



UL 1876

STANDARD FOR SAFETY

Isolating Signal and Feedback Transformers for
Use in Electronic Equipment

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UL Standard for Safety for Isolating Signal and Feedback Transformers for Use in Electronic Equipment,
UL 1876

Fourth Edition, Dated June 25, 2015

Summary of Topics

This revision of UL 1876 is being issued to reaffirm approval as an American National Standard. No changes in requirements are involved.

The revisions are substantially in accordance with Proposal(s) on this subject dated July 17, 2015.

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UL 1876

**Standard for Isolating Signal and Feedback Transformers for Use in
Electronic Equipment**

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Fourth Edition

June 25, 2015

This ANSI/UL Standard for Safety consists of the Fourth Edition including revisions through September 16, 2015.

The most recent designation of ANSI/UL 1876 as an American National Standard (ANSI) occurred on September 14, 2015. ANSI approval for a standard does not include the Cover Page, Transmittal Pages and Title Page. Any other portions of this ANSI/UL standard that were not processed in accordance with ANSI/UL requirements are noted at the beginning of the impacted sections.

Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at <http://csds.ul.com>.

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INTRODUCTION

1 Scope

1.1 These requirements apply to isolating signal and feedback transformers intended to be used in electronic equipment where only audio, video, and other signal waveforms are transformed. These transformers are intended to provide isolation from circuits that are either conductively connected to a branch circuit supply or connected to secondary circuits involving voltages that are considered to present a risk of electric shock by the nature of their use in an end-product.

1.2 These requirements do not apply to transformers and motor-transformers that are connected to a supply circuit to power a secondary circuit.

2 Components

2.1 Except as indicated in 2.2, a component of a product covered by this standard shall comply with the requirements for that component. See Appendix A for a list of standards covering components used in the products covered by this standard.

2.2 A component is not required to comply with a specific requirement that:

- a) Involves a feature or characteristic not required in the application of the component in the product covered by this standard, or
- b) Is superseded by a requirement in this standard.

2.3 A component shall be used in accordance with its rating established for the intended conditions of use.

2.4 Specific components are incomplete in construction features or restricted in performance capabilities. Such components are intended for use only under limited conditions, such as certain temperatures not exceeding specified limits, and shall be used only under those specific conditions.

3 Units of Measurement

3.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

3.2 Unless otherwise indicated, all voltage and current values mentioned in this standard are root-mean-square (rms).

4 Undated References

4.1 Any undated reference to a code or standard appearing in the requirements of this standard shall be interpreted as referring to the latest edition of that code or standard.

5 Glossary

5.1 For the purpose of this standard the following definitions apply.

5.2 **ENCAPSULATION COMPOUND** – A material, generally of the polymeric type, that is at least 1/32 inch (0.8 mm) thick and that encapsulates the transformer by being molded around the coil windings where the transformer is not provided with any other housing material.

5.3 **HAZARDOUS CIRCUIT**– A circuit in an appliance that either is conductively connected to a branch circuit or involves a risk of electric shock.

5.4 **HAZARDOUS CIRCUIT WINDING** – A winding of an isolating signal transformer that is intended to be connected to a hazardous circuit.

5.5 **HOUSING** – A partial or complete enclosure, generally of polymeric material or metal, that is around the outside of all or part of the transformer (such as end bells) but is not in contact with current-carrying parts.

5.6 **IMPREGNATION COMPOUND** – A material, generally of the polymeric type and commonly in the form of varnish, that is absorbed by insulating materials such as electrical grade paper and that provides a coating of less than 1/32 inch (0.8 mm) thick over all transformer parts.

5.7 **ISOLATED CIRCUIT** – A circuit that is not conductively connected to the supply circuit.

5.8 **ISOLATED WINDING** – A winding of an isolating signal transformer that is intended to be connected to a nonhazardous circuit.

5.9 **POTTING COMPOUND**– A material, generally of the polymeric type, that seals the transformer by filling the space between the coil windings and the housing. Potting material differs from impregnation material in that impregnation material is not intended to completely fill the space between the coil windings and the housing.

5.10 **TRANSFORMER FAMILY** – A series of transformer models which have identical insulating materials provided between each winding. The number of windings may vary for different models in a family, but the models must either all be suitable for securement to a live chassis or not suitable for securement to a live chassis.

5.11 **WINDING** – A coil of wire including the start, finish, and crossover leads up to the point where insulated leads or terminals are connected.