

RSTI - Screened, separable T-connection system for gas-insulated switchgears with bushings according to EN 50181 type C₁ (630 A) and C₂ (1250 A), 10 kV, 15 kV, 20 kV and 35 kV

Raychem screened separable T-connection system is designed to connect single-core or three-core (with installed trifurcation kit) polymeric insulated cables to gas-insulated switchgear or other equipment with bushings type C in accordance with EN 50181, specified up to 42 kV. Connections can be made in a right-angle configuration, also for 2 or 3 cables in parallel. All cables connected in the switchgear in parallel configuration must be individually mechanically fixed. Parallel connections to 630 A or 1250 A rated bushings with profile type C₁ or C₂ according to EN 50181 are possible with each RSTI. Maximum continuous current rating for T-connection system series RSTI-x8xx is 800 A. Parallel connections of RSTI-x8xx and RSTI-CC-x8xx can carry out 1250 A as well as single cable equipped with RSTI-x9xx.

Made of a highly modified silicone rubber and protected with an outer conductive shield connected to earth, Raychem RSTI screened T-connection system is thus suitable for both indoor and outdoor installations. Oversheath testing can be performed without removal of the RSTI system.

The modern design and material selection in combination with the Raychem designed high performance mechanical lug allows a large application range, covering most common cable sizes with just one kit.

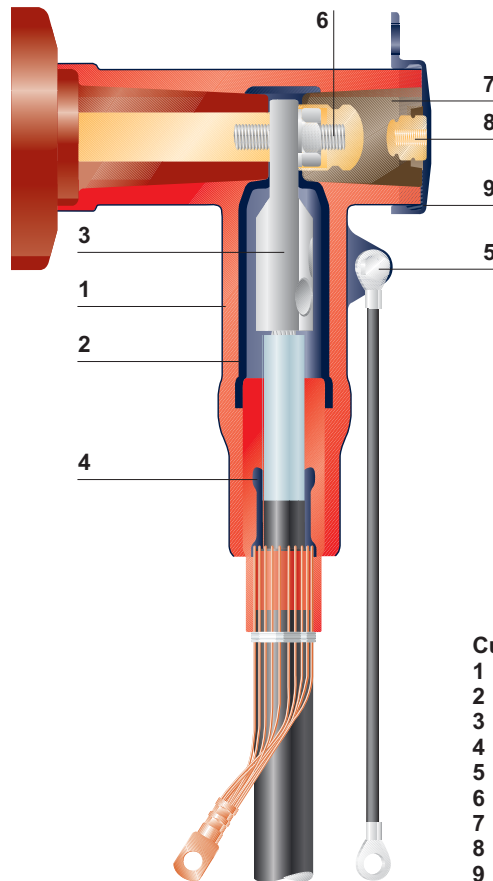
The overall and cut back dimensions are designed for use of minimum space required in the termination box, even double connections fit within most standard boxes.

Raychem RSTI screened T-connection system is equipped with a capacitive test point to determine if the circuit is energized. The capacitive test point is protected by a conductive cap.

Surge arrester RSTI-SA for screened, separable T-connection system

The screened gapless surge arrester is designed either for a direct connection onto outer cone bushings in accordance to EN50181 with interface type C or for parallel connection mating to the rear entry of the base RSTI screened T-connection system designed for system voltage up to 35 kV. Detailed information and technical data are available on request.

The combination of screened T-connection system and surge arrester exceeds the requirements of CENELEC HD 629.1.S2 which includes BS, VDE and other international specifications.



Cut-away drawing of RSTI-58xx:

- 1 Screened body
- 2 Inner screen
- 3 Mechanical lug
- 4 Stress cone adapter
- 5 Earthing eye and ground lead
- 6 Threaded pin
- 7 Rear plug with test point
- 8 Test point
- 9 Conductive end cap

Installation

The design of T-connection system allows the use of all common cable core screen removal tools with a minimum cutback up to 40 mm. After cable preparation, the lubricated stress control adapter is simply slid into place. The high performance multi range mechanical lugs are quickly installed by shearing off the bolts. When lubricated, the screened connector body can be easily slid onto the cable end and fixed to the bushing by a threaded pin and nut. The open end is sealed by a rear plug or by a connection plug, which allows parallel connection of cables.

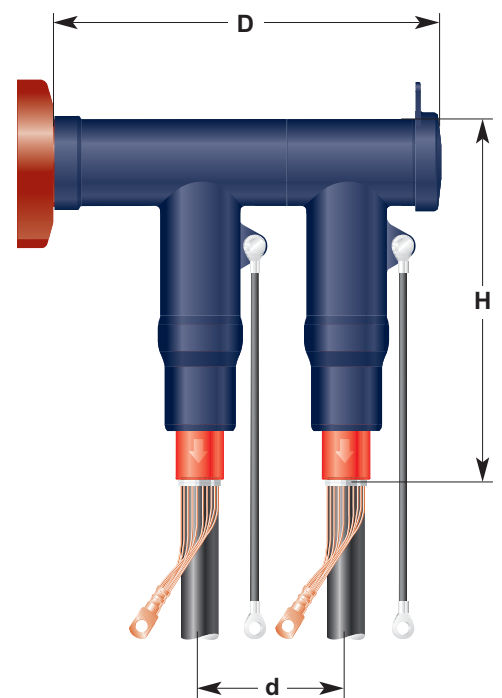
Double connections

Only T-connector and coupling connector must be ordered for parallel connection of cables.

