ARTICLE
# 324 Flat Conductor Cable: Type FCC

## Part I. General

**324.1 Scope.** This article covers a field-installed wiring system for branch circuits incorporating Type FCC cable and associated accessories as defined by the article. The wiring system is designed for installation under carpet squares.

A Type FCC system is designed to provide a completely accessible, flexible power system. As shown in Exhibit 324.1, it also provides an easy method for reworking obsolete wiring systems currently in use in many office facilities. The carpet squares are not permitted to be larger than 1.0 meter by 1.0 meter, to comply with 324.41. This limitation provides ready access to the cable by lifting a carpet square. It also reduces the likelihood of an individual cutting through the carpet above the cable with a knife or razor blade and possibly penetrating the top shield of the cable.

**324.6 Listing Requirements.** Type FCC cable and associated fittings shall be listed.

## Part II. Installation

**324.10 Uses Permitted.**

**(A) Branch Circuits.** Use of FCC systems shall be permitted both for general-purpose and appliance branch circuits and for individual branch circuits.

**(B) Branch-Circuit Ratings.**

**(1) Voltage.** Voltage between ungrounded conductors shall not exceed 300 volts. Voltage between ungrounded conductors and the grounded conductor shall not exceed 150 volts.

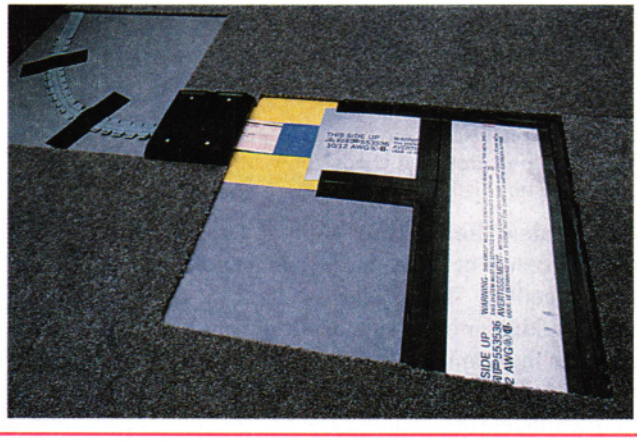

EXHIBIT 324.1 Type FCC cable installed beneath carpet squares. *(Courtesy of Tyco Electronics)*

**(2) Current.** General-purpose and appliance branch circuits shall have ratings not exceeding 20 amperes. Individual branch circuits shall have ratings not exceeding 30 amperes.

**(C) Floors.** Use of FCC systems shall be permitted on hard, sound, smooth, continuous floor surfaces made of concrete, ceramic, or composition flooring, wood, and similar materials.

**(D) Walls.** Use of FCC systems shall be permitted on wall surfaces in surface metal raceways.

**(E) Damp Locations.** Use of FCC systems in damp locations shall be permitted.

**(F) Heated Floors.** Materials used for floors heated in excess of 30°C (86°F) shall be identified as suitable for use at these temperatures.

**(G) System Height.** Any portion of an FCC system with a height above floor level exceeding 2.3 mm (0.090 in.) shall be tapered or feathered at the edges to floor level.

**324.12 Uses Not Permitted.** FCC systems shall not be used in the following locations:

(1) Outdoors or in wet locations
(2) Where subject to corrosive vapors
(3) In any hazardous (classified) location
(4) In residential buildings
(5) In school and hospital buildings, other than administrative office areas

Type FCC wiring systems are not permitted throughout school and hospital buildings except in parts of those buildings that are administrative office spaces.

**324.18 Crossings.** Crossings of more than two Type FCC cable runs shall not be permitted at any one point. Crossings of a Type FCC cable over or under a flat communications or signal cable shall be permitted. In each case, a grounded layer of metal shielding shall separate the two cables, and crossings of more than two flat cables shall not be permitted at any one point.

**324.30 Securing and Supporting.** All FCC system components shall be firmly anchored to the floor or wall using an adhesive or mechanical anchoring system identified for this use. Floors shall be prepared to ensure adherence of the FCC system to the floor until the carpet squares are placed.

**324.40 Boxes and Fittings.**

**(A) Cable Connections and Insulating Ends.** All Type FCC cable connections shall use connectors identified for their use, installed such that electrical continuity, insulation, and sealing against dampness and liquid spillage are provided. All bare cable ends shall be insulated and sealed against dampness and liquid spillage using listed insulating ends.