Cable Tray Protection Guide

A cheap and effective solution.

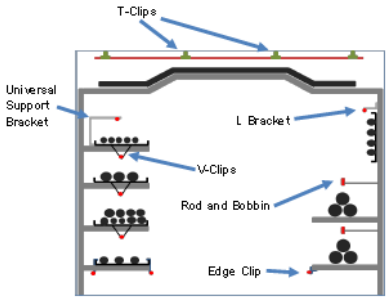
In general, a fire in a cable tray, even if it is small, can cause long periods of interruption in the activity and manufacturing processes, and damage to the construction structures, with the consequent economic losses. Using TASC's (digital) heater sensor cable, the fire can be detected before major damage occurs.

Usually, cable trays are in inaccessible places with a lot of dirt. Normally smoke detectors are used to detect fires in these places, creating several inconveniences: false alarms for dirt, little accessibility to them for maintenance and slowness when detecting a fire due to the arrangement of the trays, on many occasions on several levels.

The TASC sensor cable offers economical, durable detection, without false alarms and with a quick detection of overheating of the cables caused by faulty electrical operation or external causes. This rapid detection is due to the sensor cable being in direct contact with the cables laid in the tray.

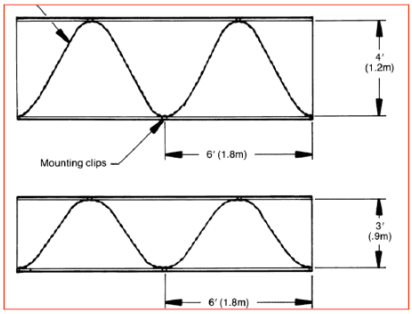
With the monitor modules for the sensor cable, we can be informed of in which meter the incident has occurred. This utility comes in handy in hidden places (skids or false floors) and also in cable galleries for a quick location of the possible fire. In addition, with TASC CTI modules, an alarm can be discriminated from a mechanical short circuit. This feature is unique in heat-melting sensor cables on the market.

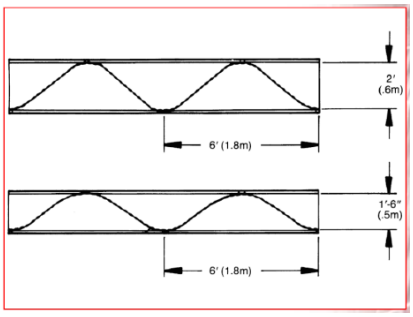
There are plenty of fixing accessories for the cables on the trays, depending on where you want to install the cable.



Typical LHDC Fixing Methods

Using a simple formula and, depending on the width of the tray, the number of meters of cable needed can be calculated. The sensor cable will be installed above the cables laid in the tray.





Tray width	Multiplier
1.2 meters	1,75
0.9 meters	1,50
0.6 meters	1,25
0.5 meters	1,15

$L_{Sensor\ cable} = L_{Tray}$ x Multiplier

Nº Clips=L_{Tray} / 3 + 1

FIRE PREVENTION

Even with the best preventive measures, fires can happen. The faster a fire is detected and acted upon, the lower the costs due to the damage caused.

As a complement to the sensor cables, passive protection measures can (and should) be carried out. Sensor cables could also act as extinguishing media by water or gaseous agents.

An example of good practice would be to perform periodic cleanings of the dirt that accumulates around the trays to avoid a fire due to external risks. The risks of electrical defects could be alleviated by not overloading the cables and avoiding bad contacts. This, together with a good fire detection system, will make optimal results to avoid incidents that stop the production of any industry.

In countries like the U.S. and Canada, pioneers in terms of fire protection systems, it is very common to protect cable trays and electrical connections (even in homes). In fact it is the main business of sensor cable manufacturers in these countries. In Europe and, particularly in Spain, this measure is not yet considered necessary, but it should be reflected that, at a very low cost, obtaining a fire prevention system in these delicate places.

ALTERNATIVE FOR LARGE LENGTHS

In large industries, where kilometers of cable trays are installed, the length of the sensor cable to protect each one of the trays can be kilometric. This, together with the user wanting to have more information about what is happening in real time, can raise the project of a linear fire detection system by optical fiber.

From a certain number of meters of cable (kilometers), the economic difference between a fiber optic system and a thermofuser sensor cable system narrows. The advantages of a linear detection system by optical fiber over the thermofuser cable are enormous, providing the protection with greater sensitivity and greater information in real time.

For any questions or clarification about this guide and request prices and references you can contact us at the following email addresses: Info@tasc.es, logistica@tasc.es, técnico@tasc.es.