

Byrne 8 Trac and 4-Trac Power Distribution System Communications Cabling Spacing Requirements

The question of the ability of communications cables to lay in the panel base with the modular electrical system comes up often with the increased use of Category 5e and Category 6 communication systems. The good news is that Cat. 5e and Cat 6 cables can be safely placed in the base of the panels with the modular electrical system.

There is a standard called the TIA/EIA-569-A, Commercial Building Standard for Telecommunications Pathways and Spaces. This Standard was developed by the Telecommunications Industry Association and it addresses requirements for installing telecom cabling in buildings. Their most recent revision, dated Feb. 20, 1998, clarifies the requirements for installing telecom cables in furniture. Sec. 6.3.3.6.1 states, "Furniture pathways often run parallel to power raceways; floor and ceiling interfaces are often divided into power and telecommunications. In such cases, separation shall be provided to meet the requirements of clause 10.3." Sec. 10.3.1 states, "Co-installation of telecommunications cable and power cable is governed by applicable electrical code for safety. For minimum separations requirements of telecommunications cable from typical branch circuits (120/240V, 20A), Article 800-52 of ANSI/NFPA 70 shall be applied..."

NFPA 70 is the National Electrical Code and Sec. 800.133(A)(2) Other Applications (previously was Sec. 800-52(a) (1) Open Conductors) states, "Communications wires and cables shall be separated at least 2 inches from conductors of any electric light, power ...circuits.

Exception No. 1: Where either (1) all of the conductors of the electric light, power, Class 1, or non-power-limited fire alarm are in a **raceway** or in metal-sheathed, metal-clad, nonmetallic-sheathed, Type AC, or Type UF Cables..."

The definition of raceway in the National Electrical Code, Section 100 is: "An enclosed channel of metal or nonmetallic materials designed expressly for holding wires, cables, or busbars, with additional functions as permitted in this Code. Raceways include, but are not limited to, rigid metal conduit, rigid nonmetallic conduit, intermediate metal conduit, liquidtight flexible conduit, flexible metallic tubing, flexible metal conduit, electrical nonmetallic tubing, electrical metallic tubing, underfloor raceways, cellular concrete floor raceways, cellular metal floor raceways, surface raceways, wireways, and busways."

Because the electrical system is UL Listed, the electrical components themselves are raceways as defined by the National Electrical Code, not the panel base. Therefore, there is no separation requirement for the communications cables per Sec. 800.133 of the National Electrical Code which the TIA/EIA-569-A states defines the requirement for separation in furniture pathways. In other words, telecommunications cables can be placed in the base of your panel systems along with the UL Listed Modular Wiring System.

This is a long and detailed explanation, but it provides the necessary standard references to confirm that communication cables are perfectly safe in the base of your panel system without a metal septum that separates power and data distribution systems.

Regards,



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