



RPIT

Plug in Termination System

RAYCHEM PLUG IN TERMINATION SYSTEM

RPIT

Features

- Separable inline connection for high current, gas insulated switchgears up to 42 kV
- Termination mates interfaces in accordance to EN50180 and EN50181 for inner cone connections
- The contact parts are designed for stranded circular aluminium or copper conductors in accordance to IEC-60228

Technical Information

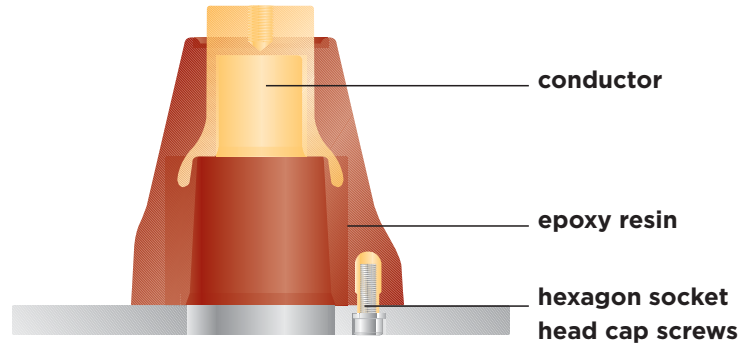
The increasing popularity of gas insulated switchgear called for the development of appropriate connection systems to standardised bushings in accordance to EN50181.

TE Connectivity Energy Division has developed two systems, one is related to the outer cone and the other one to the inner cone system. The latter is used in power switch gear and power transformers.

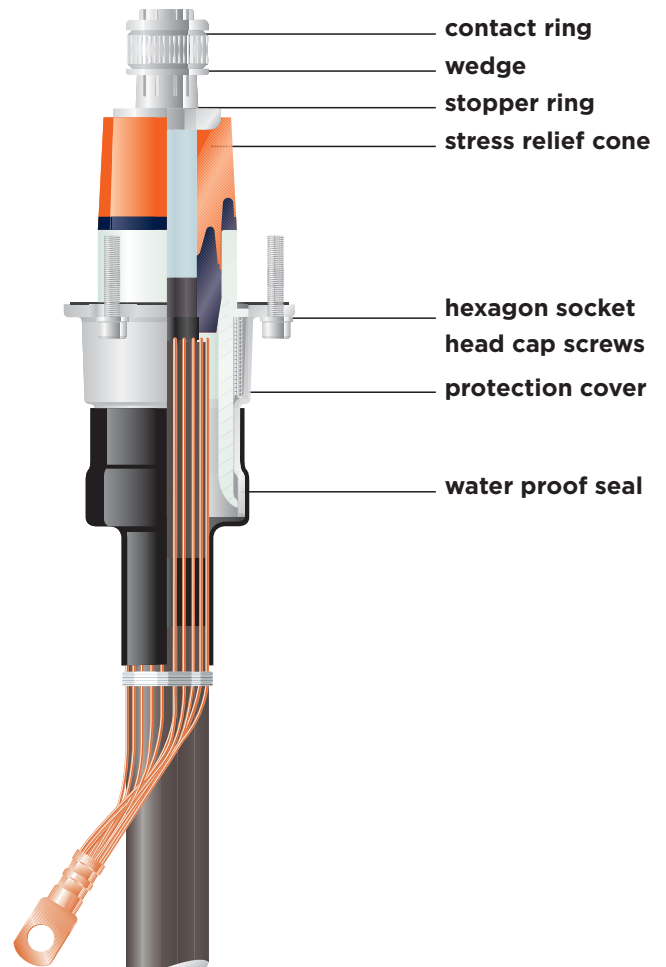
TE Connectivity Energy Division has several decades of experience in the field of hermetically insulated termination systems for medium voltage applications. Thus the bushings designed for gas insulated switchgear meet the standard EN50181 for connection type size 2 (800 A) and size 3 (1250 A) at operating voltage 12 kV up to 36 (42) kV.

The basic construction of the mating termination follows well known design principles and incorporates a lamellate contact system which ensures reliable current transmission via a cone clamp to the conductor. The interface between silicone body of the termination and the bushing is kept permanently sealed via the pressure of a spring between the insulator and the flange of the termination cover. The termination cover is sealed at the flange area with well known sealing methods and at the cable side with heat-shrinkable tubing against ingress of moisture.

