AS 61010.1—2003
Reconfirmed 2016

Australian Standard™

Safety requirements for electrical equipment for measurement, control and laboratory use—

Part 1: General requirements (IEC 61010-1:2001 MOD)

Standards Australia

This Australian Standard was prepared by Committee EL-049, Safety of Electrical Equipment for Measurement and Laboratory Use. It was approved on behalf of the Council of Standards Australia on 17 June 2003 and published on 30 June 2003.

The following are represented on Committee EL-049:

Australian Chamber of Commerce and Industry
Bureau of Steel Manufacturers of Australia
Department of Mineral Resources
Electrical Compliance Testing Association
Hunter Industries Electrical Safety Network

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STANDARDS AUSTRALIA

RECONFIRMATION

OF
AS 61010.1—2003
Safety requirements for electrical equipment for measurement, control and laboratory use —
Part 1: General requirements (IEC 61010-1:2001 MOD)

RECONFIRMATION NOTICE

Technical Committee EL-049 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

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The following are represented on Technical Committee EL-049:

Australian Chamber of Commerce and Industry
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PREFACE

This Standard was prepared by the Standards Australia Committee EL-049, Safety of Electrical Equipment for Measurement and Laboratory Use.

The objective of this Standard is to specify the general safety requirements that are generally applicable for electrical measurement, control and laboratory equipment intended for professional, industrial process and educational purposes. The essential safety requirements specified in AS/NZS 3820 that apply to electrical equipment for measurement, control and laboratory use are covered in this Standard.

This Standard is an adoption with national modifications and has been reproduced from IEC 61010-1:2001, *Safety requirements for electrical equipment for measurement, control, and laboratory use—Part 1: General requirements*, and has been varied as indicated to take account of Australian conditions. This Standard includes IEC Corrigendum 1:2001 and Corrigendum 2:2003.

Variations to IEC 61010-1:2001 are indicated at the appropriate places throughout this standard. Strikethrough (~~example~~) identifies IEC text, tables and figures which, for the purposes of this Australian Standard, are deleted. Where text, tables or figures are added, each is set in its proper place and identified by shading (example). Added figures are not themselves shaded, but are identified by a shaded border. The variations are also included in a new Annex ZZ for easy reference.

Annex ZA lists alternate requirements for Australian conditions on resistance to fire.

Additional safety requirements for other allied equipment are to be covered in the relevant Part 2 series of Standards. These are intended to be published in the near future.

The Committee is also considering the publication of a handbook for guidance on the safe use of electrical test measurement equipment, some time in the future.

As this Standard is reproduced from an International Standard, the following applies:

(a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.

(b) In the source text ‘this international standard’ should read ‘this Australian Standard’.

(c) A full point should be substituted for a comma when referring to a decimal marker.

(d) Any French text on figures should be ignored.

The terms ‘normative’ and ‘informative’ are used to define the application of the annex to which they apply. A normative annex is an integral part of a standard, whereas an informative annex is only for information and guidance.

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INTRODUCTION

This part 1 specifies the safety requirements that are generally applicable to all equipment within its scope. For certain types of equipment, these requirements will be supplemented or modified by the special requirements of one, or more than one, particular part 2 of the standard which must be read in conjunction with the part 1 requirements.

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Any table, figure or text of the international standard that is struck through is not part of this standard. Any Australian/New Zealand table, figure or text that is added is part of this standard and is identified by shading.

1 Scope and object

1.1 Scope

1.1.1 Equipment included in scope

This part of IEC 61010 specifies general safety requirements for electrical equipment intended for professional, industrial processes, and educational use, any of which may incorporate computing devices, as defined in a) to d) below, when used under the environmental conditions of 1.4.

a) Electrical test and measurement equipment

This is equipment which by electrical means tests, measures, indicates or records one or more electrical or non-electrical quantities, also non-measuring equipment such as signal generators, measurement standards, power supplies, transducers, transmitters, etc.

NOTE All indicating and recording electrical measuring instruments (except those excluded in 1.1.2) fall within the scope of IEC 61010 unless they are panel meters designed only for building-in to other equipment. Built-in panel meters are considered to be components and only need to meet the relevant requirements of IEC 61010, or other standards, as part of the equipment into which they are built.

b) Electrical control equipment

This is equipment which controls one or more output quantities to specific values, with each value determined by manual setting, by local or remote programming, or by one or more input variables.

c) Electrical laboratory equipment

This is equipment which measures, indicates, monitors or analyses substances, or is used to prepare materials, and includes in vitro diagnostic (IVD) equipment

This equipment may also be used in areas other than laboratories, for example self-test IVD equipment may be used in the home.

d) Accessories intended for use with the above (for example, sample handling equipment).

1.1.2 Equipment excluded from scope

This standard does not apply to equipment within the scope of

a) IEC 60065 (Safety requirements for audio, video and similar electronic apparatus);

b) IEC 60204 (Controls for electrical machines);

c) AS/NZS 60335 (Safety of household and similar electrical appliances);

d) IEC 60364 (Electrical installations of buildings);

e) IEC 60439-1 (Low-voltage switchgear and controlgear assemblies);

f) IEC 60521 (Class 0,5; 1 and 2 alternating current watthour meters);