C22.2 No. 4248.1-17

CSA Group

Fuseholders — Part 1: General requirements

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CSA Group

Standards Update Service

C22.2 No. 4248.1-17
October 2017

Title: *Fuseholders — Part 1: General requirements*

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Association of Standardization and Certification
NMX-J-009/4248/1-ANCE
Second Edition

CSA Group
CSA C22.2 No. 4248.1-17
Second Edition

Underwriters Laboratories Inc.
UL 4248-1
Second Edition

Fuseholders – Part 1: General Requirements

October 13, 2017

ANSI/UL 4248-1–2017

Commitment for Amendments

This standard is issued jointly by the Association of Standardization and Certification (ANCE), CSA Group, and Underwriters Laboratories Inc. (UL). Comments or proposals for revisions on any part of the standard may be submitted to ANCE, CSA, or UL at any time. Revisions to this standard will be made only after processing according to the standards development procedures of ANCE, CSA, and UL. CSA 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 and UL pages.

ISBN 978-1-4883-1311-0 © 2017 CSA Group

This Standard is subject to review 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 inquires@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.

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The most recent designation of ANSI/UL 4248-1-2017 as an American National Standard (ANSI) occurred on October 13, 2017. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page (front and back), or the Preface.

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Annex D (Informative)

Preface

This is the harmonized ANCE, CSA Group, and UL standard for Fuseholders – Part 1: General Requirements. It is the second edition of NMX-J-009/4248/1-ANCE, the second edition of CSA C22.2 No. 4248.1, and the second edition of UL 4248-1. This edition of NMX-J-009/4248/1-ANCE supersedes the previous edition published on February 28, 2007. This edition of CSA C22.2 No. 4248.1 supersedes the previous edition published on February 28, 2007. This edition of UL 4248-1 supersedes the previous edition published on February 28, 2007.

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 Technical Harmonization Subcommittee 32B – Fuseholders, on the Harmonization of Electrotechnical Standards of the Nations of the Americas (CANENA), are gratefully acknowledged.

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

This standard was reviewed by the CSA Subcommittee on Fuses and Fuseholders, under the jurisdiction of the CSA Technical Committee on Industrial 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 approved by the American National Standards Institute (ANSI) as an American National Standard.

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 identical standard for ANCE, CSA Group and UL.

An identical standard is a standard that is exactly the same in technical content except for national differences resulting from conflicts in codes and governmental regulations. 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.

Fuseholders – Part 1: General Requirements

1 General

1.1 Scope

1.1.1 These fuseholders and devices accommodate fuses to be employed in electrical circuits and are intended to be used in accordance with the Canadian Electrical Code, Part I (CE Code Part I), CSA C22.1, the National Electrical Code (NEC), ANSI/NFPA 70, or the Mexican Electrical Code, NOM-001.

1.1.2 These requirements cover:

a) Fuseholders for fuses intended for use with fuse classes covered in the ANCE NMX-J-009-248; CSA C22.2 No. 248 and UL 248 series of standards, Parts 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15; and

b) Fuseholder accessories (such as covers, indicators, adapters, etc.).

1.2 Object

1.2.1 This Standard and its subsequent parts establish the characteristics, construction, operating conditions, markings, and test conditions for fuseholders.

1.3 Units of measurement

1.3.1 The values given in SI (metric) shall be normative. Any other values given shall be for information purposes only.

1.4 Undated reference

1.4.1 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.

1.4.2 When a reference is made to another code or standard, the product shall comply with the code or standard of the country in which the product is intended to be used.

1.4.3 In Canada, general requirements applicable to this standard are given in CSA C22.2 No. 0, General Requirements – Canadian Electrical Code, Part II.

2 Definitions

2.1 General

2.1.1 Ambient temperature – The temperature of the air (or medium) surrounding the fuseholder.

2.1.2 Available fault current – The maximum current that the power system can deliver through a given circuit point to any negligible impedance short-circuit applied at that point.

2.1.3 Clearance – The shortest distance in air between two conductive parts.

2.1.4 Contacts – The parts of the fuseholder that provide electrical contact between the fuse (fuse-link) and the fuseholder.

2.1.5 Creepage – The shortest distance along the surface of the insulating material between two conductive parts.

2.1.6 Dummy fuse – A device used during the verification of temperature rise test and the withstand test, as defined in the subsequent parts.

2.1.7 Enclosed fuseholder – An insulated enclosure that holds, supports, and surrounds the fuse. Any exposed terminals are typically inaccessible from the outside of equipment after installation.

Note: Types of enclosed fuseholders include: panel mount, in-line, and modular fuseholders.

2.1.8 Ferrous – A compound or alloy of iron. For the purpose of this Standard, compounds or alloys predominantly of copper or other metals but containing an insignificant amount of iron are considered non-ferrous.

2.1.9 Fuseholder – A device that:

a) Provides mechanical support for a fuse;

b) Maintains creepage and clearance for a fuse;

c) Provides means to connect a fuse in a circuit; and

d) Allows for fuse replacement.

2.1.10 Fuse-link/Fuse – A protective device that opens a circuit during specified overcurrent conditions by means of a current responsive element.

2.1.11 In-line fuseholder – A type of enclosed fuseholder that is in-line with the application wiring and has two halves. The fuse remains in the load side housing when the two halves are separated.

2.1.12 Live parts – Conductive parts that are intended to operate at a potential different from that of the earth.

2.1.13 Open fuse indicator – A means to indicate that a fuse has operated.

2.1.14 Panel mount fuseholder – A type of enclosed fuseholder that mounts through a panel and includes a removable fuse carrier. The carrier extends outside the panel and contains the fuse. The housing is located behind the panel. Line and load side terminals are located behind the panel as well. The housing is secured to the panel.