UL 248-4

STANDARD FOR SAFETY

Low-Voltage Fuses – Part 4: Class CC Fuses

UL Standard for Safety for Low-Voltage Fuses – Part 4: Class CC Fuses, UL 248-4

Second Edition, Dated August 1, 2000

Summary of Topics

This revision of ANSI/UL 248-4 dated March 20, 2024 is being issued to update the title page to reflect the most recent designation as a Reaffirmed American National Standard (ANS). No technical changes have been made.

As noted in the Commitment for Amendments statement located on the back side of the title page, ULSE, CSA and ANCE are committed to updating this harmonized standard jointly. However, the revision pages dated March 20, 2024 will not be jointly issued by ULSE, CSA and ANCE as these revision pages only address UL ANSI approval dates.

Text that has been changed in any manner or impacted by ULSE'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 February 2, 2024.

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Low-Voltage Fuses – Part 4: Class CC Fuses

August 1, 2000

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Approved American National Standard

ANSI/UL 248-4-2005 (R2024)

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 anytime. 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 including revisions through March 20, 2024.

The most recent designation of ANSI/UL 248-4 as a Reaffirmed American National Standard (ANS) occurred on March 20, 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 the Collaborative Standards Development System (CSDS) at https://csds.ul.com.

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Preface

This is the common ULSE, CSA, and ANCE Standard for Low-Voltage Fuses – Part 4: Class CC Fuses. This is the second edition of CAN/CSA-C22.2 No. 248.4-00 (superseding the first edition, published in 1994), the second edition of UL 248-4, and the first edition of NMX-J-009/248/4-2000-ANCE.

This Standard was prepared by a Technical Harmonization Committee comprised of members from ULSE Inc. (ULSE), 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 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 4: Class CC 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 corresponds 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-009/248/4-2000-ANCE ♦ CAN/CSA C22.2 No. 248.1 ♦ UL 248-1.

1.1 Scope

This Part applies to Class CC fuses rated 30 A or less and 600 V ac. DC ratings are optional.

4 Classification

Class CC fuses are non-renewable and current limiting, with an interrupting rating of 200,000 A. Class CC fuses have one body size. Time-delay ratings are optional.

5 Characteristics

5.2 Voltage rating

For AC, the rating shall be 600 V ac.

For DC, the voltage rating may be different from the AC rating.

5.3 Current rating

30 A or less.

5.5 Interrupting rating

For AC – 200,000 A

For DC, the preferred ratings are 10,000, 20,000, 50,000, 100,000, 150,000, or 200,000 A.

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

Maximum values of peak let-through current and clearing I^2t are given in Table A.

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

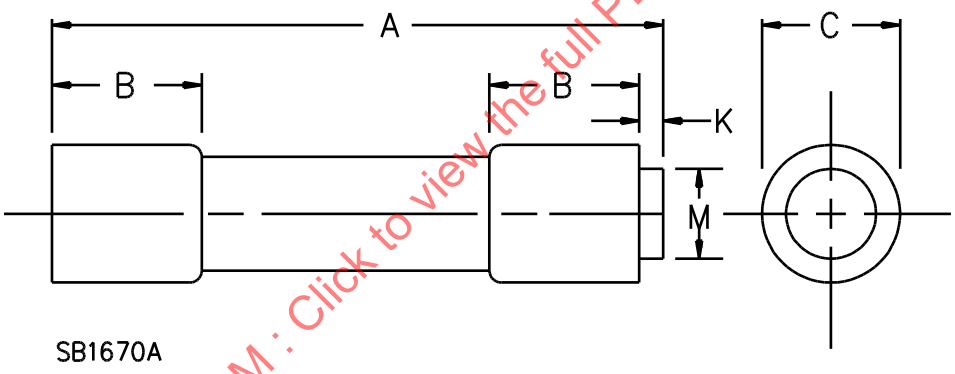
Current rating I_n, A	Between threshold and 50 kA		At 100 kA		At 200 kA	
	Peak let-through current, A	I^2t, ampere-squared seconds	Peak let-through current, A	I^2t, ampere-squared seconds	Peak let-through current, A	I^2t, ampere-squared seconds
0 – 15	3,000	2,000	3,000	2,000	4,000	3,000
16 – 20	3,000	2,000	4,000	3,000	5,000	3,000
21 – 30	6,000	7,000	7,500	7,000	12,000	7,000

7 Construction

7.1 Dimensions

Fuse dimensions are shown in Figure A.

Figure A
Dimensions of Class CC fuses in mm (in)



Current rating I_n, A	Overall length	Ferrule length	Ferrule diameter	Rejection length	Rejection diameter
	A[a]	B[b]	C[b]	K[b]	M[b]
0 – 30	38.10 (1.500)	9.53 (0.375)	10.29 (0.405)	3.18 (0.125)	6.35 (0.250)

[a] Tolerances: ± 0.79 mm (0.031 in).

[b] Tolerances: ± 0.13 mm (0.005 in).