Δ ***TABLE 392.10(A)*** *Wiring Methods*

Wiring Method	Article
Armored cable: Type AC	320
CATV cables	800 and 820
Class 2 and Class 3 cables	722 and 725
Communications cables	800 and 805
Communications raceways	800
Electrical metallic tubing: EMT	358
Electrical nonmetallic tubing: ENT	362
Fire alarm cables	722 and 760
Flexible metal conduit: FMC	348
Flexible metallic tubing: FMT	360
Instrumentation tray cable: Type ITC	341
Intermediate metal conduit: IMC	342
Liquidtight flexible metal conduit: LFMC	350
Liquidtight flexible nonmetallic conduit: LFNC	356
Metal-clad cable: Type MC	330
Mineral-insulated, metal-sheathed cable: Type MI	332
Network-powered broadband communications cables	800 and 830
Nonmetallic-sheathed cable: Types NM, NMC, and NMS	334
Non–power-limited fire alarm cable	722 and 760
Optical fiber cables	722 and 770
Other factory-assembled, multiconductor control, signal, or power cables that are specifically approved for installation in cable trays	
Power and control tray cable: Type TC	336
Power-limited fire alarm cable	722 and 760
Power-limited tray cable	725
Rigid metal conduit: RMC	344
Rigid polyvinyl chloride conduit: PVC	352
Reinforced thermosetting resin conduit: RTRC	355
Service-entrance cable: Types SE and USE	338
Underground feeder and branch-circuit cable: Type UF	340

(B) In Industrial Establishments. The wiring methods in Table 392.10(A) shall be permitted to be used in any industrial establishment under the conditions described in their respective articles. In industrial establishments only, where conditions of maintenance and supervision ensure that only qualified persons service the installed cable tray system, any of the cables in 392.10(B)(1) and (B)(2) shall be permitted to be installed in ladder, ventilated trough, solid bottom, or ventilated channel cable trays.

Δ **(1) Single-Conductor Cables and Single Insulated Conductors.** Single-conductor cables and single insulated conductors shall be permitted to be installed in accordance with 392.10(B)(1)(a) through (B)(1)(c).

(a) Single-conductor cables and single insulated conductors shall be 1/0 AWG or larger and shall be of a type listed and marked on the surface for use in cable trays. Where 1/0 AWG through 4/0 AWG single-conductor cables and single insulated conductors are installed in ladder cable tray, the maximum allowable rung spacing for the ladder cable tray shall be 225 mm (9 in.).

(b) Welding cables shall comply with Article 630, Part IV.

See also

630.42, which requires that trays used to support welding cables be dedicated for welding cable installation

(c) Single conductors used as equipment grounding conductors shall be insulated, covered, or bare, and they shall be 4 AWG or larger.

(2) Single- and Multiconductor Medium Voltage Cables. Single- and multiconductor medium voltage cables shall be Type MV cable. Single conductors shall be installed in accordance with 392.10(B)(1).

(C) Hazardous (Classified) Locations. Cable trays in hazardous (classified) locations shall contain only the cable types and raceways permitted by other articles in this *Code*.

(D) Nonmetallic Cable Tray. In addition to the uses permitted elsewhere in 392.10, nonmetallic cable tray shall be permitted in corrosive areas and in areas requiring voltage isolation.

Fiberglass cable trays are often used to support cables in corrosive environments or in electrolytic cell rooms where voltage isolation is required.

(E) Airfield Lighting Cable Tray. In airports where maintenance and supervision conditions ensure that only qualified persons can access, install, or service the cable, airfield lighting cable used in series circuits that are rated up to 5000 volts and are powered by constant current regulators shall be permitted to be installed in cable trays.

Informational Note: Federal Aviation Administration (FAA) Advisory Circulars (ACs) provide additional practices and methods for airport lighting.

See also FAA AC 150/5345-7F, *Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits*; FAA AC 150/5345-42J, *Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories*; and FAA AC 150/5345-26E, *FAA Specification for L-823 Plug and Receptacle, Cable Connectors*, which are available for free download from www.faa.gov.

392.12 Uses Not Permitted. Cable tray systems shall not be used in hoistways or where subject to severe physical damage.

392.18 Cable Tray Installation.

(A) Complete System. Cable trays shall be installed as a complete system. Field bends or modifications shall be so made that the electrical continuity of the cable tray system and support for the cables is maintained. Cable tray systems shall be permitted to have mechanically discontinuous segments between cable tray runs or between cable tray runs and equipment.

Runs of cable tray are not required to be mechanically continuous from the equipment source to the equipment termination.