UL 20

STANDARD FOR SAFETY

General-Use Snap Switches

UL Standard for Safety for General-Use Snap Switches, UL 20

Fourteenth Edition, Dated July 20, 2018

Summary of Topics

This revision of ANSI/UL 20 dated January 26, 2021 includes the following changes in requirements:

– Manufacturer's Terminal Tightening Torque; 7.1.13

– Correct Typos / Omissions for 277v Motor Ratings for 15 and 20 amp Switches; Table 20

– Marking Location; 7.3.3

– Voltage Markings on AC-ONLY Switches Incorporating Locator or Pilot Indicators; Table 19, Table 20 and 7.2.5

– Ground Screws; 4.12.2 and 7.1.14

– Wiring Diagram for Switches; 2.10, 2.22 and Figure 9

– Editorial corrections; 3.1.1 and 5.18.1

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 and revised requirements are substantially in accordance with Proposal(s) on this subject dated April 17, 2020.

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CSA Group
CAN/CSA-C22.2 No. 111-18
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Underwriters Laboratories Inc.
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Fourteenth Edition

General-Use Snap Switches

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ANSI/UL 20-2021

Commitment for Amendments

This standard is issued jointly by the Association of Standardization and Certification (ANCE), the Canadian Standards Association (operating as “CSA Group”), and Underwriters Laboratories Inc. (UL). Comments or proposals for revisions on any part of the standard may be submitted to ANCE, CSA Group, or UL at anytime. Revisions to this standard will be made only after processing according to the standards development procedures of ANCE, CSA Group, and UL. CSA Group and UL will issue revisions to this standard by means of a new edition or revised or additional pages bearing their date of issue. ANCE will incorporate the same revisions into a new edition of the standard bearing the same date of issue as the CSA Group and UL pages.

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This Standard is subject to review within five years from the date of publication, and suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change, please send the following information to inquiries@csagroup. org and include "Proposal for change" in the subject line: Standard designation (number); relevant clause, table, and/or figure number; wording of the proposed change; and rationale for the change.

This ANSI/UL Standard for Safety consists of the Fourteenth Edition including revisions through January 26, 2021. The most recent designation of ANSI/UL 20 as an American National Standard (ANSI) occurred on January 26, 2021. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page (front and back), or the Preface.

The Department of Defense (DoD) has adopted UL 20 on December 4, 1981. 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 https://csds.ul.com.

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Preface

This is the harmonized ANCE, CSA Group, and UL standard for General-Use Snap Switches. It is the first edition of NMX-J-005-ANCE, fifth edition of CAN/CSA-C22.2 No. 111, and the fourteenth edition of UL 20. This edition of CAN/CSA-C22.2 No. 111 supersedes the previous edition(s) published on May 10, 2010. This edition of UL 20 supersedes the previous edition(s) published on May 10, 2010. This harmonized standard has been jointly revised on January 26, 2021. For this purpose, CSA Group and UL are issuing revision pages dated January 26, 2021, and ANCE is issuing a new edition dated January 26, 2021.

This harmonized standard was prepared by the Association of Standardization and Certification, (ANCE), CSA Group and Underwriters Laboratories Inc. (UL). The efforts and support of the NEMA (National Electrical Manufacturers Association), EFC (Electro-Federation of Canada), and the CANENA Technical Harmonization Committee for Snap Switches, THSC 23-B, are gratefully acknowledged.

This standard is considered suitable for use for conformity assessment within the stated scope of the standard.

The present Mexican standard was developed by the CT 23 Electrical Accessories (Wiring Devices) from the Comite de Normalizacion de la Asociacion de Normalizacion y Certificacion, A.C., CONANCE, with the collaboration of the Wiring Devices manufacturers and users.

This standard was reviewed by the CSA Integrated Committee on Wiring Devices for Household and General Use, under the jurisdiction of the CSA Technical Committee on Wiring Products and the CSA Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the CSA Technical Committee. This standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

Application of Standard

Where reference is made to a specific number of samples to be tested, the specified number is to be considered a minimum quantity.

Note: Although the intended primary application of this standard is stated in its scope, it is important to note that it remains the responsibility of the users of the standard to judge its suitability for their particular purpose.

Level of Harmonization

This standard is published as an equivalent standard for ANCE, CSA Group and UL.

An equivalent standard is a standard that is substantially the same in technical content, except as follows: Technical national differences are allowed for codes and governmental regulations as well as those recognized as being in accordance with NAFTA Article 905, for example, because of fundamental climatic, geographical, technological, or infrastructural factors, scientific justification, or the level of protection that the country considers appropriate. Presentation is word for word except for editorial changes.

Interpretations

The interpretation by the standards development organization of an identical or equivalent standard is based on the literal text to determine compliance with the standard in accordance with the procedural rules of the standards development organization. If more than one interpretation of the literal text has been identified, a revision is to be proposed as soon as possible to each of the standards development organizations to more accurately reflect the intent.

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1 Scope

1.1 The requirements of this Standard apply to manually operated, general-use snap switches for connection to copper (Cu) or copper-clad conductors used in accordance with the National Electrical Code (NEC), ANSI/NFPA 70, or the Canadian Electrical Code (CE Code), Part I, and intended to be permanently connected in accordance with the NEC and the CE Code, Part I. In Canada, requirements for switches for connection to aluminum (Al) conductors used in accordance with the CE Code, Part I, and intended for connection to wiring systems recognized by the CE Code, Part I, are covered in Annex B.

1.2 This Standard applies to ac/dc rated switches for which the load ratings do not exceed 60 A at 250 V or less, 30 A at 251 V – 600 V, and 2 hp at 125 V – 600 V or less. This Standard also covers ac-only rated switches for which the load ratings do not exceed 30 A at 347 VAC or less.

1.3 This Standard applies to switches constructed to be installed readily in a flush device box or on an outlet-box cover and intended for connection to branch-circuit wiring.

1.4 This Standard applies to pendant and through-cord switches intended for field installation on flexible cord and provided with one "on" and one "off" position.

1.5 This Standard applies to switches intended for surface mounting and provided with a separable base and cover for connection to exposed wiring consisting of nonmetallic sheathed cable or open wiring on insulators (knob and tube).

1.6 This Standard applies to self-contained switches intended for flush mounting without a separate outlet box and for connection to branch-circuit wiring consisting of one or more non-metallic sheathed cables containing copper conductors.

1.7 This Standard applies to ac/dc fixture switches intended to be installed in fixtures to control incandescent lighting or fans for connection to branch-circuit wiring.

1.8 This Standard also applies to single-pole, momentary-contact door switches constructed to be installed readily in a special-purpose device box or on an outlet-box cover for connection to branch-circuit wiring.

1.9 This Standard does not apply to:

a) Clock operated switches specified in the Standard for Clock-Operated Switches, UL 917, and CSA Standard C22.2 No. 177;

b) Dimmer switches specified in the Standard for Solid-State Dimming Controls, UL 1472, and CSA Standard C22.2 No. 184.1;

c) Industrial control equipment specified in the Standard for Industrial Control Equipment, UL 508, and CSA Standard C22.2 No. 14;

d) Solid-state, single-phase motor speed controls specified in the Standard for Solid-State Fan Speed Controls, UL 1917, and CSA Standard C22.2 No. 156;

e) Special-use and ac-only fixture switches specified in the Standard for Switches for Appliances – Part 1: General Requirements, UL 61058-1, and CSA Standard C22.2 No. 55; and

f) Switches for use in hazardous locations specified in the Standard for Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations, UL 1203, and CSA Standard C22.2 No. 159.