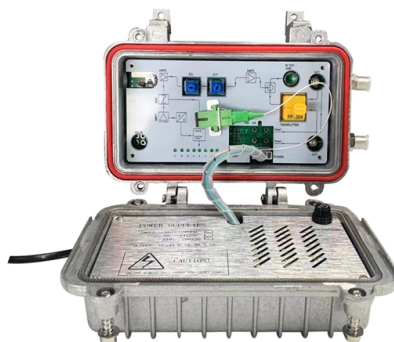


Secondary AC Small Busbar



Overview

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Key Takeaways

A secondary AC small busbar is a compact electrical conductor, typically made of copper or aluminum, used to distribute low-voltage AC power efficiently within switchgear, panel boards, or control systems.

Secondary AC busbars are designed for low-voltage distribution systems, usually below 1 kV, where they carry current from the main incoming supply to outgoing circuits. They serve as a junction point for multiple connections, reducing wiring complexity and improving reliability in compact electrical panels .

Materials and Types

- **Copper Busbars:** Preferred for high conductivity and durability, suitable for small to medium current applications in industrial and commercial panels .
- **Aluminum Busbars:** Lighter and cost-effective, often used where weight reduction is important .
- **Flexible Busbars:** Made of multiple thin copper layers or braided conductors, allowing bending and vibration tolerance, ideal for applications with movement or tight spaces, such as battery modules or e-mobility systems .

- **Insulated Busbars:** Coated with PVC, epoxy, or other insulating materials to prevent accidental contact and short circuits, commonly used in small distribution boards .

Design Considerations

- **Size and Cross-Section:** Determined by the current rating and panel space. Small busbars are typically flat strips or comb-style to fit compact layouts .
- **Mounting:** Can include supports, finger-safe covers, and modular connectors for easy installation and maintenance .
- **Flexibility:** Flexible busbars compensate for tolerance variations and vibrations, ensuring reliable connections in dynamic environments .

Applications

- **Switchgear and Panel Boards:** Distribute power to MCBs, contactors, and other devices.
- **Control Panels:** Compact busbars reduce wiring complexity and improve safety.
- **Battery and Inverter Systems:** Flexible busbars connect modules and handle vibrations in e-mobility or renewable energy setups .

Advantages

- Reduces wiring complexity and installation time.
 - Improves current distribution and reduces voltage drop.
 - Enhances safety with insulated or finger-safe designs.
 - Allows modular and flexible configurations for compact or dynamic systems .
- In summary, a secondary AC small busbar is a versatile, compact conductor solution for low-voltage power distribution, available in rigid or flexible forms, with copper or aluminum materials, and optional insulation for safety and reliability.

Article Content

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

