

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	A3	Low-resistance plating	Yes	ORv3 compliant
TECROWN	CLIP Jr170	A3.0	3.0 mm	Nickel/Silver	Yes	± 0.75 mm misalignment
TECROWN	CLIP Std300	A3.18/3.00	3.0 mm	Nickel/Silver	Yes	Blind-mate design
TECROWN	CLIP Sr420	A3.0	3.0 mm	Silver	Yes	High-current 12/48 V systems
TE	2204761-2	350	A3	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

Busbar Design Guide

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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