

Subject 486E

October 9, 2018

SUMMARY OF TOPICS

The following changes in requirements to the Standard for Equipment Wiring Terminals for Use with Aluminum and/or Copper Conductors, UL 486E, are being proposed for preliminary review and comment only:

1. For Preliminary Review Only: Conductor Insulation Type

COMMENTS DUE: October 23, 2018

This proposal is for review and comment only (no ballot at this time). Please note that comments on a preliminary review document will not receive a response from the proposal author through CSDS. Instead, the proposal author will be asked to review the comments and adjust the proposals and/or supporting rationale as the author determines to be appropriate. The preliminary review process is an informal mechanism that provides authors with the opportunity to refine their proposals before they advance to the next stage in UL's standards development process.

In some cases, the author of the proposals may choose to discontinue them. In this case, the author need not do anything after preliminary review has ended. Normally, the next step in the process is the more formal STP ballot and stakeholder review process. Only comments posted during the STP ballot and stakeholder review process will be provided with a response in CSDS.

UL's goal is to have no interest category comprise more than one-third of the STP membership balance. To improve the current balance for STP 486, UL is looking for participants in the following interest categories: AHJ, Commercial/Industrial User, Consumer, General Interest, Supply Chain, Testing & Standards. Definitions for these interest categories are available on the Standards STP Internet site:

<http://ulstandards.ul.com/develop-standards/participation/interest-categories/>

If you are interested in applying for STP 486 membership or are aware of potential candidates for this STP, please contact the STP Project Manager at Mitchell.Gold@ul.com.

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

1. For Preliminary Review Only: Conductor Insulation Type

RATIONALE

Proposal submitted by: Robert Osborne, UL LLC

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Documents

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Based on the wide variety of types of conductors permitted to be used for test conductors (including the use of uninsulated conductors), the need to specify a specific type of insulation should no longer be required when testing a connector that does not rely on the conductor insulation for the connection (i.e., not an insulation displacement type connector).

PROPOSAL

9.1.5.2 With reference to 9.1.5.1, a connector ~~may be~~ is not prohibited from being tested with uninsulated conductors or conductors with any type of insulation when the connector assembly does not rely on the conductor insulation, i.e. insulation piercing connector. When using uninsulated conductors, Table 11 shall not be applied.

Table 11 – Conductor insulation^a

(Clauses 9.1.5.1 and 9.1.5.2)

		AWG or kcmil (mm ²)	Type of insulation ^b
Aluminum	Solid	12 (3.31) and larger	THHN THW USE XHHW PE or XLPE thermoset insulation
	Stranded	All sizes	USE PE or XLPE thermoset insulation
Copper	Solid and stranded	30 – 24 (0.05 – 0.20)	Thermoplastic at least 0.254 (0.010 in) thick
		22 – 16 (0.32 – 1.31)	Thermoplastic at least 0.762 mm (0.030 in) thick
		14 (2.08) and larger	THHN THW USE XHHW

^a Table 11 is not applicable when testing with uninsulated conductors.

^b Type of insulation is not specified when testing with a connector assembly that does not rely on the conductor insulation.

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