

Australian/New Zealand Standard™

## Low-voltage fuses

**Part 3.0: Supplementary requirements  
for fuses for use by unskilled persons  
(fuses mainly for household and similar  
applications)**



Standards Australia



**STANDARDS**  
NEW ZEALAND  
Pūnaha Aotearoa

## **AS/NZS 60269.3.0:2000**

---

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL/7, Power Switchgear. It was approved on behalf of the Council of Standards Australia on 20 September 2000 and on behalf of the Council of Standards New Zealand on 24 November 2000. It was published on 6 December 2000.

---

The following interests are represented on Committee EL/7:

Australasian Railway Association  
Australian British Chamber of Commerce  
Australian Electrical and Electronic Manufacturers Association  
Electricity Supply Association of Australia  
Institution of Engineers Australia  
Testing Interests (Australia)  
TransPower New Zealand Limited  
WorkCover New South Wales

---

### **Keeping Standards up-to-date**

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Australia web site at [www.standards.com.au](http://www.standards.com.au) or Standards New Zealand web site at [www.standards.co.nz](http://www.standards.co.nz) and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia International or Standards New Zealand at the address shown on the back cover.

# Australian/New Zealand Standard™

## Low-voltage fuses

### **Part 3.0: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications)**

Originated as AS 2005.3—1978.  
Previous edition AS 2005.30—1991.  
Jointly revised and redesignated in part as AS/NZS 60269.3.0:2000.

#### **COPYRIGHT**

© Standards Australia/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Jointly published by Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 3617 3

## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL/7, Power Switchgear to supersede, in part, AS 2005.30–1991.

The objective of this Standard is to provide supplementary requirements for those stated in AS/NZS 60269.1:2000 for fuses designed for use by unskilled persons in domestic and similar applications with rated currents not exceeding 100 A and rated voltages not exceeding 500 V a.c.

This Standard is Part 3.0 of a series which, when complete, will consist of the following:

### AS/NZS

60269	Low-voltage fuses
60269.1	Part 1: General requirements
60269.2.0	Part 2.0: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application)
60269.2.1	Part 2.1: Supplementary requirements for fuses for use by authorized persons (fuses mainly for industrial application)– Sections I to V: Examples of types of standardized fuses
60269.3.0	Part 3.0: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications) (this Standard)
60269.3.1	Part 3.1: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications)– Sections I to IV
60269.4.0	Part 4.0: Supplementary requirements for fuse-links for the protection of semi-conductor devices
60269.4.1	Part 4.1: Supplementary requirements for fuse-links for the protection of semi-conductor devices–Sections I to III

The requirements of this Standard do not apply to fuses manufactured to AS 3135–1997.

The main differences between this Standard and AS 2005.30—1991 are:

- AS 2005.30 classified according to rated voltage (240 V or 415 V) and rated current. This Standard classifies according to fuse system and applies up to 500V.
- Requirement for identifying colours has been removed.
- All details for examples of standardized fuses have been placed in AS/NZS 60269.3.1.

This Standard is identical with and has been reproduced from IEC 60269-3:1987, *Low-voltage fuses Part 3: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications)*.

A reference to an International Standard identified in the normative references clause by strikethrough (~~example~~) is replaced by a reference to the Australian or Australian/New Zealand Standard(s) listed immediately thereafter and identified by shading (example). Where the struck-through referenced document and the referenced Australian or Australian/New Zealand Standard are identical, this is indicated in parenthesis after the title of the latter.

In view of the fact that this Standard should be read together with AS/NZS 60269.1, *Low-voltage fuses*, Part 1: *General requirements*, the numbering of its clauses and sub-clauses is made to correspond to the latter. Regarding the tables, their numbering also corresponds to that of AS/NZS 60269.1, however, when additional tables appear, they are referred to by capital letters, for example, Table A, Table B, etc.

As this Standard is reproduced from an International Standard, the following applies:

- (a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
- (b) In the source text ‘this International Standard’ should read ‘this Australian/New Zealand Standard’.
- (c) A full point should be substituted for a comma when referring to a decimal marker.

The term “informative” has been used in this Standard to define the application of the appendix to which it applies. An “informative” appendix is only for information and guidance.

## CONTENTS

	<i>Page</i>
1 General .....	1
1.1 Scope .....	1
1.2 Object .....	1
1.3 Normative references.....	1
4 Classification.....	2
5 Characteristics of fuses .....	2
5.2 Rated voltages.....	2
5.3 Rated current.....	2
5.5 Rated power dissipation of a fuse-link and rated power acceptance of a fuse-holder .....	3
5.6 Limits of time-current characteristics .....	3
5.7 Breaking range and breaking capacity .....	3
6 Markings.....	3
6.4 Markings of gauge-pieces .....	3
7 Standard conditions for construction .....	3
7.1 Mechanical design.....	3
7.3 Temperature rise power dissipation of the fuse-link and power acceptance of the fuse-holder.....	4
7.9 Protection against electric shock.....	5
8 Tests.....	5
8.3 Verification of temperature rise and power dissipation.....	5
8.5 Verification of the breaking capacity .....	5
8.11 Mechanical and miscellaneous tests.....	6
Figure 1 – Instant of making for Test No. 1.....	8
Appendix A (Informative) Recommendations for future designs of fuses .....	9

## STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

-----  
**Australian/New Zealand Standard****Low-voltage fuses****Part 3.0: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications)**  
-----

Any IEC table, figure or passage of text that is struck-through is not part of this Standard. Any Australian/New Zealand table, figure or passage of text that is added (and identified by shading) is part of this Standard.

**1 General**

Fuses within the scope of the requirements of this standard shall comply with all requirements of IEC Publication 60269-1, if not otherwise indicated hereinafter, and shall also comply with the supplementary requirements laid down below.

Note. - If fuses which are designed for use by unskilled persons are intended to be installed where fuses for use by authorized persons are principally installed, they should also comply with the requirements of IEC Publication 60269-2: Low-voltage Fuses, Part 2: Supplementary Requirements for Fuses for Use by Authorized Persons (Fuses Mainly for Industrial Application).

**1.1 Scope**

These requirements apply to "gG" fuses for use by unskilled persons for domestic and similar applications with rated currents not exceeding 100 A and rated voltages not exceeding 500 V a.c. Additional specific requirements are given in IEC Publication 60269-3-1: *Low-voltage fuses, Part 3: Supplementary requirements for fuses for use by unskilled person Sections I-IV* for the fuse-systems described therein and for fuse-links primarily for use in plugs.

**1.2 Object**

The following characteristics of fuses are specified in addition to IEC Publication 60269-1:

- rated voltage,
- rated power-dissipation of a fuse-link and rated power-acceptance of fuse-holders,
- time-current characteristic,
- gates,  $I^2t$  characteristics and conventional times and currents,
- rated breaking capacity,
- markings on fuse,
- standard conditions for construction,
- tests.

**1.3 Normative references**

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 60269. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 60269 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below: