Cold joint outer sheath



Overview

Ever since the installation of the first 3MTM Cold Shrink termination in 1972, we have developed products that deliver market leading efficiencies and reliability to our customers.

Key Takeaways

A cold joint outer sheath is the protective silicone or polymer layer of a cold shrink cable joint that provides insulation, mechanical protection, and environmental sealing without the need for heat during installation.

Overview

The cold joint outer sheath is an integral part of cold shrink cable joints, which are used to connect or terminate medium and low voltage cables. Unlike heat shrink joints, cold shrink joints rely on pre-stretched elastic silicone or polymer tubing that contracts onto the cable when a supporting core or spiral ribbon is removed, forming a tight, protective layer over the joint. This outer sheath ensures mechanical protection, electrical insulation, and environmental sealing.

Material and Design

Cold shrink outer sheaths are typically made from elastic silicone rubber or other polymeric materials that maintain flexibility and performance in extreme conditions. They are designed to: Maintain constant radial pressure on the cable for long-term reliability. Resist aging, hydrophobicity loss, and cold temperatures, making them suitable for cold, humid, or polluted environments.

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Provide anti-flouring and hydrophobicity transference, ensuring moisture does not penetrate the joint. Accommodate irregular cable shapes and maintain stress control through integrated geometric stress cones and Faraday cages.

Installation

The cold shrink outer sheath is installed by sliding the pre-stretched sheath over the prepared cable joint and then removing the supporting core or spiral ribbon. This allows the sheath to shrink tightly around the cable, eliminating the need for torches, heat, or additional tools. Some designs feature “All-in-One” joints, where the outer sheath is pre-assembled on the joint body for faster installation.

Applications

Cold shrink outer sheaths are widely used in: Medium voltage networks (up to 42 kV) for underground or outdoor cables. Underground Residential Distribution (URD) cables for voltages from 15 kV to 25 kV. Environments with extreme cold, humidity, salt mist, or pollution, where traditional heat shrink methods may be less effective.

Situations requiring quick, safe, and tool-free installation, such as confined spaces or hazardous areas.

Advantages

No heat required, reducing fire risk and installation complexity. Long-term reliability due to constant radial pressure and stress control. Flexibility in cold and harsh environments.

Reduced installation time with pre-assembled or compact designs. In summary, the cold joint outer sheath is a critical component of cold shrink cable joints, providing insulation, mechanical protection, and environmental sealing while enabling fast, safe, and tool-free installation in a variety of electrical applications.

Article Content

Underground Cable Accessories

Cold shrink joints are available with outer sheath tubes loaded on separate spiral ribbons and as very compact “All-in-One” joints, which have the outer sheath tube pre-assembled on top of the joint body

Medium voltage joints, terminations and cable accessories.

Ever since the installation of the first 3MTM Cold Shrink termination in 1972, we have developed products that deliver market leading efficiencies and reliability to our customers.

HCSSJ-Hongshang_Heat Shrink Tubing_Medium

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Applications: Applying to cold area, humid area, salt mist area and seriously polluted area. Special outer sheaths are available on request, such as heat shrink tubing,

Types of electrical cable sheaths, applications and how

Explore electrical cable sheath types in detail - from PVC to XLPE. Guide on selecting the right sheath for engineers and students new to the

COLD SHRINK JOINT UP TO 36 kV Application: – Cable Jointing

They are manufactured with liquid silicone rubber, which has high-quality electrical insulation, excellent tracking resistance as well as high elasticity. Outer sealing and protection. The outer sealing and

MV Cold shrink joints

Ensto supplies a wide range of cable jointing products. Silicone or heat shrink outer jackets with different features. CJ is a total cold shrink solution, and CJH is a hybrid solution with a heat shrink outer jacket.

WOER Cold Shrink Cable Jointing Kit

Featuring low-maintenance design with 25+ years aging resistance, these eco-conscious joints meet international environmental standards for hazardous and demanding applications.

Cable Repair | Heat Shrink Wraparound Cable Sheath

3M HDCW series heat shrinkable wraparound sleeve kits are suitable for cable sheath repair and jacketing sleeves – including heat shrink cable repair, cold

Cable Joint Kits

Used across both Low Voltage and Medium Voltage applications (albeit notably different products), these cable jointing kits use either Cold shrink or Heat Shrink technology. Both options are

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pull (do not rotate) 9 Hold with one hand the joint while pulling out the second plastic tube with the other hand. a Remove the plastic tube from the cable. z Compress by hand the mastic layers on to the

18 Cable Sheath Materials Explained

Cable Sheath Materials - Complete Guide (Types, Characteristics & Applications) Whether you are designing and manufacturing a new cable or

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CIGRE 2016 Location of sheath voltage limiters (SVLs) used for accessory protection to assure the insulation coordination of cable outer sheath, sectionalising joints and terminations of high ...

Temperature Handbook

The use of an inner and outer sheath of gas-tight ceramic is therefore advisable. The outer thin-walled tube protects the inner one against temperature shock through the air between them.

CMP CABLE GLANDS & ACCESSORIES

Provide environmental protection by sealing on the outer cable sheath, excluding dust and moisture from the electrical or instrument enclosure. d has a metallic construction. In this case Cable Glands may

BEST PRACTICE

All these cables have an extruded polymeric outer sheath, usually PVC or polyethylene, and some form of metallic screen, typically copper wires or tapes, or longitudinally-applied aluminium or copper foil

Understanding Cold Joints In Concrete Footings: Causes, Effects, And ...

Discover the essential guide to understanding cold joints in concrete footings and their impact on structural integrity. This article explores the causes, consequences, and best practices for preventing

Cold Joint in Concrete and Methods of Treatment

Reading time: 1 minute A cold joint is an advancing face of a concrete pour, which could not be covered by fresh concrete before concrete has begin to set due to stoppage, delay or low rate of pour

What''s in a Cable? Part 5

The purpose of a jacket or sheath is the same as skin – to keep the outside out and the insides in. Jackets come in many different forms from braids and tapes to the more common

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