Bushing



Termination



RPIT

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Raychem Plug In Termination

| TECHNICAL DATA - TESTING ACCORDING TO CELENEC HD629.1.52 | | | | |
|--|----------------------------------|----------|----------|---|
| Product Size | Size 2 | Size 2 | Size 3 | |
| Cross Section (mm ²) | 300 | 400 | 630 | |
| Diameter over insulation (mm ²) | max 42 | max 42 | max 50 | |
| Test | Testing Values for Rated Voltage | | | Results |
| u_0/u | 12.7/22 | 20.8/36 | 20.8/36 | |
| U_m | 24 | 42 | 42 | |
| DC withstand voltage 15 min (kV) | 76 | 125 | 125 | no breakdown or flashover |
| AC withstand voltage 5 min (kV) | 57 | 93.5 | 93.5 | no breakdown or flashover |
| PD at ambient temp (kV) | < 2pC | <2pC | < 2pC | max 10 pC at 2 U_0 |
| Impulse voltage at elevated temp (kV) | 150 | 200 | 200 | 10 impulses of each polarity, no breakdown |
| Disconnection / Connection | 5 x pass | 5 x pass | 5 x pass | 5 complete operations; no visible damage to contact |

Cable Terminations

| Type | Size | Nominal current (A) | System voltage (kV) | Cross section (mm ²) | Dia over conductor (mm) | Dia over insulation (mm) |
|-----------|------|---------------------|---------------------|----------------------------------|-------------------------|--------------------------|
| RPIT-32xx | 2 | 800 | 12 | 185 - 300 | 15.0 - 21.6 | 23.5 - 30.0 |
| RPIT-52xx | 2 | 800 | 24 | 95 - 300 | 11.0 - 21.6 | 23.5 - 36.0 |
| RPIT-62xx | 2 | 800 | 36 | 50 - 400 | 7.0 - 24.6 | 23.5 - 36.0 |
| RPIT-33xx | 3 | 1250 | 12 | 240 - 630 | 17.0 - 32.0 | 26.0 - 39.0 |
| RPIT-53xx | 3 | 1250 | 24 | 150 - 630 | 13.0 - 32.0 | 26.0 - 43.0 |
| RPIT-63xx | 3 | 1250 | 36 / 42 | 50 - 630 | 7.0 - 32.0 | 23.0 - 50.0 |



Note: Product is available with and without test point

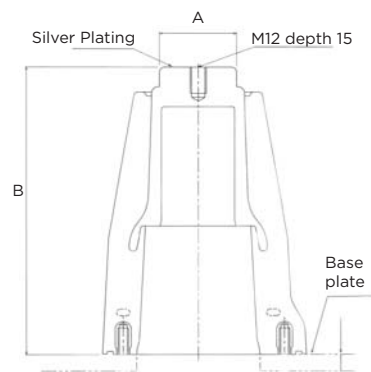
Bushing Part

Capacitive voltage tap of bushing with test point

| Size | 2 (800A) | 3 (1250A) |
|------------------------|----------|-------------|
| Capacitive voltage tap | 8 ± 2 pF | 23.0 - 50.0 |

Dimension

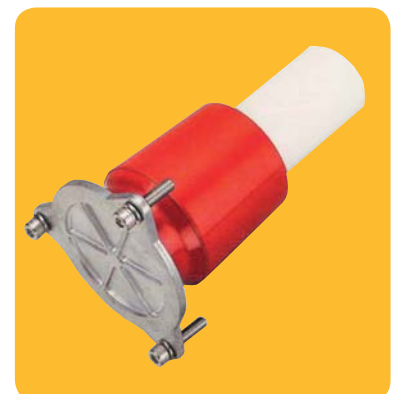
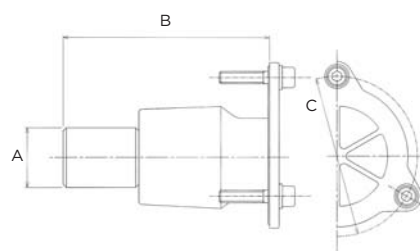
| Size | 2 (800A) | 3 (1250A) |
|------|----------|-----------|
| A | 50 | 58 |
| B | 140 | 218 |
| C | 14 | 12.5 |



Insulated Cap

Dimension

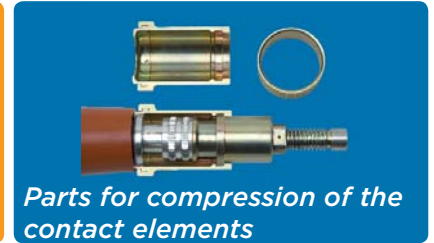
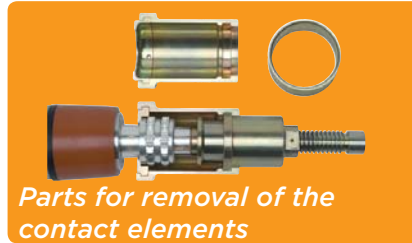
| Size | 2 (800A) | 3 (1250A) |
|------|----------|-----------|
| A | 38 | 54 |
| B | 131 | 200 |
| C | 102 | 130 |



Compression tool

Metal tool case including an easy to handle compression tool for wedge and contact ring and all necessary adaption rings.

| Catalogue Reference | Description |
|---------------------|--------------------------|
| IT-1000-025 | Compression Tool Kit |
| IT-1000-026 | Insert Lever |
| IT-1000-027 | Support Chain |
| IT-1000-028 | Impact device for size 2 |
| IT-1000-029 | Impact device for size 3 |



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