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Second Edition

CSA Group
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Second Edition

ULSE Inc
UL 4248-6
Second Edition

# Fuseholders – Part 6: Class H

January 10, 2024



ANSI/UL 4248-6-2024

Standard for Safety for Fuseholders – Part 6: Class H

Second Edition, Dated January 10, 2024

***Summary of Topics***

***This is the Second Edition of the Standard for Safety for Fuseholders – Part 6: Class H dated January 10, 2024.***

***As noted in the Commitment for Amendments statement located on the back side of the title page, ULSE, CSA Group, and ANCE are committed to updating this harmonized standard jointly.***

**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 ULSE Inc. (ULSE). Comments or proposals for revisions on any part of the standard may be submitted to ANCE, CSA Group, or ULSE at any time. Revisions to this standard will be made only after processing according to the standards development procedures of ANCE, CSA Group, and ULSE. CSA Group and ULSE 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 ULSE 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.

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

The most recent designation of ANSI/UL 4248-6 as an American National Standard (ANSI) occurred on January 10, 2024. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page (front and back), or the Preface.

Comments or proposals for revisions on any part of the Standard may be submitted to ULSE at any time. Proposals should be submitted via a Proposal Request in ULSE's 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 Fuseholders – Part 6: Class H. It is the second edition of NMX-J-009/4248/6-ANCE, the second edition of CSA C22.2 No. 4248-6, and the second edition of UL 4248-6. This edition of NMX-J-009/4248/6-ANCE, CSA-C22.2 No. 4248-6, and UL 4248-6 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 ULSE. The efforts and support of the CANENA Technical Harmonization Subcommittee 32B – Fuseholders are gratefully appreciated.

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 32, Fusibles from the Comite de Normalizacion de la Asociacion de Normalizacion y Certificacion, A.C., CONANCE, with the collaboration of the fuses manufacturers and users.

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 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 shall 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.

NMX-J-009/4248/6-ANCE is to be used in conjunction with the third edition of NMX-J-009/4248/1-ANCE. The requirements for Fuseholders – Class H are contained in this Part 6 Standard and NMX-J-009/4248/1-ANCE. Requirements of this Part 6 Standard, where stated, amend the requirements of NMX-J-009/4248/1-ANCE. Where a particular subclause of NMX-J-009/4248/1-ANCE is not mentioned in NMX-J-009/4248/6-ANCE, the NMX-J-009/4248/1-ANCE subclause applies.

CSA C22.2 No. 4248-6 is to be used in conjunction with the third edition of CSA C22.2 No. 4248-1. The requirements for Fuseholders – Class H are contained in this Part 6 Standard and CSA C22.2 No. 4248-1. Requirements of this Part 6 Standard, where stated, amend the requirements of CSA C22.2 No. 4248-1. Where a particular subclause of CSA C22.2 No. 4248-1 is not mentioned in CSA C22.2 No. 4248-6, the CSA C22.2 No. 4248-1 subclause applies.

UL Standard 4248-6 is to be used in conjunction with the third edition of UL 4248-1. The requirements for Fuseholders – Class H are contained in this Part 6 Standard and UL 4248-1. Requirements of this Part 6 Standard, where stated, amend the requirements of UL 4248-1. Where a particular subclause of UL 4248-1 is not mentioned in 4248-6, the UL 4248-1 subclause applies.

### Level of harmonization

This standard is published as an identical standard for ANCE, CSA Group, and ULSE.

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 6: Class H

## 1 Scope

1.1 This Part is intended to be read together with the Standard for Fuseholders – Part 1: General Requirements, hereafter referred to as Part 1. The titles of the Clauses in this Part correspond to the similarly titled Clauses in Part 1. The requirements of Part 1 apply unless modified by this Part. For the Part 1 requirements, refer to the Standard for Fuseholders – Part 1: General Requirements, NMX-J-009-4248/1-ANCE / CSA C22.2 No. 4248.1 / UL 4248-1.

1.2 These requirements cover fuseholders intended for use with Class H Fuses as described in NMX-J-009/248/6-2000-ANCE, CSA C22.2 No. 248.6, UL 248-6, Low-Voltage Fuses – Part 6: Class H Non-Renewable; and NMX-J-009/248/7-2000-ANCE, CSA C22.2 No. 248.7, UL 248-7, Low-Voltage Fuses – Part 7: Class H Renewable Fuses.

1.3 Fuseholders also intended for fuses covered by other Parts shall also comply with the applicable fuseholder requirements for that Part.

## 2 Referenced Publications

2.1 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.

