

Subject 1424

September 29, 2017

SUMMARY OF TOPICS

The following changes in requirements to the Standard for Cables for Power-Limited Fire-Alarm Circuits, UL 1424, are being proposed:

Withdrawal of Power Limited Fire Alarm Circuit Cable

STP BALLOTS AND ALL COMMENTS DUE: November 13, 2017

For your convenience in review, proposed additions to existing requirements are shown underlined and proposed deletions are shown ~~lined-out~~.

1. Withdrawal of Power Limited Fire Alarm Circuit Cable

RATIONALE

Proposal submitted by: Anthony Tassone, UL, LLC.

The revision to the 2014 Edition of the NEC deleted the installation of these Power Limited Fire Alarm Circuit Cables. Since there are no intended installation described, this proposal removes the reference to this cable type in UL1424.

The Cables covered in the Standard are for installation in accordance with NFPA 70 National Electrical Code.

In addition, the Limited Combustible references are also being proposed to be deleted because there is no permitted installations for these cables.

The terms HF and LSHF are being added to the Standard.

PROPOSAL

1.1 These requirements cover 60 – 250°C (140 – 482°F) single- and multiple-conductor cables for use as fixed wiring within buildings (some are also marked for direct burial) principally for power-limited fire-alarm circuits as described in Article 760 and other applicable parts of the National Electrical Code (NEC). Cables covered by these requirements are:

- a) Type FPLP (plenum cable),
- b) Type FPLR (riser cable), and
- c) Type FPL (cable for other than plenum and riser uses in general and in trays), ~~and "Power-limited fire-alarm circuit cable" (cable for limited use).~~

**UL COPYRIGHTED MATERIAL –
NOT AUTHORIZED FOR FURTHER REPRODUCTION OR
DISTRIBUTION WITHOUT PERMISSION FROM UL**



Documents
Document Sharing Hub

1.6 Smoke and fire considerations are as follows for the cables covered in these requirements:

a) TYPE FPLP CABLE – Cable that is intended for installation in accordance with section 760-154(A) of the National Electrical Code (ANSI/NFPA 70) in a duct, plenum, or other space used to transport environmental air without the cable being enclosed in a raceway in that space is to be tested for smoke and flame characteristics in accordance with the National Fire Protection Association Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces, ANSI/NFPA 262. A cable that complies exhibits a maximum flame-propagation distance that is not greater than 5 ft, 0 inch or 152 cm, a peak optical density of smoke produced of 0.50 or less (32 percent light transmission), and an average optical density of smoke produced of 0.15 or less.

b) TYPE FPLR CABLE – Cable that is intended for use in vertical runs in a shaft, or for installations in which the cable penetrates more than one floor, as specified in section 760-154(B) of the National Electrical Code ANSI/NFPA 70. This cable is to be tested for flame-propagation characteristics in accordance with the Standard Test for Flame Propagation Height of Electrical and Optical-Fiber Cables Installed Vertically in Shafts, UL 1666. A cable that complies has a flame-propagation height less than 12 ft, 0 inch or 366 cm and temperatures are 850.0°F (454.4°C) or less at a height of 12 ft, 0 inch or 366 cm.

c) TYPE FPL CABLE – Type FPL cable complies with a 70,000 Btu/h (20.5 kW) vertical-tray flame test. The cable manufacturer chooses one of the following tests:

1) THE UL TEST REFERENCED IN 23.2.1 – This paragraph applies the test method described as the UL Flame Exposure (smoke measurements are not applicable) in the Standard Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables, UL 1685, to cable that is surface marked or designated by a marker tape as "FPL". A cable of a given construction shall not exhibit char that reaches the upper end of any specimen (a maximum of 8 ft, 0 inch or 244 cm).

2) THE FT4/IEEE 1202 TEST REFERENCED IN 23.3.1 – This paragraph applies the test method described as the FT4/IEEE 1202 Type of Flame Exposure (smoke measurements are not applicable) in the Standard Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables, UL 1685. This test differs from the UL tests in loading (more cables are used, with small cables bundled, and the spacing between cables or bundles is limited), burner angle, and failure criterion. For compliance, this test damages less than 150 cm (59 inches) of cable. A cable that complies either is not marked or it bears the designation "FT4/IEEE 1202" or "FT4" legible on or through the outer surface or on a marker tape [see marking in 44.1(i)].

d) ~~POWER-LIMITED FIRE-ALARM CIRCUIT CABLE – Cable that is surface marked or designated by a marker tape as "power-limited fire-alarm circuit cable" or as "power ltd fire alarm cable" complies with the VW-1 vertical-specimen flame test. The cable is not marked "VW-1".~~

1.7 ~~As noted in 1.8, "power-limited fire-alarm circuit cable" is used with protection such as raceway. All other cables covered in these requirements are not required by the NEC to be used in raceway and are capable of use without the physical protection of raceway but may be pulled into conduit or installed in other raceway.~~