

Cable tray wire connector dimensions



Overview

Cable Tray Connectors | McMaster-CarrCut, bend, and connect these wire mesh tray systems to route cable and hose in configurations such as curves, slopes.

Key Takeaways

Cable tray wire connectors are designed to match standard tray widths and side rail thicknesses, typically accommodating 50–600mm wide trays with connector plates or bolts sized to fit the tray rails. Standard Cable Tray Dimensions

Cable trays are manufactured in standardized widths, heights, and material thicknesses to ensure compatibility with connectors and fittings. Common tray widths range from 50mm to 600mm, with typical increments of 100mm, 200mm, 300mm, and 450mm. Tray heights (side rail depth) generally range from 25mm to 150mm, depending on cable volume and ventilation requirements. Material thickness varies by load capacity, with galvanized steel trays often meeting ASTM A653 standards for corrosion resistance and structural strength .

Wire Connector Types and Dimensions

Wire connectors for cable trays are typically bolt-on or clamp-style plates that secure the side rails of two tray sections. Key dimensional considerations include:

- Connector plate width: Must match the side rail thickness of the tray, usually 1.5mm to 3mm for light to medium duty trays, and up to 4–5mm for heavy-duty industrial trays .



- Bolt hole spacing: Designed to align with tray side rails, commonly 25mm to 50mm apart, depending on tray size and load requirements.
- Bolt diameter: Standard bolts range from M6 to M10 for light and medium trays, and M12 or larger for heavy-duty trays.
- Connector length: Typically 100mm to 150mm, sufficient to span the side rails and provide secure fastening.

Installation Considerations

- Ensure the connector plate fully overlaps the tray side rails to maintain structural integrity.
- Use bolts and nuts compatible with the tray material (galvanized steel, stainless steel, or aluminum) to prevent galvanic corrosion.
- Maintain proper torque as specified by the manufacturer to avoid loosening under vibration or load.
- Allow for 25–40% spare capacity in tray width for future cable expansion, which may influence connector placement .

Summary

While exact connector dimensions vary by manufacturer and tray type, wire connectors are engineered to match the tray's side rail thickness and width, with bolt diameters and spacing scaled to the tray's load rating. For precise specifications, always refer to the manufacturer's technical guide for the specific cable tray system being used . Proper selection ensures structural stability, code compliance, and safe cable management.

Article Content

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Cable Tray Raceway Fill and Load Calculations

The Wire Mesh / Cable Tray Fill table in below section shows the number of cables and the load in lbf/lineal foot

Cable Tray Fitting Accessories

Cable tray fittings such as reducers and offset reducing connectors are used to join cable trays of different

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Standard length of about 10 feet (118") Wire Mesh tray is generally used for telecommunication and fiber optic applications and are

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TRAY CABLE CATALOGUE

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Section 16135

Provide wire basket cable tray of types and sizes indicated with connector assemblies, clamp assemblies, connector plates, splice

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Cable Tray | Wire Mesh, Ladder Tray and More Wire Management

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Where cable tray wiring systems with current carrying conductors are installed in a dust environment, ladder type cable trays should

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