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

2.3 Throughout this Standard, the CSA standard references apply to products intended for use in Canada, the ANCE NMX standard references apply to products intended for use in Mexico, and the UL standard references apply to products intended for use in the United States. Combined references are separated by a slash (“ / ”) to denote the difference between the applicable requirements specified for use in Canada, Mexico, and the United States.

2.4 The following publications are referenced in this Standard:

| United States | Canada | Mexico |
|---|---|---|
| NFPA 70, National Electrical Code | CSA C22.1, Canadian Electrical Code, Part I<br>CSA C22.2 No. 0, General Requirements – Canadian Electrical Code, Part II | NOM – 001, Mexican Electrical Code |
| UL 248-6, Low-Voltage Fuses - Part 6: Class H Non-Renewable Fuses *(Trinational)* | CSA C22.2 No. 248.6, Low-Voltage Fuses - Part 6: Class H Non-Renewable Fuses *(Trinational)* | NMX-J-009/248/6-ANCE, Low-Voltage Fuses - Part 6: Class H Non-Renewable Fuses *(Trinational)* |
| UL 248-7, Low-Voltage Fuses - Part 7: Class H Renewable Fuses (Trinational) | CSA C22.2 No. 248.7, Low-Voltage Fuses - Part 7: Class H Renewable Fuses *(Trinational)* | NMX-J-009/248/7-ANCE, Low-Voltage Fuses - Part 7: Class H Renewable Fuses *(Trinational)* |

| United States | Canada | Mexico |
|---|---|---|
| UL 746C, Standard for Polymeric Materials – Used in Electrical Equipment Evaluations | CSA 22.2 No. 0.17, Evaluation of Properties of Polymeric Materials | |
| UL 4248-1, Fuseholders – Part 1: General Requirements (Trinational) | CSA C22.2 No. 4248.1, Fuseholders – Part 1: General Requirements *(Trinational)* | NMX-J-009-4248/1-ANCE, Fuseholders – Part 1: General Requirements *(Trinational)* |

## 3 Units of Measurement

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

## 4 General

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

## 5 Classification

5.1 Class H fuseholders have a short-circuit withstand rating of 10,000 A. Class H fuseholders are rated 250 V or 600 V and are divided into six body sizes in each voltage rating corresponding to the Class H fuse body sizes.

## 6 Characteristics

6.1 Class H fuseholders shall be rated 250 or 600 V.

6.2 Class H fuseholders shall be rated 30, 60, 100, 200, 400, or 600 A .

6.1 Class H fuseholders shall have a short-circuit withstand rating of a 10,000 A.

## 7 Markings

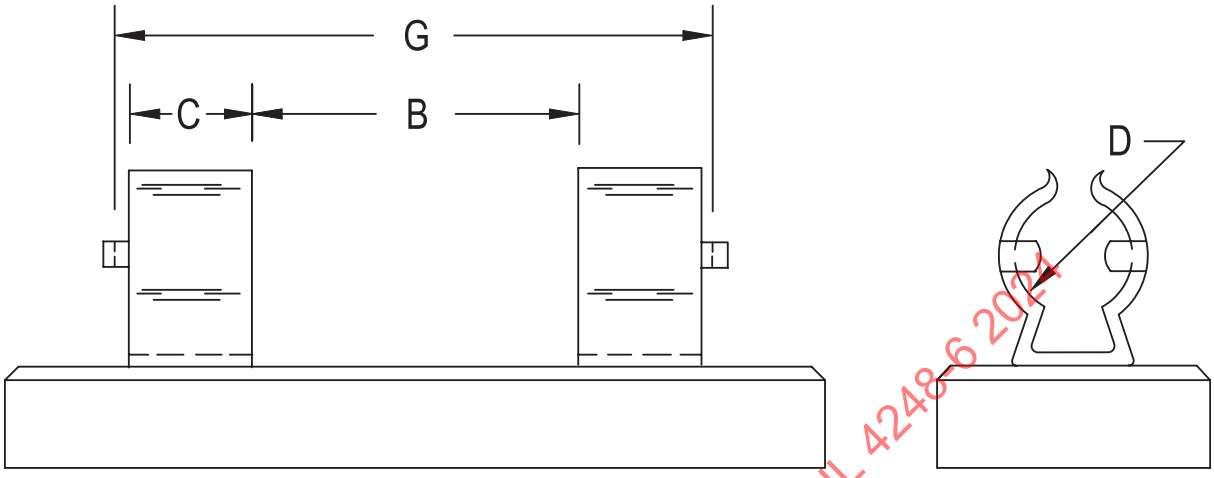
7.1.1 In addition to the requirements of Part 1, the fuseholder shall be marked " Use Class H Fuses".

