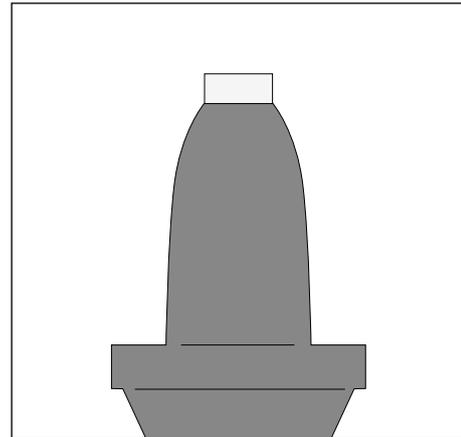




TE's Raychem Cable Accessories



Installation Instruction EPP-1387-1/18

Raychem Compact Switchgear/ Transformer Termination Insulator Unit

Um = 145 kV

Um = 170 kV

PHVS/PHVT 145/170

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General Instructions

Before Starting

- Check the kit label and the title of the installation instructions to prove that the cable accessory you are going to use matches the cable.
- Make sure the cable is properly sealed.
- Make sure the cable is in the final installation position.
- Make sure the cable is straight at the jointing position.
- Check the position of the cables to be in alignment to the final position of the accessories.
- Make sure the joint bay/installation area provides adequate space for the cable components to be parked on either cable for later use during the installation.
- The joint bay/Installation area must be kept clean and dry during installation. For outdoor installation use tent or other appropriate shelter.
- Carefully read and follow the steps in the installation instructions. Components or working steps may have been changed/improved since you last installed this product.
- All tools, PPE and apparatus used must be kept clean during the installation.
- Obey relevant and local security and safety rules during the installation.

Shrinking Heat-Shrink Tubing

Use a propane (preferred) or butane gas torch.

Ensure the torch is always used in a well-ventilated environment.

Adjust the torch to obtain a soft blue flame with a yellow tip. Pencil-like blue flames should be avoided.

Keep the torch aimed in the shrink direction to preheat the material.

Keep the flame moving continuously to avoid scorching the material.

Clean and degrease all parts that will come into contact with adhesives.

If a solvent is used follow the manufacturer's handling instructions.

Start shrinking the tubing at the position recommended in the instructions.

Ensure that the tubing is shrunk smoothly all around before continuing along the cable.

Tubing should be smooth and wrinkle free with inner components clearly defined.

Stripping the Cable

Use appropriate stripping tools for smooth and even insulation diameter.

Adjust the stripping tool to the thickness of the semi-conductive layer. Avoid removing too much of the insulation.

Polish the stripped surface by hand using the supplied abrasive paper beginning with the lowest grid size, or by an appropriate sanding machine and abrasive paper and grades. The surface of the insulation must be even and free of all traces of conductive material.

Cables with Segmented Conductors

All cut back dimensions and information given in this instructions document refer to cables with non-segmented conductors only. In case of cables with segmented conductors, all insulation or conductive materials have to be removed from the conductor. If the removal of these materials require a longer cut back of the cable insulation, this length needs to be added to the cable cut back dimensions mentioned in the instructions.

NOTE: Special instructions for segmented conductors are available on request.

The Information contained in these installation instructions is for use only by installers trained to make electrical power installations and is intended to describe the correct method of installation for this product. However, TE Connectivity has no control over the field conditions which influence product installation.

