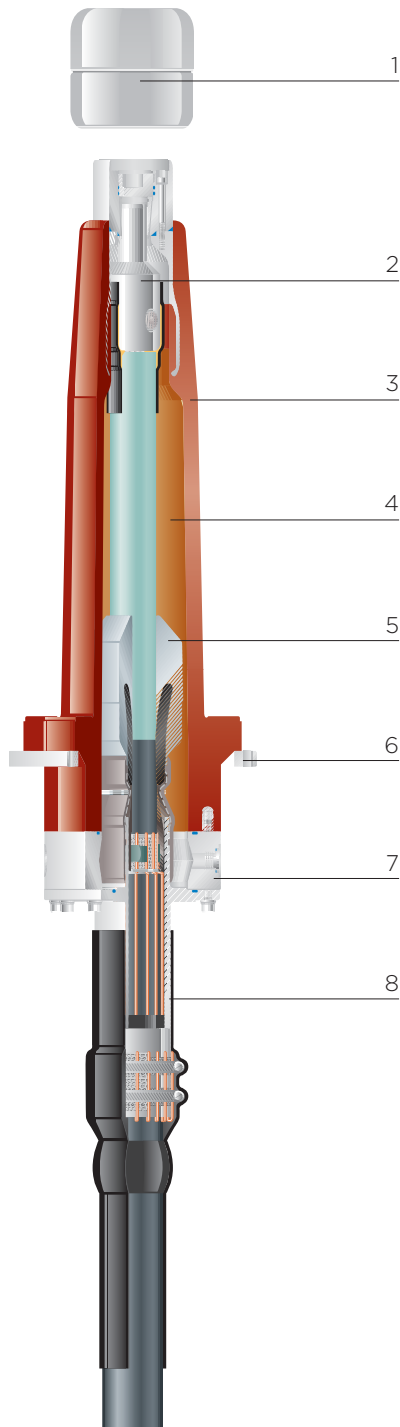




Energy Division

## Raychem Switchgear & Transformer Termination SHVT & THVT for 72 kV up to 170 kV

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## Application

The switchgear termination for voltage classes up to 170 kV is designed to be installed in cable entry housings of gas-insulated switchgear (GIS). It complies with IEC 60859 and IEEE 1300 standards, which essentially specify the interfaces between the termination and the switchgear. Therefore the termination will fit into all GIS complying with these standards. The termination operates in SF<sub>6</sub> but also in insulating liquids like transformer oil. A corona shield at the top of the transformer termination then provides the necessary shielding of the terminal.

## Features

- Si-oil filling
- Dimensions comply with IEC 60859 and IEEE 1300
- Pressure-tight resin housing
- Operates in SF<sub>6</sub> and insulating liquids
- Pre-fabricated and factory tested Si-rubber stress cone
- Torque-controlled conductor bolt
- No special tools required to install the termination
- Isolated cable gland for sectionalization
- Type tested according to IEC 60840, IEC 60859 and IEEE 1300 standards

## Major Design Elements of Raychem Switchgear & Transformer Termination

The epoxy-resin insulator (3) with embedded electrode forms the gas pressure-tight interface between GIS or transformer cable entry and the oil-filled cable compartment of the termination. It is attached to the cable entry housing with the fixing ring (6). To fit the cable conductor, torque-controlled shear-off bolt connectors (2) or crimp-type connectors are available. The connector is suitable for stranded aluminium and copper conductors and can be modified to accept solid conductors as well. No special tool is required to install the mechanical connector. Heat-shrinkable polymeric tubing containing oil-resistant sealant encapsulates the connector barrel and the polymeric insulation transition. The silicone rubber stress cone (5) provides the electrical field control and can easily be applied without tools owing to its excellent elasticity. The interface between stress cone, cable insulation and resin housing is filled with silicone oil (4). Filling and venting nozzles are available at the top bolt assembly and at the base of the termination. A corona shield (1) can be easily attached to the transformer termination for use in insulating liquids. Compared with IEC 60859 and IEEE 1300 wider clearances apply in this application. The cable outer serving is adapted through a gland system (8), which addresses the individual shielding and armouring. Heat-shrinkable tubings are used to seal the cable gland. The conventional mounting position is vertical. For horizontal or upside-down mounting an optional oil expansion vessel is available.

- 1 Corona shield (THVT only)
- 2 Connector (mechanical or crimp)
- 3 Resin housing
- 4 Oil-filling
- 5 Stress cone
- 6 Fixing ring
- 7 Base plate
- 8 Gland and sealing

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Tyco Electronics Raychem GmbH  
Energy Division  
Finsinger Feld 1  
85521 Ottobrunn/Munich, Germany

Phone: +49-89-6089-0  
Fax: +49-89-6096345

<http://energy.tycoelectronics.com>

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