

Type A and Type B cable trays



Overview

What is a cable tray ? ABB offers a number of different types of cable tray for use in a range of different applications and environments.

Key Takeaways

Cable trays type A and type B generally refer to different material constructions and finishes, optimized for specific environmental and load conditions.

Cable trays are engineered support systems designed to route, support, and protect insulated electrical cables for power, control, instrumentation, and communication applications . The classification into type A and type B typically reflects material composition, corrosion resistance, and structural finish, rather than a difference in basic design like ladder or perforated trays .

Type A Cable Trays

- Material: Often made from aluminum or pre-galvanized steel, providing lightweight construction and moderate corrosion resistance .
- Finish: May include natural oxide coating (aluminum) or electro-galvanized steel for protection against atmospheric corrosion .
- Applications: Suitable for indoor or mildly corrosive environments, industrial and commercial installations where weight reduction and ease of handling are important.



- **Advantages:** Lightweight, easy to install, and cost-effective for standard electrical loads. Aluminum trays also resist rust and are electrically non-magnetic, reducing interference with sensitive instrumentation .

Type B Cable Trays

- **Material:** Typically stainless steel (AISI 316L) or hot-dip galvanized steel, offering higher corrosion resistance and mechanical strength .

- **Finish:** Stainless steel provides a passive chromium oxide layer, while hot-dip galvanization adds a sacrificial zinc coating for long-term protection in wet or industrial environments .

- **Applications:** Ideal for harsh or corrosive environments, such as chemical plants, coastal areas, or outdoor installations exposed to moisture and pollutants.

- **Advantages:** Superior durability, resistance to stress corrosion cracking, and suitability for heavy-duty cable loads. Stainless steel trays are also compatible with high-temperature or aggressive chemical conditions .

Key Considerations

- **Load Capacity:** Both types can be manufactured in ladder, perforated, or solid-bottom designs, affecting ventilation and cable support .

- **Environmental Exposure:** Type B is preferred for high-corrosion or outdoor environments, while type A is sufficient for indoor or controlled conditions.

- **Maintenance and Expansion:** Open designs like ladder trays allow easier cable access and heat dissipation, which is important for both types depending on the installation .

- **Standards Compliance:** Both types should comply with IEC 61537 and relevant national standards for safety, load, and fire resistance .

Summary

In essence, type A cable trays are optimized for lightweight, indoor, or moderately corrosive environments, while type B trays are designed for heavy-duty, high-corrosion, or outdoor applications. The choice between them depends on environmental conditions, cable load, and long-term durability requirements. Selecting the correct type ensures safety, compliance, and efficient cable management.

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