

Australian/New Zealand Standard™

**Approval and test specification—  
Thermostats and energy regulators**

## **AS/NZS 3161:2005**

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 20 December 2004 and on behalf of the Council of Standards New Zealand on 23 December 2004. This Standard was published on 2 March 2005.

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The following are represented on Committee EL-004:

Australasian Railway Association  
Australian Chamber of Commerce and Industry  
Australian Electrical and Electronic Manufacturers Association  
Canterbury Manufacturers Association, New Zealand  
Consumer Electronic Suppliers Association  
Consumers' Federation of Australia  
Electrical Regulatory Authorities Council  
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## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Technical Committee EL-004, *Electrical Accessories*, to supersede AS/NZS 3161:1995 on publication.

The objective of this Standard is to provide the Australian and New Zealand electrical industry including manufacturers, test laboratories and regulators with requirements and test methods for thermostats and energy regulators.

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 which 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.

The essential safety requirements in AS/NZS 3820 that could be applicable to thermostats and energy regulators are covered by this Standard taken in conjunction with any other relevant requirements affecting safety.

This Standard was revised to introduce the following technical and editorial changes:

- (a) Changes to fire test requirements.
- (b) Updating of cross-references to referenced Standards and other minor editorial changes.

This Standard does not include all the necessary conditions of a contract.

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## STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

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**1 SCOPE**

This Standard applies to thermostats and energy regulators as defined in Clauses 4.1 and 4.2 and to controls incorporating a combination of the features referred to in those definitions. Such controls are associated with appliances, equipment and heating systems for household use, or controls which are specifically referred to in individual Approval and Test Specifications.

A control which complies with the appropriate requirements of IEC 60730-1 is deemed to comply with this Standard.

This Standard does not apply to—

- (a) excess temperature or over-current protective controls, thermal cut-outs and the like, as commonly used for the protection of electrical apparatus;
- (b) thermostats and energy regulators which are specifically excluded from compliance with this Standard in another Approval and Test Specification; or
- (c) controls incorporating electronic components, the failure of which will affect the controls compliance with this Standard.

NOTE: A thermostat or an energy regulator, or both, may hereinafter be referred to as 'a control'.

Where a control also incorporates a thermal cutout, this Standard applies only to the 'control' component.

NOTE: It is expected that individual equipment Standards will specify appropriate requirements for thermal cutouts; for example, see AS 1308.

**2 APPLICATION****2.1 General requirements of AS/NZS 3100**

This Specification shall be read in conjunction with AS/NZS 3100 and the appropriate provisions of AS/NZS 3100 shall apply to control within the scope of this Standard.

**2.2 Specific requirements of this Standard**

A control shall be deemed to comply with this Standard only if it complies with all the appropriate requirements of this Standard and passes the relevant tests specified herein.

**2.3 Requirements of other Standards**

Components incorporated in a control, which are relied upon for safety, shall comply with the appropriate requirements of any relevant Approval and Test Specification, unless such requirements are varied herein.

**3 REFERENCED DOCUMENTS**

The following documents are referred to in this Standard.

## STANDARDS

AS

1308 Electric water heaters—Thermostats and thermal cutouts