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

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Australian Electrical and Electronic Manufacturers Association

Confederation of Australian Industry

Department of Public Works, N.S.W.

Electrical Contractors Association of Australia

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PREFACE

This Standard was prepared by the Standards Australia Committee on Electrical Accessories to supersede AS 3190—1983, *Approval and test specification for current-operated (core balance) earth-leakage devices.*

It is one of a series of Approval and Test Specifications issued by Standards Australia. These Specifications are accompanied by a general specification AS 3100, containing definitions and general requirements for electrical materials and equipment. The purpose of these Specifications is to outline conditions which must be met to secure approval for the sale and use of electrical equipment in Australia. Only safety matters and related conditions are covered.

This Standard was revised to incorporate Amendment No. 1, April 1985 (which affected Clauses 2.3, 3 and 4.2 and Appendix C) and introduces other technical and editorial changes such as—

- Retitling and use of the generic and internationally accepted term 'residual current device' (rcd) in lieu of the former 'current-operated (core balance) earth-leakage devices', in line with current Australian and overseas practice.
- Introduction of classifications (and tests/requirements) for portable rcd's for household use, and for general industrial use.
- Introduction of tests/requirements for Class L portable rcd's for alignment with AS 3105, *Approval and test specification—Electrical portable outlet devices.*
- Alteration of some existing tests/requirements, e.g. the test facility percentage of rated residual current.
- Amendment of existing, and inclusion of new definitions and marking requirements, including user instructions.
- Introduction of tests/requirements for reliability and ageing of electronic components in line with the latest International Electrotechnical Commission (IEC) documents.
- Allowance for the future introduction (at this stage, under consideration) of tests/requirements for resistance to unwanted tripping due to impulse voltages.
- Introduction of rcd's with selective tripping time delay characteristics, via a new Type IV classification.
- Provision for tripping tests at rated and high residual currents with amended tripping times specified.

This Standard supersedes AS 3190—1983 (including Amendment No. 1, April 1985) on publication, with the exception of the indicated passages in Clauses 6.7.1 and 6.7.5. Also, it should be noted that Clauses 8.1.2 and 9.17 and Appendix D form part of this Specification 12 months from date of publication.

Attention is drawn to Appendix E which details the additional tests/requirements for approval of **portable** rcd's in New Zealand. For such compliance in New Zealand, portable rcd's are required to comply with the appropriate requirements of this Specification, except as varied by Appendix E.

It is generally accepted that Type III and Type IV rcd's (see Clause 5.1) do not provide adequate personal protection however, they are within the scope of this Specification.

Standards Australia points out that this Specification does not purport to include all the necessary provisions of a contract.

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