Mechanical Press Busbar Connection

Summary of Content

Mechanical press busbar connections use press-fit or mechanical fastening techniques to join busbars, providing reliable electrical conductivity and mechanical integrity without soldering.

Overview

A busbar is a conductive strip, bar, or tube, typically made of copper, brass, or aluminum, designed to carry high currents between components in power assemblies . Traditional connection methods like bolting, welding, or soldering can be challenging in modern compact or high-current applications due to space constraints, heat sensitivity, and assembly complexity . Mechanical press-fit connections offer a solder-free, high-reliability solution that simplifies assembly while maintaining excellent electrical and mechanical performance .

Press-Fit Technology

Press-fit connections involve inserting a busbar into a pre-formed contact or PCB hole with a controlled force, creating a gas-tight, low-resistance electrical interface. This method eliminates the need for soldering, reducing thermal stress on nearby components and enabling automated assembly . Press-fit systems are commonly used in:

• PCB busbars for precise high-current distribution

• Power modules and DC-link systems in inverters

• Automotive and industrial electronics using specialized contact bushings and mechanical fasteners

Article Content

Copper Busbar Connections Explained: Torque Control, Contact

Learn why full overlap is not required for copper busbar connections. This guide explains how proper busbar torque

Flexible Press Welded Expansion Connectors

Construction and Application Expansion connectors in standard design for busbar systems.

Power Applications Using High-force Press-Fit

Fortunately, extensive testing has now been conducted on new high-force press-fit interconnects in copper busbars, including

Design Guide for bus bars

Mechanical considerations include rigidity, mounting holes, connections and other subsystem elements. The width of the conductor

Busbar Power Connectors/Distribution | High Current

These board-to-busbar connectors are designed to meet OCP V3 power distribution

Applications Note

Ease of Assembly: Press-fit connections can be straightforward to assemble and disassemble, facilitating easier maintenance and

Busbar Power Connectors/Distribution | High Current Electrical Busbar ...

These board-to-busbar connectors are designed to meet OCP V3 power distribution architecture standards and are

SPS Ultraflexx® highly flexible busbars

Thanks to our different cross-sections, Ultraflexx® highly flexible busbars can be adapted to a wide range of equipment and used as

PEM eConnect® Busbar Connector System

The new PEM eConnect® Busbar Connector System – a streamlined, cost-saving, high-performance solution for joining busbars in

A Comprehensive Guide to Jointing Busbars: Which Method is Best?

Planning and executing a low-resistance, effective, reliable jointing of busbars requires analysis of electrical, mechanical, thermal,

Flexible Busbar Connectors

Our flexible busbar connectors are designed to be used in situations where there is a need for flexibility or movement between two

Contact Us

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