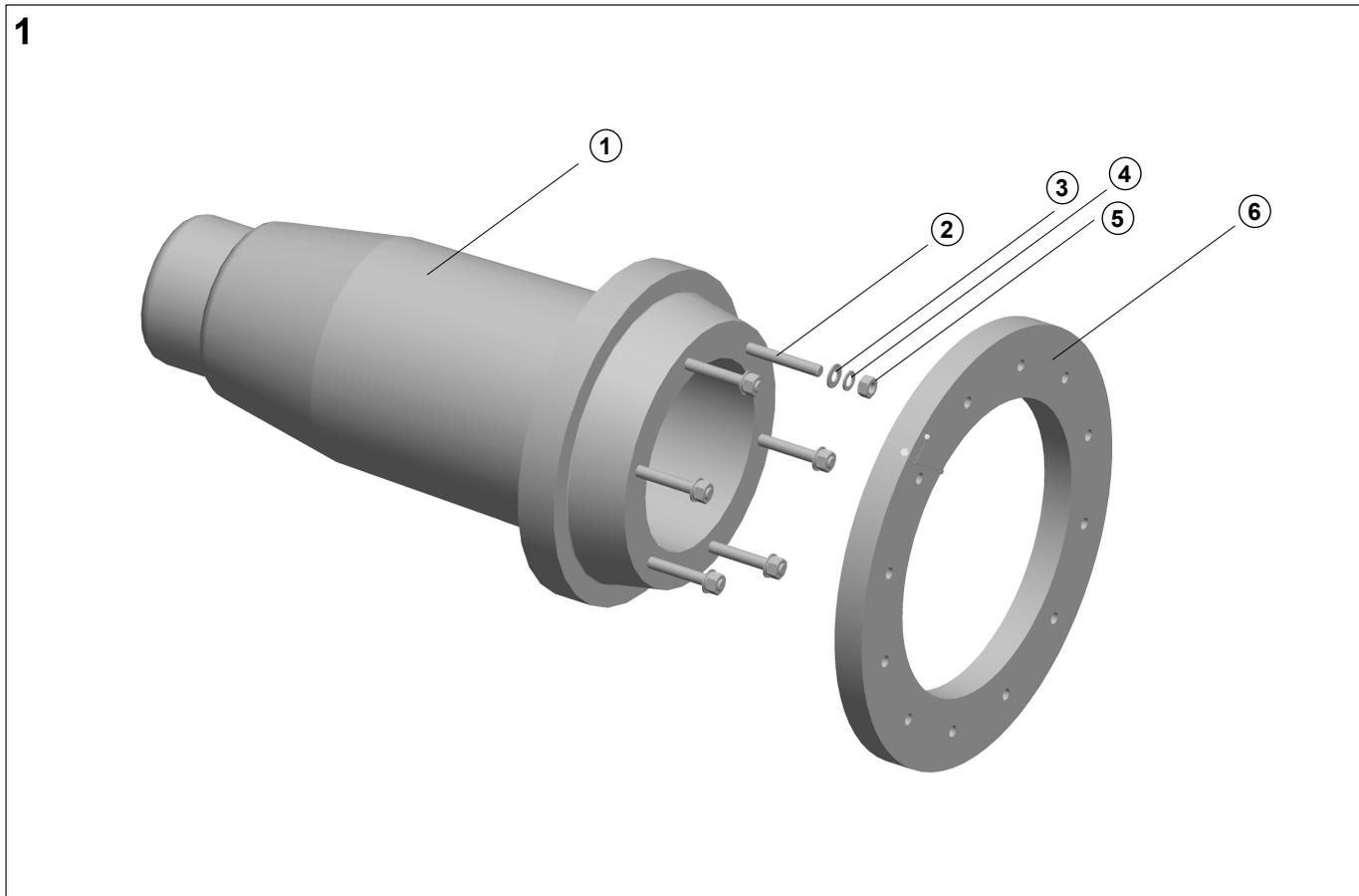
It is the user's responsibility to determine the suitability of the installation method in the user's field conditions.

TE Connectivity's only obligations are those in TE Connectivity's standard Conditions of Sale for this product and in no case will TE Connectivity be liable for any other incidental, indirect or consequential damages arising from the use or misuse of the products.

