

What are the different specifications of busbar connectors



Overview

There are many situations where it is necessary to join two busbars to create a single, unified unit.

Key Takeaways

Busbar connectors typically support 100–1250 A per contact, mate with 3.0 mm busbar blades, offer blind-mate alignment, and use copper-alloy contacts with silver or nickel plating, as shown in TE Connectivity and Amphenol product specifications. Overview

Busbar connectors are high-current power interconnects used in servers, data centers, industrial systems, and power distribution. Specifications vary by manufacturer, but common parameters include current rating, busbar thickness, plating, hot-plug capability, and misalignment tolerance.

Key Specifications (from TE Connectivity & Amphenol) 1. Current Rating

- 150–1250 A per contact depending on model (Amphenol BarKlip series).
- TE CROWN CLIP connectors:
 - Junior: ~170 A
 - Standard: 300 A
 - Senior: 420 A

2. Busbar Blade Thickness

- Typical mating thickness: 3.0 mm $\pm$ 0.1 mm (TE CROWN CLIP).

- TE 2204761-2: 3 mm (0.118 in).

3. Plating & Materials

- Contact base: Copper alloy.
- Plating: Silver (e.g., 3 µm) with nickel underplating.

- Housing: Stainless steel (TE 2204761-2).

4. Operating Voltage

- Up to 600 VAC / 48 VDC (TE 2204761-2).

5. Temperature Range

- Typical: -55 °C to +105 °C.

6. Mechanical Features

- Blind-mate alignment ± 0.75 –1.0 mm depending on model.
- Hot-plug capable (CROWN CLIP series).

- Screw-mount or solder-mount options.

7. Dimensions (example: TE 2204761-2)

- Length: 52 mm

- Width: 12 mm

- Height: 30 mm

Example Product Specs Table

Manufacturer	Series / Part	Current (A)	Busbar Thickness	Plating	Hot-Plug	Notes
Amphenol	Barklip BK1200	Up to 1250 A	3 mm	Low-resistance plating	Yes	ORv3 compliant
TECROWN	CLIP Jr170	170 A	3.0 mm	Nickel/Silver	Yes	± 0.75 mm misalignment
TECROWN	CLIP Std300	300 A	3.18/3.00 mm	Nickel/Silver	Yes	Blind-mate design
TECROWN	CLIP Sr420	420 A	3.0 mm	Silver	Yes	High-current 12/48 V systems
TE	2204761-2	350 A	3 mm	Silver (3 µm)	Not specified	Stainless steel housing

What Specs Matter Most When Selecting a Busbar Connector

- Current rating (match system load)
- Busbar thickness compatibility
- Hot-plug requirements
- Misalignment tolerance for blind-mate systems
- Plating type for conductivity and corrosion resistance
- Thermal rise performance
- Mechanical mounting style (screw, solder, floating)

These specifications ensure safe, efficient, and reliable high-current power distribution in demanding applications.

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For busbar systems, the maximum working current is determined primarily by the maximum

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I. Introduction to Busbars A. What is a busbar? A busbar is a crucial component in electrical

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Typical Busbar Sizes If this program recommends sizes that do not fit into the ranges below, change either the number of conductors

Catalogue SIMABUS-EPP-2829-8-16 rev2-HD

Low own frequencies of a busbar system depends on combination of several factors as, long span, large size of tubes, inappropriate

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Amphenol offers high-performing, low-resistance Busbar connectors with designs to conveniently distribute power between busbars,

Flexible Busbar: Laminated vs Braided + Ampacity

It sits between two familiar options. Cable is easy to source but bulky and termination-heavy. Rigid copper bar is

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WILLELE provides multiple busbar configurations to suit various MCB connection types. All models share a standard cross-section of

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Below is a practical busbar size chart commonly used in electrical engineering applications. These standard

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A busbar is a crucial component in electrical distribution systems, primarily serving as a

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