AS/NZS 3190:2009

Australian/New Zealand Standard™

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

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.
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The following are represented on Committee EL-004:

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Australian Information Industry Association
Australasian Railway Association
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Consumer Electronics Suppliers Association
Consumers' Federation of Australia
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Australian/New Zealand Standard™

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

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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.

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1 SCOPE AND REFERENCED DOCUMENTS

1.1 Scope

This Standard applies to residual current devices and residual current relays intended to isolate supply or initiate a 'tripping' signal to isolate supply to protected circuits, socket-outlets or equipment in the event of a current flow to earth, which exceeds a predetermined level, and—

(a) have rated residual currents not exceeding 300 mA;

(b) have rated load currents not exceeding 125 A a.c.; and

(c) designed for use at low voltage.

The devices may be fixed or portable or, may be integral with a switching device or miniature overcurrent circuit breaker or, may be supplied as a separate attachment.

This Standard does not apply to—

(i) devices intended to be used with a particular circuit breaker other than a miniature overcurrent circuit-breaker, as defined in AS/NZS 3111 or AS/NZS 60898.1; or

(ii) devices intended to protect an electricity authority distribution system; or

(iii) devices for the protection of equipment for mines and covered by the AS 2081 series of Standards.

1.2 Referenced documents

The following documents are referred to in this Standard.

AS	
1931	High-voltage test techniques
1931.1	Part 1: General definitions and test requirements
60068	Environmental testing
60068.2.30	Part 2.30: Tests—Test Db and guidance: Damp heat, cyclic (12+12-hour cycle)
60529	Degrees of protection provided by enclosures (IP Code)
AS/NZS	
2081	Electrical equipment for coal and shale mines—Electrical protection devices
3001	Electrical installations—Transportable structures and vehicles including their site supplies
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