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Australian Standard 3161—1979

APPROVAL AND TEST SPECIFICATION FOR THERMOSTATS AND ENERGY REGULATORS

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THE FOLLOWING SCIENTIFIC, INDUSTRIAL AND GOVERNMENTAL organizations or departments were officially represented on the committee entrusted with the preparation of this specification:

Australian Chamber of Commerce

Australian Electrical and Electronic Manufacturers Association

Confederation of Australian Industry

Electrical Apparatus Approvals Authorities

Electrical Contractors Association of Australia

Electrical Testing Laboratories

Electricity Supply of Australia

Electronic Importers Association

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PREFACE

This revised specification, prepared by Committee EL/2, Electrical Approvals Standards, was approved on behalf of the Council of the Standards Association of Australia on 25 July 1979, and was published on 1 November 1979.

It is one of a series of approval and test specifications issued by the Association under Part 2 of the SAA Wiring Rules. These specifications are accompanied by a general specification AS C100, 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.

The purpose of the revision is to express the requirements in metric units having regard to Australian Government legislation under the Metric Conversion Act, 1970, which has the objective of the progressive adoption of such units. The '3000' series of numbers has been allocated for new and revised SAA approval and test specifications expressed in metric units, the letter classification 'C' being dropped; thus this specification which was numbered AS C161 in the imperial unit series becomes AS 3161 in the metric series.

It should be noted that the metric values herein are a 'soft' conversion, i.e. a direct conversion from imperial to metric units, rounded off as was considered appropriate. No attempt has been made to revise established criteria; however, various items have been updated in line with current drafting practice.

This specification supersedes AS C161—1970 from date of publication.

The Association desires to call attention to the fact that this specification does not purport to include all the necessary provisions of a contract.

This specification requires reference to the following Australian standard approved and test specifications:

AS C100	Definitions and General Requirements for Electrical Materials and Equipment
AS 3121	Insulating Mouldings
AS 3133	Air-break Switches

In addition, reference to other approval and test specifications may be required for approval of particular components incorporated in thermostats and energy regulators (see Clause 4.3).

STANDARDS ASSOCIATION OF AUSTRALIA

Approval and Test Specification for THERMOSTATS AND ENERGY REGULATORS

SEE AMENDMENTS No 1

This specification shall be read in conjunction with AS ~~C100~~ 3100, Approval and Test Specification for Definitions and General Requirements for Electrical Materials and Equipment, (See also Clause 4 below.)

1 SCOPE. This specification applies to thermostat and energy regulators as defined in Clauses 2.1 and 2.2 and to devices incorporating a combination of the features referred to in those definitions, such devices being associated with appliances, equipment and heating systems for household use or devices which are specifically referred to in individual approval and test specifications.

The specification does not apply to excess temperature or over-current protective devices, thermal cutouts and the like as commonly used for the protection of electrical apparatus nor to thermostats and energy regulators which are specifically excluded from compliance with this specification in another approval and test specification.

NOTE: A thermostat and/or an energy regulator may hereinafter be referred to as 'a device'.

2 DEFINITIONS. For the purpose of this specification the following definitions apply:

2.1 Thermostat—a device having a thermally responsive element which switches or controls an electric circuit in order that a temperature may be maintained within specified limits of a chosen setting.

2.2 Energy regulator—a device which permits variation of the energy transmitted to electrical equipment by changing the ratio of the 'on' and 'off' time, or by varying the current or voltage or both in a progressive manner, between the lowest and maximum declared positions. The energy regulator may take the form of a thermally operated device such as an infinite control switch, or a variable transformer, saturable reactor or electronic control device.

3 TYPES OF DEVICE. Devices shall be classified as Type A, B or C according to the following provisions:

Type A—designed to be mounted independently; self-contained with respect to mounting, enclosure and function; containing-case obligatory; e.g. air temperature control thermostat.