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Exploded View of Insulator

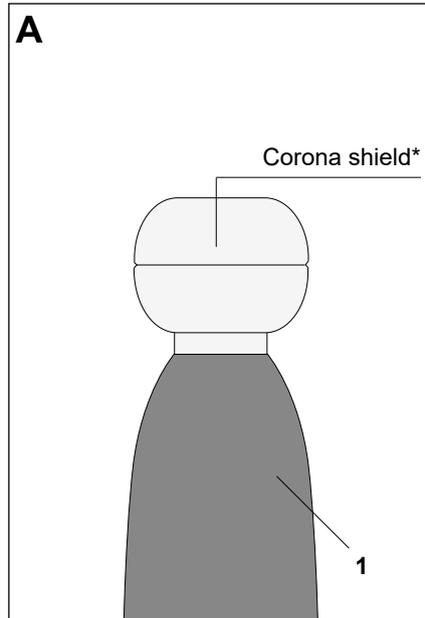


Scope of supply as per 62271-209 (former IEC 60859)

Item No.	Description	Size	Quantity	Reference to IEC 62271-209 (figure 4)
1	Epoxy insulator		1 Pc	(4), (3), (9)
2	Set screw	M12x90	6 Pcs	
3	Washer	M12	6 Pcs	
4	Spring washer	M12	6 Pcs	
5	Hexagon nut	M12	6 Pcs	
6	Flange		1 Pc	(11)

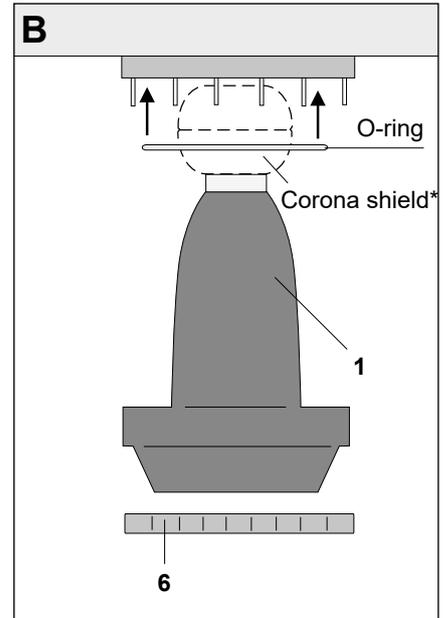
All other parts are to be supplied by the switchgear/transformer manufacturer (according to IEC 62271-209).

Installation of the Insulator into the Switchgear/Transformer Housing



Bolt the corona shield to the insulator electrode.

***Corona shield for transformer termination only (not for switchgear).**



Put the O-ring (supplied by the switchgear/transformer manufacturer) into the sealing groove of the switchgear. Clean and degrease the epoxy insulator (1). Keep it free from dust and dirt.

***Corona shield for transformer termination only (not for switchgear).**

Insert the epoxy insulator (1) into the switchgear/transformer housing. Apply the flange (6). Bolt the flange evenly to the switchgear /transformer housing.

Fix the bolts of the flange with a torque of 40 Nm.

Install the insulator to the switchgear/transformer housing.

