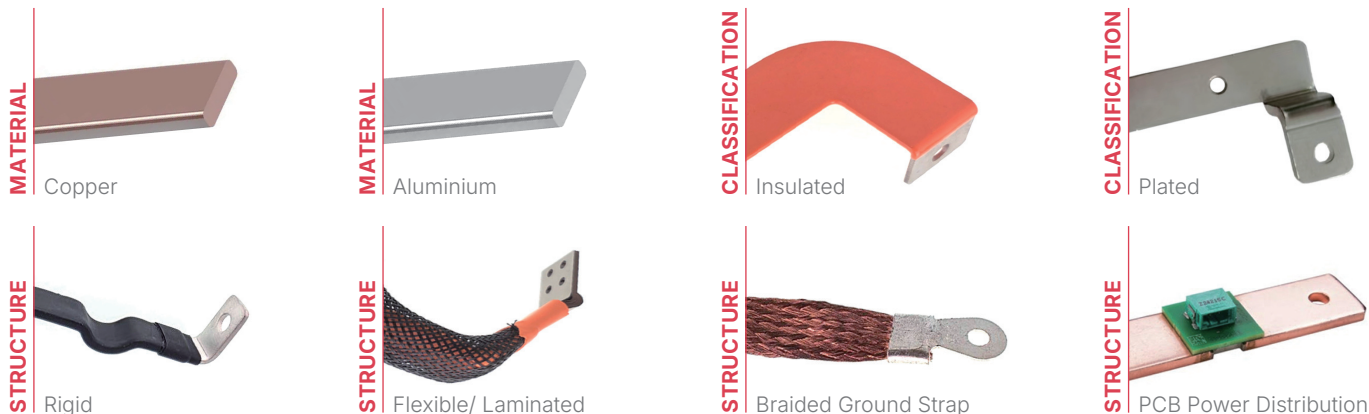
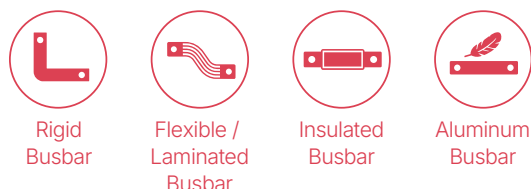


Busbar



We possess end-to-end manufacturing capabilities ranging from mold development, precision machining, surface treatment, to electrical performance testing. We can customize solutions based on your drawings and electrical parameters (rated current, temperature rise limits, spatial dimensions).



Busbar Product Classification

Busbar Type	Features & Structure	Advantages & Applications
1. Rigid Busbar	- Manufactured from high-conductivity OFC or electrolytic copper. - Supports bending, punching, CNC machining, and tin/silver plating. - Offers high structural rigidity and large current-carrying capacity.	- Extremely low voltage drop and exceptional thermal dissipation. - Ideal for high-current, fixed-structure power transmission.
2. Flexible / Laminated Busbar	- Constructed from multiple layers of ultra-thin copper foils (diffusion-welded/crimped) or copper braided links. - Exhibits superior mechanical flexibility.	- Effectively absorbs mechanical vibrations and thermal expansion displacements. - Simplifies wiring and assembly in complex, tight spaces.
3. Insulated Busbar	Coated with heat-shrink tubing, dip-molded epoxy resin, or multi-layer insulating films (PET or Nomex).	- Reduces phase-to-phase safety clearance requirements and prevents short circuits. - Enhances operational safety in high-voltage systems.
4. Aluminum Busbar	- Density is about one-third of copper for exceptional lightweight benefits. - Economical raw material costs and lower overall BOM costs. - Requires professional surface treatments (tin, nickel, or silver plating) to prevent oxidation and electrochemical corrosion.	- Suitable for weight-sensitive applications (such as EVs and portable energy storage). - Reduces overall system load while ensuring long-term electrical stability and weather resistance.

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Design Highlights

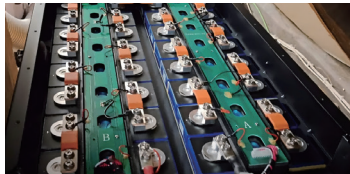
Component Type	Functional Role	Design Focus & Selection Principles
Copper Busbar	High-current main path transmission	High conductivity; requires tin or silver plating on the surface for anti-oxidation.
Aluminum Busbar	Lightweight connection	Suitable for modules; requires copper-aluminum transition plates (bimetal) and the application of conductive paste to prevent electro-chemical corrosion.
Laminated Busbar	PCS internal power path	Laminates positive and negative poles to utilize magnetic field cancellation, which effectively reduces stray inductance and suppresses voltage spikes.
Grounding Braid	Equipotential bonding and protection	Features high surface area for low high-frequency impedance while offering superior resistance to mechanical vibration and fatigue.

Core Application Fields



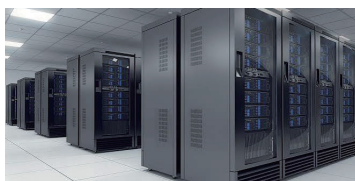
• Electric Vehicles (EV) & Charging Piles

Utilized for battery module internal series/parallel connections, Power Distribution Units (PDUs), motor controllers, and On-Board Chargers (OBC), meeting automotive-grade vibration and high-temperature standards.



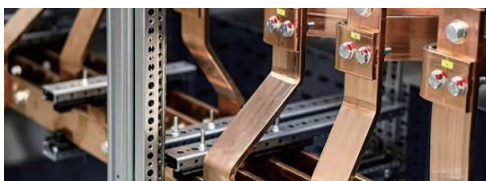
• Energy Storage Systems (ESS)

Applied within battery clusters, Battery Management Systems (BMS), and Power Conversion Systems (PCS) for high-current power busing.



• Data Centers & Uninterruptible Power Supplies (UPS)

Employed in server rack busway systems and high-power UPS units to ensure low impedance and high stability during prolonged data center operation.



• Industrial Automation & Inverters

Designed for large motor drives, industrial inverters, and heavy-industry switchgear, delivering compact and highly reliable power distribution.

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