## 8 Construction – Contacts of a cartridge fuseholder

8.1 The dimensions of a Class H fuseholder shall be as specified in Figure 8.1 or Figure 8.2, whichever is applicable.

**Figure 8.1**

**Class H Fuseholder – Ferrule Contact Type**

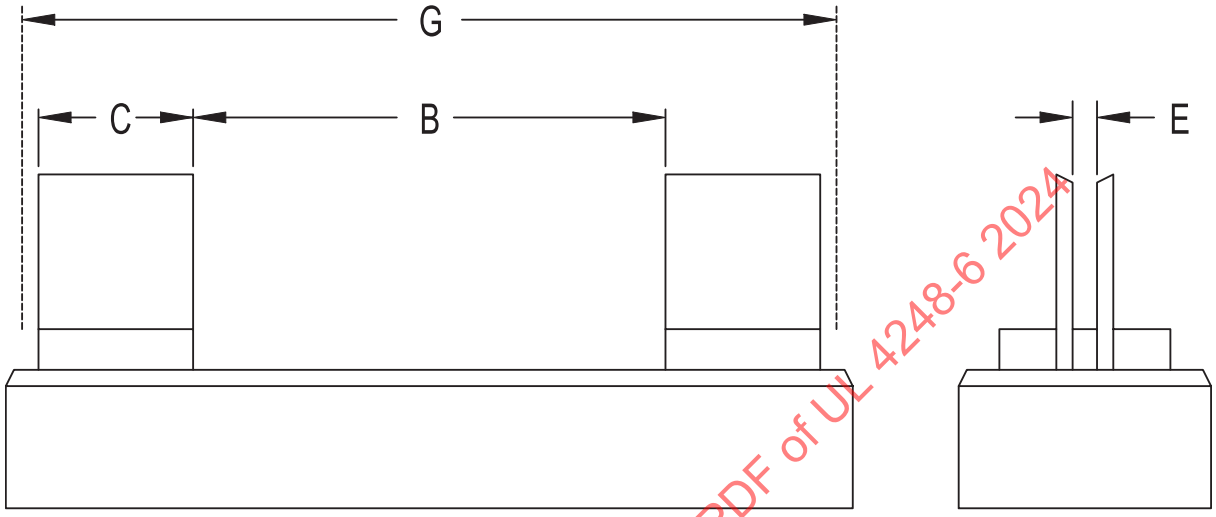



SB0574B

Tabs shown are a typical end-stop configuration.

**Figure 8.2**

**Class H Fuseholder – Knife-blade Type**




SB0575B

Tabs shown are a typical end-stop configuration.

| Class of fuse | Potential rating of fuse, volts | Current rating of fuse, amperes | Dimensions, mm (in) | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | B | C | D | E | G | |
| | | | Distance[a] between contact clips | Minimum width of contact clip | Diameter of ferrule | Thickness of blade | Distance between end stops | |
| | | | | | | | Minimum | Maximum |
| H | 250 | 30 | 25.4 (1.0) | 12.7 (0.5) | 14.27 (0.562) | – | 51.59 (2.031) | 53.97 (2.125) |
| | | 60 | 44.45 (0.750) | 15.88 (0.625) | 20.62 (0.812) | – | 76.99 (3.031) | 79.38 (2.125) |
| | | 100 | 101.6 (4.0) | 22.22 (0.875) | – | 3.18 (0.125) | | – |
| | | 200 | 114.3 (4.5) | 31.75 (1.250) | – | 4.75 (0.187) | | – |
| | | 400 | 127.0 (5.0) | 44.45 (1.750) | – | 6.35 (0.250) | | – |
| | | 600 | 152.4 (6.0) | 53.97 (2.125) | – | 6.35 (0.250) | | – |
| | 600 | 30 | 101.6 (4.0) | 12.7 (0.5) | 20.62 (0.812) | – | 127.79 (5.031) | 130.17 (5.312) |
| | | 60 | 107.95 (4.250) | 15.88 (0.625) | 26.97 (1.062) | – | 140.49 (0.531) | 142.88 (5.63) |
| | | 100 | 152.4 (6.0) | 22.22 (0.875) | – | 3.18 (0.125) | | – |
| | | 200 | 177.8 (7.0) | 31.75 (1.250) | – | 4.75 (0.187) | | – |
| | | 400 | 203.2 (8.0) | 44.45 (1.750) | – | 6.35 (0.250) | | – |