

A large, high-quality photograph of two high-voltage insulators. The one in the foreground is red and has a metal terminal with two holes. The one in the background is grey and has a metal terminal with a single hole. Both insulators have a series of disc-shaped sheds along their length. The background is a light blue gradient.

HEAT SHRINK OR COLD APPLIED TECHNOLOGY?

HOW TO CHOOSE THE RIGHT SOLUTION
FOR YOUR APPLICATION

Your decision on whether to install heat shrink or cold applied technology can have a significant impact on your project's long-term success. The choice depends on the unique technical requirements of your project. TE Connectivity (TE) is one of the only providers that produces a complete range of heat shrink and cold applied technology solutions.

TE has solved some of the toughest connectivity challenges in harsh environments. Many of the world's major energy utilities use TE products, and the industry counts on us to continue to deliver on the latest advances.

HEAT SHRINK TECHNOLOGY

TE pioneered heat shrink technology more than 50 years ago and has optimized it for field usage. Our Raychem material technology is based on specially-formulated thermoplastic polymer materials that have the capability to shrink to conform to different shapes. Their elastic memory uses cross linking that allows them to return to their original shape after heat application. Within the advanced heat shrink product range, multi-layer tubing and unique materials science incorporate several functions into each component.

RELIABILITY

Heat shrink technology has a field-proven legacy of robustness and longevity lasting 40+ years without maintenance. This extended service translates to cost savings.

VOLTAGE

LV, MV, HV (up to 72 kV)

MATERIALS

Crystalline molecular structures:

- EVA
- Polyolefin materials
- Rigid, robust construction

ENVIRONMENTAL CONDITIONS

Superior reliability and performance in harsh environments. Large product range and highly adaptable to different requirements:

- UV light
- Pollution & chemicals
- Salt fog environments
- Flame retardant/fire resistant
- Resistant to thermal aging
- Resistant to surface electrical activity
- Impermeable to cable oils (MBSM and SRM)
- Tracking and erosion resistance
- Suitable for nuclear applications
- Moisture vapor barriers (MBSM)
- Excellent performance in acid environments

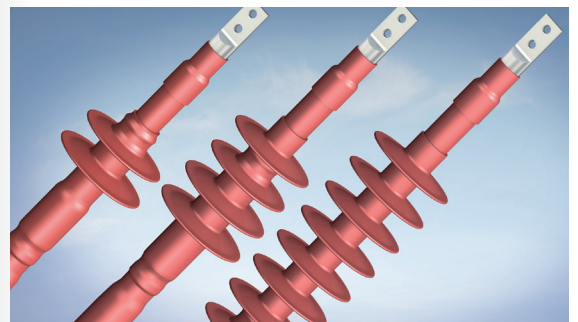
CUSTOMIZATION

- Multiple additives and blends of polymers formulated to provide superior product performance
- Tubes can be customized to a required length
- Skirts can be added to terminations for greater tracking and erosion resistance



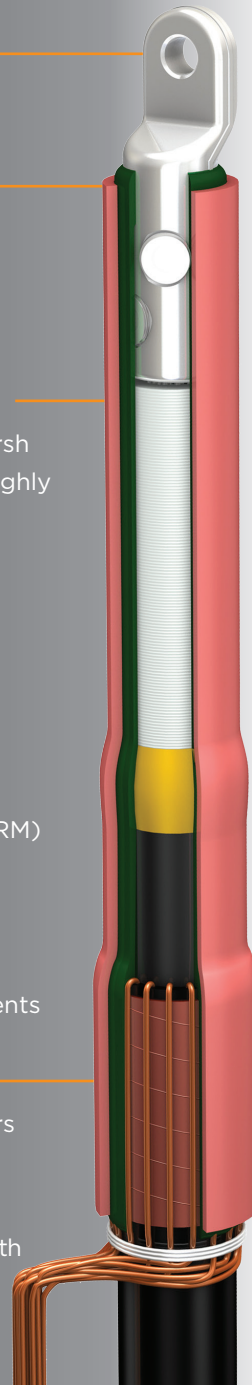
INSTALLATION

- Several functions (mechanical protection, and thermal electrical conductivity) are all built into multi-layered tube with an advanced product range
- Installed in minutes with a gas torch
- Components have visual indications to signal correct installation
- Easily accepts shear-bolt connectors or compression



BOTTOM LINE

Heat shrink technology offers solutions for a wide area of energy connections in many environments. With its proven longevity in the field heat shrink offers substantial savings over time; thus, a reduced total cost of ownership.



