

Gap between cable trays

Article Overview

Proper spacing between cable trays ensures safety, maintenance access, heat dissipation, and minimizes electromagnetic interference.

Horizontal Spacing

When installing two cable trays in parallel at the same height, the minimum horizontal gap should be 0.6 meters (60 cm) to allow maintenance access, inspection, and proper airflow for heat dissipation, while preventing cables from touching and causing short circuits or interference. For power and signal cable trays, the recommended horizontal separation is generally 0.5 meters (50 cm) to reduce electromagnetic interference (EMI). If the trays are shielded, this distance can be reduced to 0.3 meters (30 cm).

Vertical Spacing

For floor-mounted or stacked trays, the minimum vertical clearance should be 150 mm (6 inches) from the bottom of the upper tray to the top of the lower tray. This ensures structural integrity, facilitates ventilation, and allows future installation of additional trays. When trays cross over beams, piping, or other obstacles, a minimum clearance of 9 inches (22.9 cm) is recommended to prevent mechanical damage and allow easy cable installation.

Support and Load Considerations

Cable trays must be supported at intervals specified by the manufacturer, typically every 4 to 6 feet (1.2-1.8 meters) for horizontal runs, with a maximum of 5 feet (1.5 meters) according to NEC guidelines. Supports should be placed under splices, intersections, or changes in elevation to maintain stability and prevent sagging.

Special Considerations for Mixed Cables

- o Shielded instrument cables can be installed in the same tray as power cables with a minimum gap of 300 mm and proper grounding of the shield.
- o Unshielded instrument cables should not share a tray with power cables to avoid induction problems, especially with non-linear loads.

Summary

Maintaining proper gaps between cable trays is critical for:

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- o Safety: Prevents short circuits and mechanical damage
 - o Maintenance: Provides access for inspection and cable replacement
 - o Heat Dissipation: Ensures airflow to prevent overheating
 - o EMI Reduction: Minimizes interference between power and signal cables
- Following these spacing guidelines ensures compliance with safety standards, manufacturer recommendations, and efficient long-term operation of the cable tray system .

Even if there are installation scenarios where the cable tray is mechanically discontinuous, such as with a firewall

#2 "Re: Distance between Cable Trays" by North of 60 on 06/12/2008 12:32 PM (score 1) Copy to Clipboard Users

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The minimum clearances for cable trays shall be (a) 150 mm vertical clearance, excluding depth of cable trays,

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Cable tray system shall be used for laying of MV and LV power, control, instrumentation and special cables in the

The gap between sections is restricted to 1.8 m (6 ft), the cables are to be fastened to the cable tray prior to and after the transition,

In accordance with its continuous improvement policy, Legrand reserves the right to change the specifications and illustrations

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