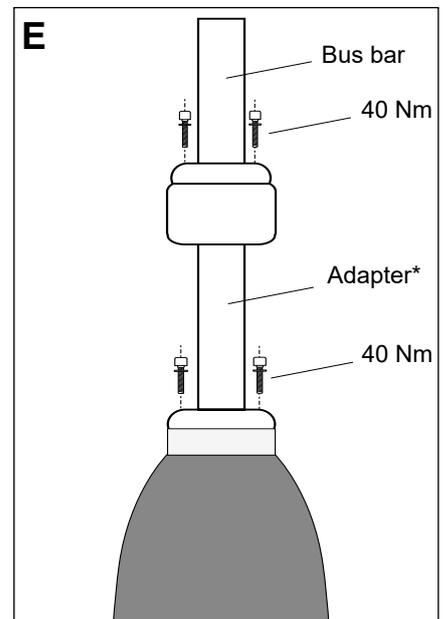
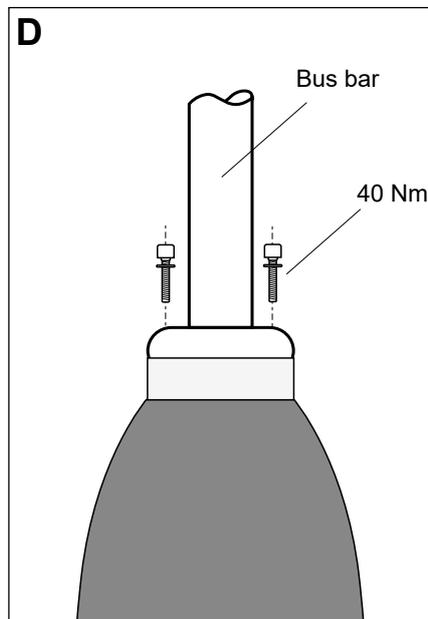
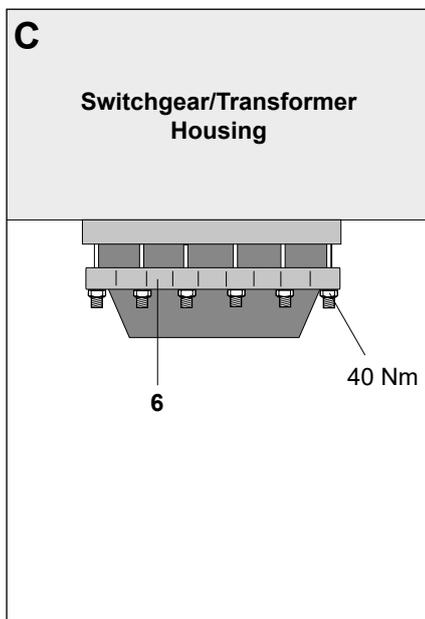
Note: Bolt the bus bar with torque of 40 Nm.

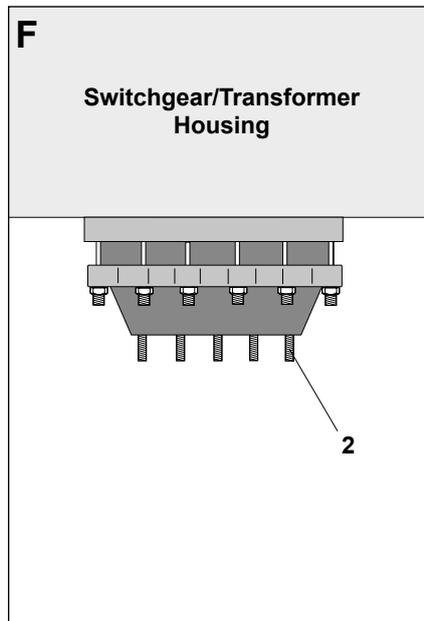
Installation of the Adapter

The adapter is required in the case of switchgears/transformers designed for fluid-filled cable terminations (see fig. 2, IEC 62271-209).

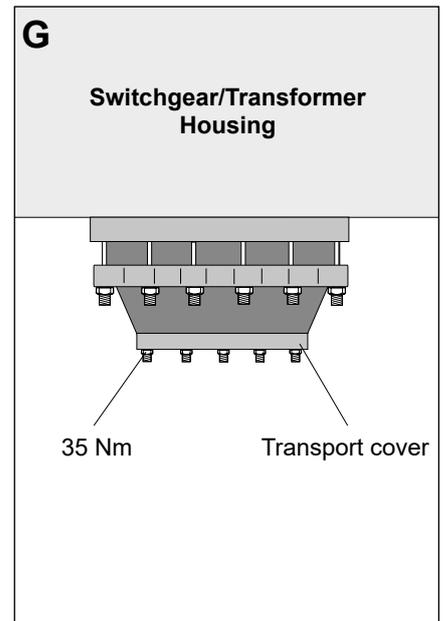
Install the adapter on top of the insulator and fix it with four bolts.

Note: Bolt the adapter with torque of 40 Nm.





Screw the set screws as much as possible into the epoxy insulator.



For closing the insulator without plug-in part only.

Put the O-ring in the closing plate. Apply the closing plate. Bolt the closing plate evenly to the epoxy insulator.

Fix the Bolts of the transport cover with a torque of 35 Nm.

For testing the switchgear/transformer a special test plate has to be mounted on the insulator.

Please dispose of all waste according to environmental regulations.