The required installation dimensions

D/d/H are as follows:

- 285/101/299 for connection of RSTI-58
- 295/101/339 for connection of RSTI-68
- 315/120/411 for connection of RSTI-x9



Configuration of RSTI-58 as double T-connection

RSTI - Screened, separable T-connection system for gas-insulated switchgears with bushings according to EN 50181 type C1 (630 A) and C2 (1250 A), 10 kV, 15 kV, 20 kV and 35 kV

RSTI - T-connection system

Nominal voltage U _o /U (kV)	Cross section (mm ²)	Ordering description T-connector	Coupling connector	Diameter over core insulation (mm)
6/10	35 - 95	RSTI-5851	RSTI-CC-5851	12,7 - 25,0
	95 - 240	RSTI-5853	RSTI-CC-5853	17,0 - 32,6
	185 - 300	RSTI-5855	RSTI-CC-5855	21,3 - 34,6
	400	RSTI-3951	RSTI-CC-3951	28,9 - 36,4
	500	RSTI-3952	RSTI-CC-3952	28,9 - 36,4
	630	RSTI-3953	RSTI-CC-3953	34,0 - 45,4
8,7/15 and 12/20	35 - 70	RSTI-5851	RSTI-CC-5851	12,7 - 25,0
	95 - 240	RSTI-5854	RSTI-CC-5854	21,3 - 34,6
	185 - 300	RSTI-5855	RSTI-CC-5855	21,3 - 34,6
	400	RSTI-5951	RSTI-CC-5951	34,0 - 45,4
	500	RSTI-5952	RSTI-CC-5952	34,0 - 45,4
	630	RSTI-5953	RSTI-CC-5953	39,1 - 59,0
20/35	800	RSTI-5954	RSTI-CC-5954	39,1 - 59,0
	35 - 95	RSTI-6851	RSTI-CC-6851	22,4 - 35,5
	95 - 150	RSTI-6852	RSTI-CC-6852	22,4 - 35,5
	120 - 240	RSTI-6853	RSTI-CC-6853	28,9 - 42,0
	180 - 300	RSTI-6855	RSTI-CC-6855	28,9 - 42,0
	400	RSTI-6951	RSTI-CC-6951	34,0 - 45,4
	500 - 630	RSTI-6952	RSTI-CC-6952	39,1 - 59,0
	800	RSTI-6953	RSTI-CC-6953	39,1 - 59,0

Scope of supply: Screened connector body, stress control adapter, mechanical lug (suitable for aluminium and copper conductors), fixing nuts, terminal stud, backplug and lubricant supplied in a 3-phase set complete with installation instruction.

Solderless earth connection for cables with aluminium or copper tape shield

Cross section (mm²) for cables with nominal voltage U_o/U

6/10 kV	8,7/15 kV	12/20 kV	Ordering description
35 - 120	35 - 120	35 - 120	SMOE-62871
95 - 400	70 - 300	50 - 240	SMOE-62872

Note: The solderless earth connection kit must be ordered separately. The SMOE kits include 3 roll springs, 3 earth leads, 3 heat shrinkable insulating tubing and copper mesh.

Trifurcation kit for screened, 3-core polymeric insulated cables with wire shield and without armour

Dia. over core insulation (mm)	Dia. over cable (mm)	Max. tail length* (mm)	Ordering description
13,7 - 25,0	46,0 - 67,0	600	RSTI-TRF01
17,6 - 35,6	50,0 - 90,0	600	RSTI-TRF02
25,6 - 43,0	85,0 - 140,0	600	RSTI-TRF03

* Trifurcation kits with longer tail length are available on request.

Note: Trifurcation kits must be ordered separately.

RSTI system accessories

Test rods

Cables can be tested while the RSTI connector and the cables are connected to the switchgear.

Set of 3 test rods with threading reducer

M16 / M12

RSTI-68TRA

2x length of 310 mm, 1x length of 460 mm.

RSTI-68TR

3x length of 310 mm.

RSTI-68TRL

3x length of 460 mm.



Earthing plug for cable earthing

Cables can be earthed while the RSTI connector and the cable are connected to the switchgear.

RSTI-68EA25

Set of 3 pieces with ball diameter 25 mm.

RSTI-68EA20

Set of 3 pieces with ball diameter 20 mm.

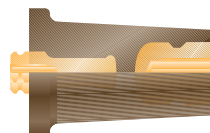


Termination plug as live end seal

Allows termination and sealing of the RSTI connectors in case that they are not installed on a switchgear bushing. The termination plug must be installed before applying any voltage (e.g. cable system test).

RSTI-68TP

Set of 3 pieces.



Insulated end cover

Insulated dead end for switchboard bushing according to EN 50181 types C.

RSTI-N66RC

Set of 3 pieces.