



UL 5

STANDARD FOR SAFETY

Surface Metal Raceways and Fittings

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UL Standard for Safety for Surface Metal Raceways and Fittings, UL 5

Fifteenth Edition, Dated May 24, 2016

Summary of Topics

This new edition of ANSI/UL 5 includes revisions to the Installation Instructions.

The requirements are substantially in accordance with Proposal(s) on this subject dated April 1, 2016.

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Standard for Surface Metal Raceways and Fittings

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Fifteenth Edition

May 24, 2016

This ANSI/UL Standard for Safety consists of the Fifteenth Edition.

The most recent designation of ANSI/UL 5 as an American National Standard (ANSI) occurred on May 24, 2016. ANSI approval for a standard does not include the Cover Page, Transmittal Pages and Title Page.

The Department of Defense (DoD) has adopted UL 5 on July 9, 1984. The publication of revised pages or a new edition of this Standard will not invalidate the DoD adoption.

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 cover surface metal raceways and fittings for use in accordance with the National Electrical Code, NFPA 70.

1.2 Raceways of the following thicknesses are intended to enclose circuits operating at potentials not exceeding 600 volts between conductors:

- a) Raceways that are entirely of metal at least 0.040 inch (1.02 mm) thick nominal and
- b) Raceways consisting of nonmetallic covers on metal bases of the thickness indicated in (a).

Thinner all-metal raceways or raceways of thinner metal bases with nonmetallic covers are intended to enclose circuits operating at potentials lower than 300 volts between conductors.

1.3 These requirements do not cover cable trays, wireways or nonmetallic raceways.

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.

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3 Units of Measurement

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

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 Installation

5.1 The method of installation, as outlined in the instructions accompanying the raceway and fittings, shall be practical and feasible under the conditions met in practice.

5.2 The raceway, fittings and any wiring devices or accessories are to be installed as intended and examined with regard to the feasibility of installation, as well as for compliance with the construction, performance, and marking requirements in this standard. Attention is to be given to items that require particular care on the part of the raceway installer.

6 Nonmetallic Parts

6.1 A nonmetallic cover, fitting or other part of a metal raceway shall comply with the applicable requirements in the Standard for Nonmetallic Surface Raceways and Fittings, UL 5A.

7 Glossary

7.1 For the purposes of this standard, the following definitions apply:

7.2 ACCESSORY – A part that is added to a raceway system for a special purpose (for example, guards, hangers, or retainers).

7.3 BOX, CEILING FAN – A box that has been evaluated and determined to be acceptable as the support of a ceiling-suspended (paddle) fan.

7.4 BOX, FIXTURE – A box that has been evaluated and determined to be acceptable as the support of a lighting fixture, lampholder, or other equipment intended for similar installation.

7.5 FITTING – A part used to connect, change direction, or terminate a raceway (for example, a transition coupler, an end cap, a corner, a tee, an adapter, or a box).

7.6 NONMETALLIC – A polymeric part.

7.7 RACEWAY, SURFACE METAL – A raceway for surface or pendant mounting with a metal base and a metal or nonmetallic cover.

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7.8 RACEWAY SYSTEM – A system consisting of a surface metal raceway, associated fittings, and possibly wiring devices and accessories.

7.9 WIRING DEVICE – A part of an electrical system that is intended to carry, provide a means of connection to, or control of, electrical energy within a raceway system (for example, switches or receptacles).

CONSTRUCTION

8 General

8.1 A raceway system shall be constructed to facilitate compliance with the requirements for the installation of insulated wires and cables as given in the National Electrical Code, NFPA 70.

8.2 Each element of a raceway system shall comply with the requirements for the construction, performance, and use of that element.

8.3 A raceway shall consist of one or more pieces formed and constructed to make the raceway readily distinguishable from electrical conduit, electrical metallic tubing, electrical nonmetallic tubing, and other raceway systems.

8.4 A raceway system shall provide a complete enclosure that protects the wires installed therein against damage. The complete system, when installed as intended, shall comply with the following:

- a) There shall not be any openings that exceed 1/16 inch (1.59 mm) in width on surfaces that are accessible following installation of the system.
- b) A knockout or break-away tab shall completely cover the opening in which it is located, and the clearance between the knockout or break-away tab and the opening shall not be more than 0.030 inch (0.76 mm).
- c) Mounting holes having a maximum diameter of 9/32 inch (7.1 mm), or slotted openings for mounting of one dimension not larger than 5/8 inch (15.9 mm) and the other dimension not larger than 1/8 inch (3.2 mm), provided on the raceway base or fitting base surface that is installed flush with the mounting surface, are not prohibited.
- d) A partition in a raceway system shall not have any openings through which wires are capable of being passed, intentionally or otherwise, from one compartment to another.

Exception No. 1: A gap of 1/8 inch (3.2 mm) shall be used only when means is provided to completely contain conductors in their individual compartments, such as wire retaining clips.

Exception No. 2: On lengths of surface metal raceway provided with openings that are intended for wiring devices, fittings or accessories, those openings are not required to be blocked by knockouts or break-away tabs where the installation instructions provided with that surface metal raceway comply with 24.7.

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