.6	RSTI-5826	RSTI-5846
185	21.3-	34.6	RSTI-5827	RSTI-5847	185	21.3-	34.6	RSTI-5827	RSTI-5847
240	21.3-	34.6	RSTI-5828	RSTI-5848	240	21.3-	34.6	RSTI-5828	RSTI-5848
300	21.3-	34.6	RSTI-5829	RSTI-5849	300	21.3-	34.6	RSTI-5829	RSTI-5849

Kits including deep indent lugs are on request

#### Screened separable connection system with mechanical lugs and shear bolts

Cross section mm <sup>2</sup>	12 kV Diameter core insulation		Reference number Conductor material	Cross section mm <sup>2</sup>	24 kV Diameter core insulation		Reference number Conductor material
	min mm	max mm			Al or Cu	min mm	
35-95	12.7-	25.0	RSTI-5851	35-70	12.7-	25.0	RSTI-5851
95-120	12.7-	25.0	RSTI-5852	95-185	17.0-	32.6	RSTI-5853
95-240	17.0-	32.6	RSTI-5853	95-240	21.3-	34.6	RSTI-5854
150-240	21.3-	34.6	RSTI-5854	185-300	21.3-	34.6	RSTI-5855
185-300	21.3-	34.6	RSTI-5855				

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