

Types of tray cables

Types of tray cables

The cable trays are composed of a thin metallic plate and electro-welded steel rods, the construction of which is based on the international standard IEC 61537. The standard specifies the requirements for cable tray systems, tests, and specifications. Purpose of Cable tray Cable trays, also called carrier trays, are mechanical support systems for cables. As trays provide a rigid structural system for cables, they are used to accommodate and safely transport all types of cables from one point to another in the project. The cables include power cables, armored cables, control and instrumentation cables, telecommunication, and fiber optic cables.

Trays are a very efficient type of channeling electrical cables, both safe and economical. Due to its ease of installation, installation costs are reduced, making maintenance and future extensions more convenient. The basic idea of a carrier tray is to arrange to wire intelligently, cleanly, and simply. Furthermore, these facilities are efficient and maintain the attractiveness of the area.

Cable trays have different characteristics that make them unique, such as their ease of fixation and installation, finishes, ventilation, resistance, design, and secrecy.

As their name implies, these trays resemble ladders. Its structure consists of two longitudinal side rails connected by individual cross members. The carrier type allows the highest air flow between the cables, thus maintaining high ventilation levels and heat dissipation so that the cables do not exceed operating temperatures. The steps of a ladder-type tray are perforated so that, in that way, cables with cable ties (belts) can be grouped and securely tied. These trays are usually used in the high part of buildings. In addition, they do not accumulate moisture, given their open design.

A perforated cable tray consists of a bottom that has openings, and 60% of the flat area is used to support the cables placed inside the longitudinal side rails. These trays are used for instrumentation and power cables. They are perfect for organizing large volumes of industrial power cables. Perforated cable trays can be installed on any surface and improve the cables' useful life. Cable trays such as these provide greater security since they isolate cables completely. With a perforated cable tray, there is no buckling or hanging. Additionally, the perforated design of the tray ensures adequate ventilation for the cables so one can maintain adequate temperatures in a closed environment space.

A solid or smooth background tray consists of a background that has no opening, placed within the longitudinal side rails. This tray is designed to protect and support cables of all types, and the carrier tray provides maximum protection. As a result, all kinds of buckles and hangings can be avoided. In addition, they are mostly used in pipes with small-capacity cables. These trays are designed to isolate cables completely through a hermetic closure system, which helps to prevent the buildup of heat. Additionally, the characteristics of the solid-background carriers allow them to function as electromagnetic shields, making them ideal for protecting control and data cables from RFI interference.

Types of tray cables

It is important to note that these trays accumulate moisture. It is a problem that can be solved by performing perforations that allow continuous draining, as long as the trays are not used as a shield. Basket-type Cable Tray The basket-type cable trays are welded wire structures that serve to support electrical cables in an orderly way, especially systems with cables of control and data. They provide ideal support for data communication cables (coaxial and braided pairs).

These trays have the advantage of being versatile and can be used in many different situations. Due to this, it is possible to work with accessories that vary horizontally and vertically by cutting them as needed. They have other advantages, such as a light structure and more open spaces. It provides better cooling, improves electrical efficiency, and is fire-resistant. It can be used as a shield for cables.

The channel tray's width is small, providing economical support for length drop cables. This kind of cable tray is used to carry only one or two cables to the nearby equipment from the main cable tray. Its size is small compared to any other type of cable tray. Cable hanging can be avoided, and a safe run can be arranged with it. Materials of Cable Tray Cable trays are available both in metal and non-metal types

Metallic trays are available in Steel, Stainless Steel, Galvanized Iron, Low-carbon steel, and Aluminum. Aluminum trays are widely used because they have the following features:

Steel tray provides good electric shielding, and it has low thermal expansion. The cable trays made of stainless steel have excellent corrosion resistance, and they can sustain high temperatures. 2. Non-metal Fiberglass reinforced plastic (FRP).- It is lightweight, non-conductive & resists corrosion.

The accessories of the cable tray are shown in the picture below.

Contact us for free full report

Web: <https://kary.com.pl/contact-us/>

Email: energystorage2000@gmail.com

WhatsApp: 8613816583346