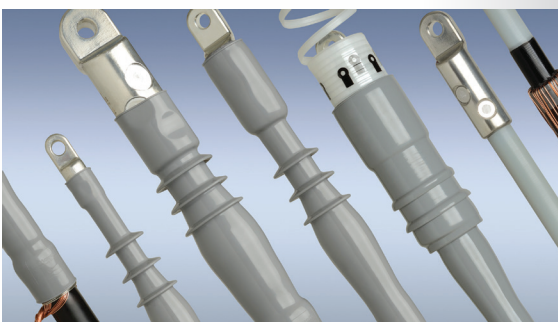
COLD APPLIED TECHNOLOGY

Our engineers leveraged their functional application knowledge on how to best connect, seal, and maintain cable accessories to create their all-in-one cold applied technology. Cold shrink sleeves are pre-expanded in the factory and expanded onto a holdout. During installation the holdout is removed and the sleeve recovers tightly onto the cable substrate.



INSTALLATION

- A single piece component incorporates all the main product functionality making it one of the most compact joint designs on the market
- Design minimizes installation steps
- Ideal for environments where a torch is restricted
- Easily accepts shear-bolt connectors or compression



BOTTOM LINE

Cold applied technology is an especially good solution for industries where gas torch usage is restricted. Cold applied may also be preferred in installations where there are constricted physical spaces that limit torch usage.

RELIABILITY

TE cold applied technology has **15 years of proven field service.** Its **silicone rubbers** are considered **reliable insulating materials used up to the highest voltage classes.**

VOLTAGE

LV, MV, HV (up to 245 kV)

MATERIALS

Amorphous molecular structures:

- EPDM rubber
- Silicone rubber
- Flexible

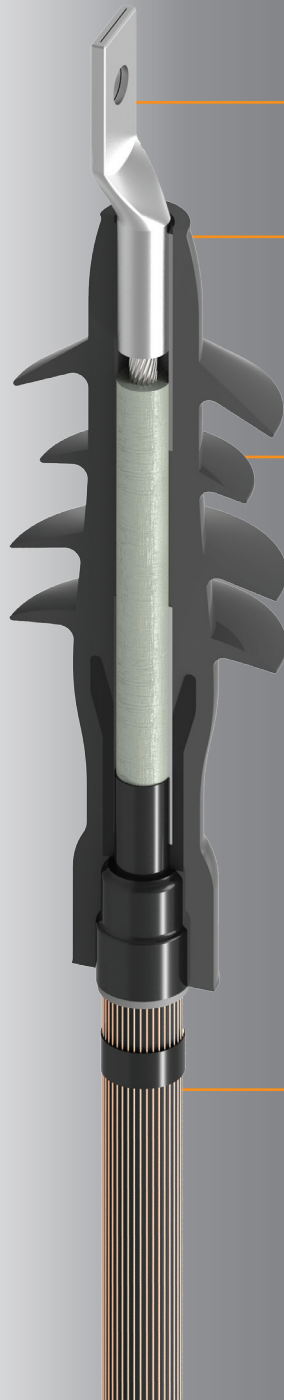
ENVIRONMENTAL CONDITIONS

Large product range and highly adaptable to different length applications and requirements:

- UV light
- Pollution & chemicals
- Salt fog environments
- Flame retardant/fire resistant
- Resistant to thermal aging
- Resistant to surface electrical activity
- Low temperature recovery
- Hydrophobicity
- Tracking and erosion resistance
- High thermal property

CUSTOMIZATION

- Multiple additives or blends of different polymers can be included to ensure meeting unique requirements*
- Instruction kits can be customized
- Customization can include: ground braids, spring clamps, connectors, and more*



* Not all products available in all regions – contact your local TE sales representative for assistance.

TE Connectivity (NYSE: TEL) is a \$12 billion global technology leader. Our commitment to innovation enables advancements in transportation, industrial applications, medical technology, energy, data communications, and the home. TE's unmatched breadth of connectivity and sensor solutions, proven in the harshest of environments, helps build a safer, greener, smarter and more connected world. With 75,000 people – including more than 7,000 engineers – working alongside customers in nearly 150 countries, we help ensure that EVERY CONNECTION COUNTS – www.TE.com.

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FOR MORE INFORMATION:

TE Technical Support Centers

AMERICAS

USA/Canada: +1 (800) 327-6996
 Mexico: +52 0-55-1106-0800
 Brazil: +55 11-2103-6023
 South America: +57 1-319-8962

ASIA-PACIFIC

Australia: +61 29-554-2695
 New Zealand: +64 9-634-4580
 China: +86 (0) 400-820-6015

EUROPE-MIDDLE EAST-AFRICA

France: +33 (0) 38-058-3200
 Germany/Switzerland: +49 (0) 89-608-9903
 UK: +44 08708-707-500
 Spain/Portugal: +34 912-681-885
 Italy: +39 335-834-3453
 Benelux: +32 16-508-695
 Russia: +7 495-790 790 2-200
 Poland/Baltics: +48 224-576-753
 Czech Republic: +42 (0) 272-011-105
 Sweden/Norway: +46 850 725 000
 Middle East: +971 4-211-7020

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