

Australian Standard™

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

**Part 031: Safety requirements for hand-
held probe assemblies for electrical
measurement and test
(IEC 61010-031:2002 MOD)**

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 12 February 2004 and published on 29 April 2004.

The following are represented on Committee EL-049:

Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Consumers Federation of Australia
Department of Mineral Resources
Electrical Compliance Testing Association
Electrical Regulatory Authorities Council
Hunter Industries Electrical Safety Network
National Electrical and Communications Association

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Web Shop at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Global Standard*, has a full listing of revisions and amendments published each month.

Australian Standards[™] and other products and services developed by Standards Australia are published and distributed under contract by SAI Global, which operates the Standards Web Shop.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to the Chief Executive, Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001.

AS 61010.031—2004

Australian Standard™

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

**Part 031: Safety requirements for hand-
held probe assemblies for electrical
measurement and test
(IEC 61010-031:2002 MOD)**

First published as AS 61010.031—2004.

COPYRIGHT

© Standards Australia International

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Published by Standards Australia International Ltd
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 5889 4

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 particular requirements for hand-held probe assemblies for electrical test and measuring equipment.

This Standard is an adoption with national modifications and has been reproduced from, IEC 61010-031:2002, *Safety requirements for electrical equipment for measurement, control and laboratory use, Part 031: Safety requirements for hand-held probe assemblies for electrical measurement*, and has been varied as indicated to take account of Australian/New Zealand conditions.

Variations to IEC 61010-031:2002 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.

This Standard is one of a series of Standards dealing with electrical test and measuring equipment. Currently this Series consists of the following parts; additional parts will be added from time to time.

AS

61010	Safety requirements for electrical equipment for measurement, control and laboratory use
61010.1	Part 1: General requirements
61010.031	Part 031: Safety requirements for hand-held probe assemblies for electrical measurement and test (this Standard)
61010.2.032	Part 032: Particular requirements for hand-held and hand-manipulated current sensors for electrical test and measurement

This part of the Standard complements Part 1.

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.

In this Standard, the following print types are used:

- requirements proper: in arial type;
- *test specifications: in italic type;*
- explanatory matter: in smaller arial type.

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.

CONTENTS

	<i>Page</i>
1 Scope and object	1
1.1 Scope	1
1.2 Object	1
1.2.1 ASPECTS INCLUDED IN SCOPE	1
1.2.2 ASPECTS EXCLUDED FROM SCOPE	2
1.3 Verification	2
1.4 Environmental conditions	2
2 Normative references	2
3 Definitions	3
3.1 Parts and accessories	3
3.2 Electrical quantities	4
3.3 Tests	4
3.4 Safety terms	4
3.5 Insulation	5
4 Tests	8
4.1 General	8
4.2 Sequence of tests	9
4.3 Reference test conditions	9
4.3.1 ENVIRONMENTAL CONDITIONS	9
4.3.2 STATE OF probe assemblies	9
4.3.3 POSITION OF THE probe assembly	9
4.3.4 ACCESSORIES	9
4.3.5 COVERS AND REMOVABLE PARTS	9
4.3.6 INPUT AND OUTPUT VOLTAGES	10
4.3.7 CONTROLS	10
4.3.8 CONNECTIONS	10
4.3.9 DUTY CYCLE	10
4.4 Testing in SINGLE FAULT CONDITION	10
4.4.1 GENERAL	10
4.4.2 APPLICATION OF FAULT CONDITIONS	10
4.4.3 DURATION OF TESTS	11
4.4.4 CONFORMITY AFTER APPLICATION OF single fault conditions	11
5 Marking and documentation	12
5.1 Marking	12
5.1.1 GENERAL	12
5.1.2 IDENTIFICATION	12
5.1.3 FUSES	13
5.1.4 Terminals AND OPERATING DEVICES	13
5.1.5 PARTS PROTECTED BY double insulation OR reinforced insulation	13
5.1.6 Rating	14
5.2 Warning markings	14
5.3 Durability of markings	14

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- Looking for additional Standards? Visit Intertek Inform Infostore
 - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-