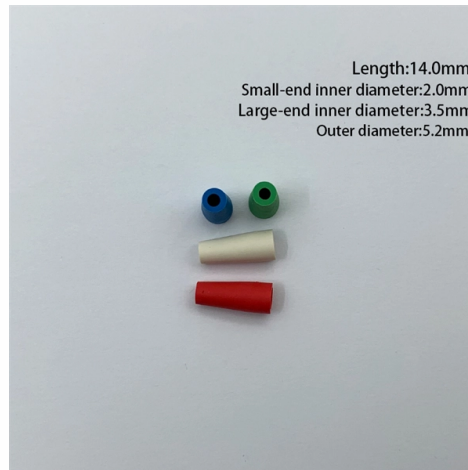


## Do low-voltage power and fire protection cables share the same cable tray



### Overview

While it is technically possible to run power and low-voltage cables in the same tray under strict conditions, segregation or shielding is strongly recommended to ensure safety, compliance, and system reliability. While all data cable is ran within cable tray, about 20% or so of the fire alarm cable is sharing the same tray. The commissioning agents for the project have recently told us that this is against code, however in speaking with our fire alarm subcontractor they do not believe that to be the case -. Maintaining proper separation between power, data, and limited energy cabling is foundational to system performance, safety, and code compliance. 48 Conductors of Different Circuits in the Same Cable, Cable. 760. A power-limited tray cable (PLTC) is covered by Article 725 and is a factory assembly of two or more insulated conductors rated at 300 volts, enclosed in a non-metallic jacket.



## Article Content

### Cable Separation Standards | Winnie Industries

Why It Matters: When power and limited energy circuits share a pathway, physical contact or voltage crossover can cause interference or damage. Best Practice: Use divider brackets ...

### 725 – Class 1, Class 2, and Class 3 Remote-Control, Signaling, and ...

Class 1 circuits and power-supply circuits shall be permitted to occupy the same cable, enclosure, or raceway without a barrier only where the equipment powered is functionally associated.

### Fire Alarm & Data Cable Sharing Same Cable Tray

Cable and conductors of two or more power-limited fire alarm circuits, communications circuits, or Class 3 circuits shall be permitted within the same cable, enclosure, cable tray, raceway, ...

### Can Power Cables And Instrumentation/Communication Cables ...

While it is technically possible to run power and low-voltage cables in the same tray under strict conditions, segregation or shielding is strongly recommended to ensure safety, compliance, ...

### Conductors of Different Circuits in Same Cable, Enclosure, or

Conductors from different circuits can share the same cable, enclosure, or raceway under specific conditions. Class 1 circuits and non-power-limited fire alarm circuits may coexist regardless of their ...

### NFPA 70 and Low Voltage Systems | National Training Center

Low-voltage cables are categorized based on the circuit to which they are intended to be connected. Fire alarm systems require FPL-type cables, while other systems may use CL2-type or CL3-type ...

### Can You Run Fire Alarm Cables With Data Cables?

Power-Limited Fire Alarm (PLFA) circuits, which make up the majority of modern fire alarm systems, are generally permitted by the NEC to share a cable tray or raceway with ...

### National Electrical Code Tips: Article 760, Fire Alarm Systems, Part 6

You can install two or more PLFA circuits, communication circuits, or Class 3 circuits in the same enclosure, cable, cable tray, raceway, or cable routing assembly [760.139 (A)].

### § 2586.3. Separation from Conductors of Other Circuits.

Power supply and fire alarm circuit conductors are permitted in the same enclosure, cable, or raceway only if connected to the same equipment.

#### Fire Alarm Wiring Based on NEC Article 760

Power-limited fire alarm circuits and audio system circuits using Class 2 and Class 3 wiring methods shall not be installed in the same raceway, enclosure, cable routing assembly or cable tray.

## Contact Us

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