



# UL 248-3

## STANDARD FOR SAFETY

Low-Voltage Fuses – Part 3: Class CA  
and CB Fuses

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UL Standard for Safety for Low-Voltage Fuses – Part 3: Class CA and CB Fuses, UL 248-3

Second Edition, Dated August 1, 2000

### **Summary of Topics**

***This revision of ANSI/UL 248-3 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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Second Edition

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## Low-Voltage Fuses – Part 3: Class CA and CB Fuses

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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 248-3 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.

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## CONTENTS

<b>Preface .....</b>	<b>5</b>
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 .....	9
8.2 Verification of temperature rise and current-carrying capacity .....	9
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 .....	10

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No Text on This Page

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## Preface

This is the common ULSE, CSA, and ANCE Standard for Low-Voltage Fuses – Part 3: Class CA and CB Fuses. This is the second edition of CAN/CSA-C22.2 No. 248.3-00 (superseding the first edition, published in 1996), the second edition of UL 248-3, and the first edition of NMX-J-009/248/3-2000-ANCE.

This Standard was prepared by a Technical Harmonization Committee comprised of members from 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 Comité de Normalización de la Asociación de Normalización y Certificación, 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 3: Class CA and CB 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-009/248/3-2000-ANCE ♦ CAN/CSA C22.2 No. 248.1 ♦ UL 248-1.*

### 1.1 Scope

This Part applies to Class CA and CB fuses rated 60 A or less and 600 V ac. DC ratings are optional.

### 4 Classification

Class CA and CB fuses are non-renewable and current limiting, with an interrupting rating of 200,000 A. Class CA fuses have one body size. Class CB fuses are divided into two body sizes. The maximum current rating,  $I_n$ , for each size is specified in this Part.

### 5 Characteristics

#### 5.2 Voltage rating

For AC, the rating shall be 600 V ac.

The DC voltage rating may be different from the AC rating.

#### 5.3 Current rating

Class CA fuses shall be rated 30 A or less.

Class CB fuses shall be rated 60 A or less. Refer to Figure B for range of current ratings in each body size.

#### 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 CA and CB fuses at 200 kA**

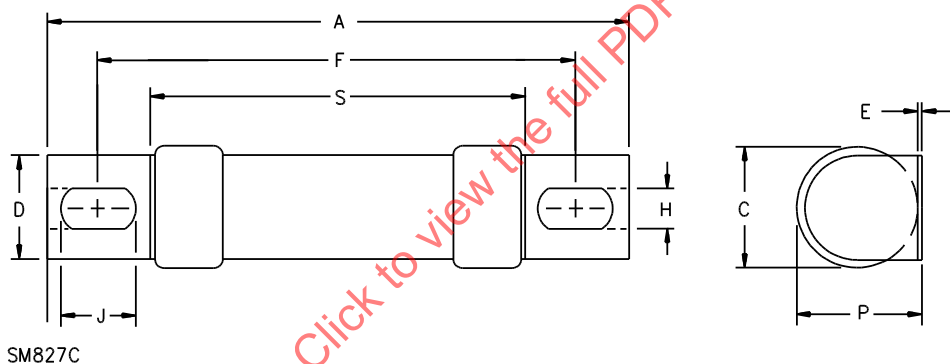
Class and current rating $I_n$ , A	Peak let-through current, A	$I^2t$ , ampere-squared seconds
Class CA	8,000	6,000
Class CB		
1 – 30	10,000	10,000
31 – 60	15,000	60,000

## 7 Construction

### 7.1 Dimensions

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

**Figure A**  
**Dimensions of Class CA fuses in mm**



SM827C

Maximum overall length	Maximum outside diameter	Maximum blade width	Thickness of blade		Distance between mounting centers	Width of slot	Minimum length of slot	Maximum overall height	Maximum overall body length
A	C	D	E		F	H <sup>a</sup>	J <sup>b</sup>	P	S
56	14.5	11.2	min	max	44.5	4.5	5.5	14.5	36.5

<sup>a</sup> Tolerance  $\pm 0.5$  mm.  
<sup>b</sup> It is permissible to extend the fixing slots or form open-ended slots.