



UL 248-5

STANDARD FOR SAFETY

Low-Voltage Fuses – Part 5: Class G
Fuses

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UL Standard for Safety for Low-Voltage Fuses – Part 5: Class G Fuses, UL 248-5

Second Edition, Dated August 1, 2000

Summary of Topics

This revision of ANSI/UL 248-5 dated July 31, 2019 is being issued to reaffirm approval as an American National Standard. No changes in requirements are involved.

As noted in the Commitment for Amendments statement located on the back side of the title page, UL, CSA, and ANCE are committed to updating this harmonized standard jointly. However, the revision pages dated July 31, 2019 will not be jointly issued by UL, CSA, and ANCE as these revision pages only address UL ANSI approval dates.

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 requirements are substantially in accordance with Proposal(s) on this subject dated May 17, 2019.

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This ANSI/UL Standard for Safety consists of the Second Edition including revisions through July 31, 2019. The most recent designation of ANSI/UL 248-5 as a Reaffirmed American National Standard (ANS) occurred on July 8, 2019. 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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CONTENTS

| | |
|--|----|
| Preface | 5 |
| 1 General | 7 |
| 1.1 Scope | 7 |
| 4 Classification | 7 |
| 5 Characteristics | 7 |
| 5.2 Voltage rating | 7 |
| 5.3 Current rating | 7 |
| 5.5 Interrupting rating | 7 |
| 5.6 Peak let-through current and clearing I^2t characteristics | 7 |
| 7 Construction | 8 |
| 7.1 Dimensions | 8 |
| 8 Tests | 10 |
| 8.2 Verification of temperature rise and current-carrying capacity | 10 |
| 8.3 Verification of overload operation | 10 |
| 8.4 Verification of operation at rated voltage | 10 |
| 8.5 Verification of peak let-through current and clearing I^2t characteristics | 11 |

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No Text on This Page

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Preface

This is the common UL, CSA, and ANCE Standard for *Low-Voltage Fuses – Part 5: Class G Fuses*. This is the second edition of CAN/CSA-C22.2 No. 248.5-00 (superseding the first edition, published in 1996), the second edition of UL 248-5, and the first edition of NMX-J-009/248/5-2000-ANCE.

This Standard was prepared by a Technical Harmonization Committee comprised of members from Underwriters Laboratories, CSA International, the National Association of Standardization and Certification of the Electrical Sector, the end product manufacturers, and material suppliers. The efforts and support of the members of the Technical Harmonization Committee are gratefully acknowledged.

The present Mexican Standard was developed by the TC 32 Fuses from the Comite de Normalizacion de la Asociacion de Normalizacion y Certificacion, A. C., CONANCE, with the collaboration of the fuse manufacturers and users.

This Standard was reviewed by the CSA Subcommittee on Fuses and approved by the Technical Committee on Industrial Products under the jurisdiction of the CSA Strategic Steering Committee on the Requirements for Electrical Safety.

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 trinational standard is published as an Identical Standard. An identical standard is a standard that is the same in technical content except for conflicts in Codes and Governmental Regulations. Presentation is word for word except for editorial changes.

Interpretations

The interpretation by the SDO (Standards Development Organization) of an identical standard shall be based on the literal text to determine compliance with the standard in accordance with the procedural rules of the SDO. If more than one interpretation of the literal text has been identified, a revision shall be proposed as soon as possible to each of the SDOs to more accurately reflect the intent.

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Low-Voltage Fuses – Part 5: Class G Fuses

1 General

NOTE –

This Part is intended to be read together with the Standard for Low-Voltage Fuses – Part 1: General Requirements, hereafter referred to as Part 1. The numbering of the Clauses in this Part correspond to like numbered Clauses in Part 1. The requirements of Part 1 apply unless modified by this Part. For Clauses not shown below, refer to the Standard for Low-Voltage Fuses – Part 1: General Requirements, NMX-J-009/248/5-2000-ANCE ♦ CAN/CSA C22.2 No. 248.1 ♦ UL 248-1.

1.1 Scope

This Part applies to Class G fuses rated 20 A or less, 600 V ac; 21 – 60 A, 480 V ac. DC ratings are optional.

4 Classification

Class G fuses are non-renewable and current limiting, with an interrupting rating of 100,000 A. Class G fuses are divided into four body sizes. The maximum current rating, I_n , for each size is specified in this Part. Time-delay ratings are optional.

5 Characteristics

5.2 Voltage rating

For AC, the rating shall be 600 V ac for the 0 – 20 A body sizes, and 480 V ac for the 21 – 60 A body sizes. The DC voltage rating may be different from the AC rating.

5.3 Current rating

Refer to [Figure A](#) for range of current ratings in each body size.

5.5 Interrupting rating

For AC – 100,000 A

For DC, the preferred ratings are 10,000, 20,000, 50,000, or 100,000 A.

5.6 Peak let-through current and clearing I^2t characteristics

Maximum values of peak let-through current and clearing I^2t at 100,000 A are given in [Table A](#).

Table A
Maximum peak let-through current and clearing I^2t for Class G fuses

| Current rating I_n , A | Peak let-through current, A | I^2t , ampere-squared seconds |
|--------------------------|-----------------------------|---------------------------------|
| 1 | 1,000 | 800 |
| 3 | 1,500 | 1,200 |
| 6 | 2,000 | 1,800 |
| 10 | 3,000 | 2,800 |
| 15 | 4,000 | 3,800 |
| 20 | 5,000 | 5,000 |
| 25 | 6,000 | 6,000 |
| 30 | 7,000 | 7,000 |
| 35 | 8,000 | 14,000 |
| 40 | 8,500 | 17,000 |
| 45 | 9,000 | 18,500 |
| 50 | 9,500 | 21,000 |
| 60 | 10,500 | 25,000 |

7 Construction

7.1 Dimensions

Fuse dimensions are shown in [Figure A](#).