UL 248-18

STANDARD FOR SAFETY

Low-Voltage Fuses – Part 18: Class CD Fuses

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER
REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

UL Standard for Safety for Low-Voltage Fuses – Part 18: Class CD Fuses, UL 248-18

First Edition, Dated March 31, 2022

Summary of Topics

This reaffirmation of ANSI/UL 248-18 dated June 29, 2026 is 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 and CSA are committed to updating this harmonized standard jointly. However, the revision pages dated June 29, 2026 will not be jointly issued by ULSE and CSA 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 May 8, 2026.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form by any means, electronic, mechanical photocopying, recording, or otherwise without prior permission of ULSE Inc. (ULSE).

ULSE provides this Standard "as is" without warranty of any kind, either expressed or implied, including but not limited to, the implied warranties of merchantability or fitness for any purpose.

In no event will ULSE be liable for any special, incidental, consequential, indirect or similar damages, including loss of profits, lost savings, loss of data, or any other damages arising out of the use of or the inability to use this Standard, even if ULSE or an authorized ULSE representative has been advised of the possibility of such damage. In no event shall ULSE's liability for any damage ever exceed the price paid for this Standard, regardless of the form of the claim.

Users of the electronic versions of UL's Standards for Safety agree to defend, indemnify, and hold ULSE harmless from and against any loss, expense, liability, damage, claim, or judgment (including reasonable attorney's fees) resulting from any error or deviation introduced while purchaser is storing an electronic Standard on the purchaser's computer system.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

No Text on This Page

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

CSA Group
CSA C22.2 No. 248.18:22
First Edition

ULSE Inc.
UL 248-18
First Edition

Low-Voltage Fuses – Part 18: Class CD Fuses

March 31, 2022

(Title Page Reprinted: June 29, 2026)

ANSI/UL 248-18-2022 (R2026)

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

Commitment for Amendments

This standard is issued jointly by 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 CSA Group or ULSE at anytime. Revisions to this standard will be made only after processing according to the standards development procedures of 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.

ISBN 978-1-4883-3828-1 © 2022 Canadian Standards Association

All rights reserved. No part of this publication may be reproduced in any form whatsoever without the prior permission of the publisher.

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.

To purchase CSA Group Standards and related publications, visit CSA Group's Online Store at www.csagroup.org/store/ or call toll-free 1-800-463-6727 or 416-747-4044.

© 2026 ULSE Inc. All rights reserved.

Our Standards for Safety are copyrighted by ULSE Inc. Neither a printed nor electronic copy of a Standard should be altered in any way. All of our Standards and all copyrights, ownerships, and rights regarding those Standards shall remain the sole and exclusive property of ULSE Inc.

This ANSI/UL Standard for Safety consists of the First edition including revisions through June 29, 2026. The most recent designation of ANSI/UL 248-18 as a Reaffirmed American National Standard (ANS) occurred on June 29, 2026. 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.

For information on ULSE Standards, visit https://www.shopulstandards.com, call toll free 1-888-853-3503 or email us at ClientService@shopULStandards.com.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

CONTENTS

Preface 5

1 Scope 7
2 Referenced Publications 7
3 Units of Measurement 7
4 General 7
5 Classification 7
6 Characteristics 8
6.1 Voltage rating 8
6.2 Current rating 8
6.3 Interrupting rating 8
6.4 Peak let-through current and clearing I^2t characteristics 8
7 Construction 8
8 Tests 10
8.1 Verification of temperature rise and current-carrying capacity 10
8.2 Verification of overload operation 10
8.3 Verification of operation at rated voltage 10
8.4 Verification of peak let-through current and clearing I^2t characteristics 11

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

No Text on This Page

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

Preface

This is the harmonized CSA Group and ULSE standard for Low-Voltage Fuses – Part 18: Class CD Fuses, UL 248-18. It is the first edition of CSA C22.2 No. 248.18, and the first edition of UL 248-18.

This harmonized standard was prepared by CSA Group and ULSE. The efforts and support of the Technical Harmonization Subcommittee, 32B, Fuses, 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.

While ANCE continues to participate in the technical development of this trinational standard, the ANCE logo has been removed from the title page as standards cannot be formally published in Mexico at this time.

This Standard was reviewed by the CSA Subcommittee on Fuses and Fuseholders and approved by the CSA Technical Committee on Industrial Products under the jurisdiction of the CSA Strategic Steering Committee on the Requirements for Electrical Safety. This standard has been developed in compliance with the 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 the 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 trinational standard is published as an identical standard for 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 and basic safety principles and requirements. 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.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

No Text on This Page

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.

Low-Voltage Fuses – Part 18: Class CD Fuses

1 Scope

1.1 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 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 Low-Voltage Fuses – Part 1: General Requirements, NMX-J-009-248/1-ANCE / CSA C22.2 No. 248.1 / UL 248-1.

1.2 This Standard applies to Class CD fuses rated 31 – 60 A and 600 Vac.

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	UL 248-1, Low-Voltage Fuses – Part 1: General Requirements (Trinational) CSA C22.2 No. 0, General Requirements – Canadian Electrical Code, Part II	NOM – 001, Mexican Electrical Code
UL 248-1, Low-Voltage Fuses – Part 1: General Requirements *(Trinational)*	CSA C22.2 No. 248.1, Low-Voltage Fuses – Part 1: General Requirements *(Trinational)*	NMX-J-009/248/1-ANCE, Low-Voltage Fuses – 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 In 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 CD Fuses are non-renewable and current-limiting with an interrupting rating of 200,000 A. Time-delay ratings are optional.

ULSE INC. COPYRIGHTED MATERIAL – NOT AUTHORIZED FOR FURTHER REPRODUCTION OR DISTRIBUTION WITHOUT PERMISSION FROM ULSE INC.