High Voltage Busbar Heat Shrink Tubing Material



Overview

Bus Bar Heat-Shrink Tubing | McMaster-CarrFind tubing with the right shrink ratio, flexibility, and dielectric strength. Plus, compare materials by chemica.

Key Takeaways

High-voltage busbar heat shrink tubing provides durable insulation, flashover protection, and conformal coverage for busbars in switchgear and substation applications.

Overview

Heat shrink tubing is widely used to insulate and protect high-voltage busbars in electrical systems, including switchgear, substations, and motor control centers. It forms a conformal, continuous insulation layer over irregular busbar geometries, such as bolted joints, cable lugs, and transition sleeves, where traditional tape or molded boots may fail due to air pockets or moisture ingress. This ensures dielectric integrity and reduces the risk of flashover or accidental contact.

Voltage Ratings and PerformanceHigh-voltage busbar heat shrink tubing is available for a wide range of voltages: Medium voltage applications: up to 35 kV, suitable for standard substation busbars. High-voltage applications: up to 72 kV, providing flashover protection and insulation enhancement for copper or aluminum busbars. The tubing is typically made from flame-retardant, non-halogen polymers with excellent dielectric strength, chemical resistance, and thermal stability.

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Some products are low-smoke and RoHS-compliant, making them suitable for environmentally sensitive installations.

Material and Design Considerations

Wall thickness: Medium- and heavy-wall tubing ensures sufficient insulation and mechanical protection. Shrink ratio: Tubing is designed to recover snugly over busbar profiles, including rectangular, round, or angled shapes. Flexibility: Allows installation in confined spaces and over complex geometries without compromising insulation.

Color coding: Often orange for easy identification in high-voltage systems. Standards ComplianceHigh-voltage busbar heat shrink tubing is manufactured to meet ANSI/IEEE C37. 20 standards for metal-enclosed switchgear, ensuring minimum clearance and withstand requirements.

U

L 224 VW-1 flame retardance is common for lower-voltage applications, while higher-voltage tubing meets specialized substation insulation standards.

Installation

Field or factory application: Tubing can be installed using a hot air gun, gas torch, or oven, depending on production scale and site conditions. Conformal coverage: Shrinks radially to grip every contour, eliminating air pockets and providing continuous insulation. Clearance reduction: Enables designers to reduce air spacing between busbars in compact switchgear layouts.

Applications

Insulation of busbars in switchgear and substationsProtection against flashover and accidental bridgingUse in confined or exposed busbar arrangementsSuitable for copper and aluminum busbars, both circular and rectangular High-voltage busbar heat shrink tubing is essential for long-term reliability, safety, and compliance in electrical distribution systems, providing both mechanical protection and superior electrical insulation.

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Article Content

Bus Bar Heat-Shrink Tubing | McMaster-Carr

Find tubing with the right shrink ratio, flexibility, and dielectric strength. Plus, compare materials by chemical resistance temperature, and more. Insulate and protect high-voltage devices.

High Voltage Heat Shrink Busbar Insulation Tubing

35kV high voltage busbar heat shrink tubing is widely used in the insulation protection of high-voltage switchgear busbars, thanks to its outstanding insulation performance and flexibility, effectively

Busbar Insulation Material: A Comprehensive Guide for

Heat shrink tubing is used to insulate busbars by shrinking the tubing over the conductor using heat. This method provides a tight seal and protection

Busbar Insulation Methods in Electrical Cabinets: Heat

Explore copper busbar insulation methods, including heat-shrink tubing and epoxy coating. Learn about process techniques, advantages, and

High-Voltage Heat Shrinks | McMaster-Carr

Find tubing with the right shrink ratio, flexibility, and dielectric strength. Plus, compare materials by chemical resistance temperature, and more. Insulate and protect high-voltage devices.

BUSBAR INSULATION TUBING BPTM

Particularly useful in confined spaces the BPTM tubing can be used on both circular and rectangular copper or aluminium busbars. On application of heat the tubing shrinks snugly over the busbar profile

3M™ Heat Shrink Tubing BBI | 3M United States

3M™ Bus Bar Heat Shrink Tubing BBI is made of a specially formulated cross-linked polyolefin. The tubing is colored orange-red. The material has high resistance to

SKBT-HV High Voltage 35KV Busbar Insulation Heat

SKBT-HV High Voltage Heat shrink busbar insulation tubing is a kind of continuous tubing made of radiation cross-linked polyolefin which carries excellent insulating

Heat Shrink Busbar Tubing | Insulating Tubing | KTG Electronics

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This page shows three types of busbar heat shrink tubing for 1kV, 10kV and 35kV applications. This busbar tubing has a perfect insulation performance for low voltage and high voltage switchgears, and

bus bar tubes | busbar tubing | bustube

Bus Tube is heat shrinkable tube designed to insulate busbar systems up to 36KV & to protect against accidental flashover. The tubes are manufactured from high quality non tracking crosslinked

Busbar Heat Shrink tubes

Wellele Busbar Heat Shrink tubes pressure resistance level can be divided into the following levels: 1. General pressure resistance: ≤ 0.6KV 2. Medium voltage:

Insulation Solutions for Custom Busbars

Busbar surface insulation treatment prevents accidental short circuits, reduces oxidation and corrosion, and ensures long-term stability in conductivity and heat dissipation. In new energy busbar

Heat Shrink Insulation Tubing

Heat-shrinkable busbar insulation tubing. Busbar heat-shrinkable tubing are suitable for use on long runs of rectangular or round busbars.

Busbar Insulation Material: A Comprehensive Guide for Modern

Busbar Insulation Material: A Comprehensive Guide for Modern Electrical Systems Busbar insulation materials are pivotal in ensuring safety, enhancing performance, and prolonging

Raysulate

Raysulate products come in the form of Heat Shrink Tubes, Tapes, Sheets and pre-formed shapes to enhance insulation of live points of any shape and voltage grade. All the products are made of

Understanding High Voltage Busbar Heat Shrink Tubing: Technical ...

Discover technical specifications, performance grades, and application techniques for high voltage busbar heat shrink tubing. Learn about materials, insulation properties, and common industrial uses

BUSBAR INSULATION TUBING BPTM

TE Connectivity''s (TE) Raychem BPTM medium-wall, heat shrink tubing provides insulation enhancement and protection against flashover and accidentally induced discharge. Particularly

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HEAT SHRINK BUSBAR INSULATION TUBING (EDLI)

The EDLI tubing can be installed easily during large-scale production using an oven or in the field using a gas torch or hot air. Upon application of heat, the tubing shrinks snugly over the busbar profile,

Related Video Reference

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

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

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