Cold-joint splice



Overview

Our broad portfolio of electrical joints and splices are made for low, medium and high voltage electrical connections.

Key Takeaways

A cold-joint splice is a method of joining cables or fibers without applying heat, using pre-fabricated materials or mechanical connectors to ensure reliable electrical or optical continuity.

Definition and Principle

A cold-joint splice is a connection technique where two conductors, cables, or fibers are joined without the use of heat. In electrical applications, this often involves cold shrink silicone or mechanical connectors that provide insulation, stress relief, and continuity without soldering or thermal processes. In optical fiber applications, cold splicing uses precise V-shaped grooves or quick connectors to align and join fiber ends, avoiding the need for fusion splicing.

Applications

Electrical Power Cables: Cold-joint splices are widely used in medium- and high-voltage power cables (15–35 kV). Products like the Raychem CSJA-1C or 3M QS200 kits use pre-stretched silicone bodies that shrink onto the cable when the core is removed, forming a secure, insulated joint. These splices can accommodate mechanical or compression connectors, maintain shield continuity, and include integrated stress control and Faraday cages for safety.

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They are suitable for indoor, outdoor, and harsh environments, and can be installed at temperatures from -20°C to +50°C. Optical Fibers: Cold splicing in fiber optics allows quick, on-site connections of fiber pigtails or butt joints. The fibers are aligned in a V-groove or connector, providing a fast, cost-effective alternative to fusion splicing.

This method is particularly useful for FTTH (fiber to the home) installations, where speed and low cost are critical. Conveyor Belts: In mechanical systems, cold splicing can refer to joining fabric conveyor belts using adhesives or mechanical interlocks without heat. This ensures uniform belt thickness and reduces mechanical stress, extending the belt's service life.

Advantages

No heat required: Safe for environments where open flames are restricted. Quick and easy installation: Reduces downtime and labor costs. Reliable insulation and stress control: Especially in medium- and high-voltage applications.

Versatile: Can be used for electrical, optical, and mechanical splicing. Field-ready: Many kits are pre-fabricated and tested for AC withstand and partial discharge.

Installation Overview

Prepare the cable or fiber ends by stripping insulation or cleaning fiber surfaces. Position the cold splice body or connector over the joint. Remove the pre-stretched core (for cold shrink) or secure mechanical connectors.

Ensure proper alignment and continuity, checking for electrical or optical performance. Seal and protect the joint as required for environmental exposure. SummaryCold-joint splicing is a safe, efficient, and versatile method for joining electrical cables, optical fibers, or conveyor belts without heat.

It provides reliable insulation, mechanical stability, and rapid installation, making it ideal for field applications and environments where traditional heat-based splicing is impractical.

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Article Content

Electrical Joints | TE Connectivity

Our broad portfolio of electrical joints and splices are made for low, medium and high voltage electrical connections. These are engineered to withstand harsh conditions in extreme environments, providing

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.

3M Cold Shrink Splices

3M electrical splices feature cold shrink technology, which is engineered for easy installation by unwinding the inner core. Reduce the time, labor and cost that

COLD SHRINK JOINTS, COLD SHRINK SPLICES, 20KV 22KV 24KV

The versatile design of the prefabricated one-piece cold shrink splice body allows installation on a wide range of cable sizes and types and a fast and easy installation at temperatures ranging from - 20°C

HV Joints | HV Cable Joints | High Voltage Joints 66kV

Each cable splice or joint manufactured is factory tested by 3M to provide reliability. The 3M Cold Shrink cable splice kit contains a set-screw aluminium (Al/Cu) inline

3M™ Cold Shrink Medium Voltage Splice Joint Kit QS2000 93-AP 631

Cold Shrink splice solution for an easy and secure sealing and insulating of medium voltage cable connections up to 24 kV. Electrical field control device and faraday cage pre-installed to the

Disconnectable Joints

The Richards Disconnectable Joint system is a multi-way medium voltage splicing system available through 35kV. Commonly found in higher load density

3M™ Cold Shrink Medium Voltage splice joint kit QS200 93-AK, 620-1 ...

The versatile design of the prefabricated one-piece cold shrink splice body allows installation on a wide range of cable sizes and types and a fast and easy installation at temperatures ranging from - 20°C

Hot, Cold, or Mechanical: How Precise Endless Splices

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Poing near Munich, 18th August – In conveyor technology, conveyor belts are essentialfor the safe and efficient transport of materials. The

3M Cold Shrink Splices: Splices to Fit All Electrical Cable Systems

History of 3MTM Cold Shrink Technology For over 50 years, professional electrical workers have trusted 3M for innovative solutions that enhance safety and productivity. That''s why 3M invented cold shrink

In Line Cold Shrinkable Joints, 15-35 kV

TE''s CSJ-SR cold shrinkable joint with separate rejacketing sleeve for 15 through 35 kV is designed to splice JCN, BCN and flat strap neutral cables.

A56 ELASTIMOLD/FISHER PIERCE

For over 50 years, the Elastimold brand has been associated with reliable, high-quality, pre-molded power cable splices that are designed to stand the rigors of the toughest utility applications. These

PRODUCT SHEET Elastimold® Shrink-Fit® cable joints Provide ease

Elastimold® Shrink-Fit® cable joints Provide ease of installation for even the toughest applications lity, pre-molded power cable splices that are designed to withstand the rigors of the toughest utility

Conveyor Belt Fabric Splice Manual

Never butt the ply seams/joints tight together. Never allow the ply seams/joints to overlap. Place a noodle or narrow strip of inside rubber over the ply seams/joints. Each ply seam/joint must be

3M™ Cold Shrink QS4 Integrated Splice Kits 15-SP Series

The new 3M™ Cold Shrink QS4 Integrated Splice Kit is a premier offering that utilizes our field-proven 3M™ Cold Shrink QS-III Splice Body with additional features that make installation quick and easy.

3M Cold Shrink Products | 3M US

3M Cold Shrink products contain elastomeric bonds, giving them elasticity similar to rubber bands. When stretched and then allowed to shrink onto a cable, they exert a strong inward force that produces a

CABLE JOINTING, JOINTING KITS, 3M COLD SHRINK JOINT SPLICE

An expert from 3M details Standard 3M Cold Shrink Joint uses Scotch 13 Semi conducting tape to overtape the cable connector during cable jointing. The taped electrode cable splice offers a viable

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2380109-1 : RAYCHEM Inline Joint: Cold Shrink, Straight up to 42 kV

Get 2380109-1 RAYCHEM Inline Joint: Cold Shrink, Straight up to 42 kV specs, pricing, inventory availability, and more from TE Connectivity. Get a sample or request a quote.

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

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