UL 917

STANDARD FOR SAFETY

Clock-Operated Switches

UL Standard for Safety for Clock-Operated Switches, UL 917

Fifth Edition, Dated November 10, 2006

Summary of Topics

These revisions to UL 917 dated July 19, 2016 are being issued to include Adding Requirements for the Test Method and Simulated Electrical Loads for Electronic Ballast, CFL and LED Driver Ratings From NEMA 410-2011 and other miscellaneous editorial updates.

Text that has been changed in any manner or impacted by UL's electronic publishing system is marked with a vertical line in the margin.

The new/revised requirements are substantially in accordance with Proposal(s) on this subject dated June 3, 2015, December 18, 2016 and April 15, 2016.

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Standard for Clock-Operated Switches

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Second Edition – April, 1977
Third Edition – May, 1985
Fourth Edition – July, 1994

Fifth Edition

November 10, 2006

This UL Standard for Safety consists of the Fifth Edition including revisions through July 19, 2016.

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 clock-operated switches rated 600 V or less, to be used in ordinary locations designed to close and open circuits to a load at predetermined intervals, and intended to be employed in accordance with the National Electrical Code, ANSI/NFPA 70.

1.2 These requirements cover only clock-operated switches in which the switching contacts are actuated by a clock-work, by a gear-train, by hand, by electrically-wound spring motors, by electric clock-type motors, or by equivalent arrangements. In addition to closing and opening the switching contacts, the devices may also indicate the time of day or time interval.

1.3 These requirements do not cover devices incorporating electronic timing circuits or switching circuits without separable contacts.

1.4 A clock-operated switch, which is incomplete in construction features or restricted in performance capabilities, is acceptable for use as a factory-installed component provided that the restrictions established for the component are eliminated when the component is installed.

1.5 Specific provisions are included in these requirements for TV rated clock-operated switches.

1.6 A product that contains features, characteristics, components, materials or systems new or different from those covered by the requirements in this Standard, and that involves a risk of fire, electric shock, or injury to persons shall be evaluated using the appropriate additional component and end-product requirements as determined necessary to maintain the acceptable level of safety as originally anticipated by the intent of this Standard. A product whose features, characteristics, components, materials, or systems conflict with specific requirements or provisions of this Standard cannot be judged to comply with this Standard. Where considered appropriate, revision of requirements shall be proposed and adopted in conformance with the methods employed for development, revision, and implementation of this Standard.

2 Glossary

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

2.2 ACCESSIBLE PART – A part so located that it can be contacted by a person, either directly or by means of a probe or tool.

2.3 LEAKAGE CURRENT – Leakage current refers to all currents, including capacitively coupled currents, that may be conveyed between exposed conductive surfaces of an appliance and ground or other exposed conductive surfaces of a device.

2.4 LIVE PARTS – Denotes metal or other conductive parts that have a potential difference with respect to ground or any other conductive part in intended use.

2.5 LOW-VOLTAGE CIRCUIT – A circuit classified as low voltage is one involving a potential of not more than 42.4 V peak (30 V rms) and supplied by a primary battery, by a standard Class 2 transformer, or by a combination of a transformer and a fixed impedance, which, as a unit, complies with all the performance requirements for a Class 2 transformer.

2.6 OPERATING CONTROL – A control, usually a knob, push button, or lever, provided to enable the user to cause the device to perform its intended function, without the use of tools, when the device is in the operating condition.

2.7 PERMANENTLY CONNECTED – Denotes connection to a supply circuit by way of fixed electrical conductors.

2.8 PILOT DUTY – An application involving the control of an electromagnet.

2.9 PLUG-IN DEVICE – A device provided with integral blades for direct insertion into a receptacle.

2.10 RAINPROOF – So constructed, protected, or treated as to prevent rain from interfering with successful operation of the device under specified test conditions.

2.11 SWITCH – Usage of the word switch without further qualification signifies a clock-operated switch in subsequent paragraphs of this standard.

3 Components

3.1 Except as indicated in 3.2, a component of a product covered by this standard shall comply with the requirements for that component.

3.2 A component need not comply with a specific requirement that:

a) Involves a feature or characteristic not needed in the application of the component in the product covered by this standard, or

b) Is superseded by a requirement in this standard.

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

3.4 Specific components are recognized as being 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 restricted to use only under those specific conditions for which they have been recognized.

4 Units of Measurement

4.1 If a value for measurement is followed by a value in other units in parentheses, the second value may be only approximate. The first stated value is the requirement.

5 References

5.1 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.

CONSTRUCTION

6 Frame and Enclosure

6.1 General

6.1.1 The frame and enclosure shall be strong and rigid to resist the abuses likely to be encountered during service. The degree of structural integrity inherent in the unit shall preclude total or partial collapse with the attendant reduction of spacings, loosening or displacement of parts, and other serious defects that alone or in combination constitute an increase in the risk of fire, electric shock, or injury to persons.

6.1.2 Electrical parts of a clock-operated switch shall be located or enclosed to reduce the risk of unintentional contact with an uninsulated live part. For the purpose of these requirements, film-coated wire is considered to be an uninsulated live part.

Exception: An enclosure is not required for a device intended for assembly as part of another device.

6.1.3 An opening in an enclosure or a clock-operated switch is acceptable if an accessibility probe as illustrated in Figure 6.1, when inserted into the opening, cannot be made to touch any part that involves the risk of electric shock to the end-user or service personnel. However, in no case shall the opening be large enough to permit the entrance of a 1 inch (25.4 mm) diameter rod.

Figure 6.1
Accessibility probe