



Energy Division

Raychem Dry Compact
Switchgear & Transformer
Termination PHVS & PHVT
for 72 kV up to 145 kV



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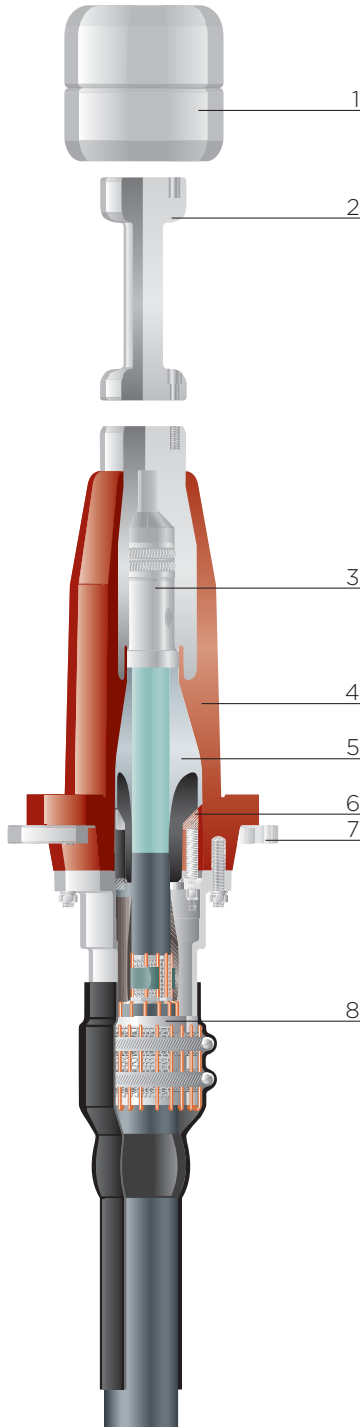


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PHVS & PHVT

Raychem Dry Compact Switchgear & Transformer Termination for 72 kV up to 145 kV



Application

The dry compact switchgear termination for voltage classes up to 145 kV is designed to be installed in cable entry housings of gas-insulated switchgear (GIS). It complies with IEC 62271-209 standard, which essentially specifies the interfaces between the termination and the switchgear. Therefore the termination will fit into all GIS complying with IEC 62271-209. An adapter is available to match the dimensions of wet (oil-filled) type terminations, which are also specified in IEC 62271-209. The termination operates in SF₆ but also in insulating liquids like transformer oil. A corona shield at the top of the termination then provides the necessary shielding of the terminal. The termination is easily separable and consists of a plug-in part and an epoxy resin insulator. The insulator can be installed by the GIS or transformer manufacturer already at the factory saving installation time on-site and

reducing the risk of contamination of the cable entry housing. In case of short cable links and due to the short length and light weight of the plug-in part it can be also pre-installed by the cable manufacturer further reducing the time required to install a substation.

Features

- Dry interfaces, no oil-filling
- Dimensions comply with IEC 62271-209
- Pressure-tight resin housing
- Operates in SF₆ and insulating liquids
- Pre-fabricated and factory tested Si-rubber stress cone
- Torque-controlled multi-contact conductor bolt
- No special tools required to install the termination
- Isolated cable gland for sectionalization
- Type tested according to IEC 60840 and IEC 62271-209 standards

Major Design Elements

The epoxy-resin insulator (4) with embedded multi-contact electrode forms the gas pressure-tight interface between GIS or transformer cable entry and the plug-in part of the termination. It is attached to the cable entry housing with the fixing ring (7). The torque-controlled shear-off bolt connector (3) with multi contacts fits the cable conductor. 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 connector. The silicone rubber stress cone (5) provides the electrical field control and can easily be applied without tools owing to its excellent elasticity. A metal spring-loaded compression ring (6) presses the rubber stress cone into the specially shaped interior of the resin housing, ensuring a uniform contact pressure and electrically sound interface. A corona shield (1) can be easily attached to the termination for use in insulating liquids. Compared with IEC 62271-209 wider clearances apply in this application. The cable outer serving is adapted through a gland system (8), which addresses the individual shielding and armouring. The gland system also secures the cable. An adapter (2) can be used to match the dimensions of wet type switchgear and transformer terminations which makes the termination the ideal choice for replacing oil-filled terminations.

- 1 Corona shield (PHVT only)
- 2 Adapter (optional)
- 3 Mechanical connector
- 4 Resin housing

- 5 Stress cone
- 6 Spring-loaded compression ring
- 7 Fixing ring
- 8 Gland and sealing

All of the above information, including drawings, illustrations and graphic designs, reflects our present understanding and is to the best of our knowledge and belief correct and reliable. Users, however, should independently evaluate the suitability of each product for the desired application. Under no circumstances does this constitute an assurance of any particular quality or performance. Such an assurance is only provided in the context of our product specifications or explicit contractual arrangements. Our liability for these products is set forth in our standard terms and conditions of sale. Raychem, TE Logo and Tyco Electronics are trademarks.

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