

Australian/New Zealand Standard™

**Approval and test specification—
Residual current devices (current-
operated earth-leakage devices)**



AS/NZS 3190:2009

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-004, Electrical Accessories. It was approved on behalf of the Council of Standards Australia on 2 February 2009 and on behalf of the Council of Standards New Zealand on 5 February 2009.
This Standard was published on 27 February 2009.

The following are represented on Committee EL-004:

Australian Chamber of Commerce and Industry
Australian Industry Group
Australian Information Industry Association
Australasian Railway Association
Canterbury Manufacturers Association, New Zealand
Consumer Electronics Suppliers Association
Consumers' Federation of Australia
Electrical Compliance Testing Association
Electrical Regulatory Authorities Council
International Accreditation New Zealand
Ministry of Consumer Affairs, New Zealand
Plastics Industry Pipe Association of Australia
Testing interests, Australia

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 Standards may also be withdrawn.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 Web Shop at www.standards.com.au or Standards New Zealand web site at 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 or Standards New Zealand at the address shown on the back cover.

AS/NZS 3190:2009

Australian/New Zealand Standard™

**Approval and test specification—
Residual current devices (current-
operated earth-leakage devices)**

Originated as AS 3190—1974.
Previous edition AS/NZS 3190:2002.
Seventh edition 2009.

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, GPO Box 476, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 9034 8

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-004, Electrical Accessories, to supersede AS/NZS 3190:2002, *Approval and test specification—Residual current devices (current-operated earth-leakage devices)* from the date of publication.

This Standard will exist in parallel with AS/NZS 61008.1, *Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs)*, Part 1: *General rules* and AS/NZS 61009.1, *Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)*, Part 1: *General rules* (and any revisions thereof). This Standard or AS/NZS 61008.1 or AS/NZS 61009.1 is acceptable for RCDs.

The essential safety requirements in AS/NZS 3820 that could be applicable to residual current devices (current-operated earth-leakage devices) are covered by this Standard taken in conjunction with any other relevant requirements affecting safety.

The objective of this Standard is to provide Australian and New Zealand electrical industries (including manufacturers, test laboratories, installers and regulators) with electrical safety requirements and test methods for residual current devices (current-operated earth-leakage devices).

This Standard is one of a series of Approval and Test Specifications to be read in conjunction with AS/NZS 3100, *Approval and test specification—General requirements for electrical equipment*. The purpose of this series is to outline conditions that must be met to secure approval for the sale and use of electrical equipment in Australia and New Zealand. Only safety matters and related conditions are covered.

There is a general acceptance that Type III and Type IV residual current devices do not provide adequate personal protection, however, they are within the scope of this Standard.

This Standard was revised to introduce the following changes:

- (a) Revised requirements for the resistance to fire test.
- (b) Introduction of requirements for PSOAs (see Clause 2.4).
- (c) Changes to marking requirements and symbols.
- (d) Revised testing requirements.
- (e) General editorial revision and correction of some minor errors.

The term ‘normative’ has been used in this Standard to define the application of the appendix to which it applies. A ‘normative’ appendix is an integral part of a Standard.

This Standard does not purport to include all the necessary provisions of a contract.

CONTENTS

	<i>Page</i>
1 SCOPE AND REFERENCED DOCUMENTS	4
2 DEFINITIONS.....	5
3 COMPLIANCE WITH STANDARDS	7
4 CLASSIFICATION	8
5 DESIGN AND CONSTRUCTION	9
6 ELECTRICAL REQUIREMENTS	15
7 MARKING	18
8 TESTS	21
 APPENDICES	
A RELIABILITY	37
B IMPULSE WITHSTAND TEST.....	42

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- Looking for additional Standards? Visit Intertek Inform Infostore
 - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-