AS 61010.2.032—2004
IEC 61010-2-032:2002

AS 61010.2.032

Australian Standard™

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

Part 2.032: Particular requirements for hand-held and hand-manipulated current sensors for electrical test and measurement

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 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 Standards may also be withdrawn.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.

This Standard was issued in draft form for comment as DR 03628.

Australian Standard™

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

Part 2.032: Particular requirements for hand-held and hand-manipulated current sensors for electrical test and measurement

First published as AS 61010.2.032—2004.

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

ISBN 0 7337 5888 6

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 current sensors for electrical test and measurement.

This Standard is identical with, and has been reproduced from, IEC 61010-2-032:2002, *Safety requirements for electrical equipment for measurement, control and laboratory use, Part 2-032: Particular requirements for hand-held and hand-manipulated current sensors for electrical test and measurement*.

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
61010.2.032	Part 032: Particular requirements for hand-held and hand-manipulated current sensors for electrical test and measurement (this Standard)

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

Page

NOTES

STANDARDS AUSTRALIA

Australian Standard

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

Part 2.032: Particular requirements for hand-held and hand-manipulated current sensors for electrical test and measurement

1 Scope and object

This clause of part 1 is applicable, except as follows:

1.1 Scope

Replacement:

This Standard applies to the HAND-HELD and hand-manipulated CURRENT SENSORS described below. These CURRENT SENSORS are for use in the measurement of current without physically opening the current path of the circuit being measured. They may be stand-alone CURRENT SENSORS or accessories to other equipment.

CURRENT SENSORS require hand manipulation before or after a test or measurement, but do not necessarily need to be HAND-HELD during the test or measurement.

Type A **CURRENT SENSOR**: a CURRENT SENSOR designed to be applied around or removed from uninsulated HAZARDOUS LIVE conductors. Type A CURRENT SENSORS have defined HAND-HELD or hand-manipulated parts providing protection against electric shock from the conductor being measured, and also have protection against short-circuits between wires and busbars during clamping.

Type B **CURRENT SENSOR**: a CURRENT SENSOR which has protection against a short-circuit between wires or busbars during clamping but without defined HAND-HELD or hand-manipulated parts which provide protection against electric shock during clamping. Additional protective means are necessary to avoid electric shock from HAZARDOUS LIVE conductors which cannot be de-energised during application or removal of the CURRENT SENSOR.

NOTE Type B CURRENT SENSORS include flexible CURRENT SENSORS.

Type C **CURRENT SENSOR**: a CURRENT SENSOR without protection against short-circuits between wires or busbars during clamping. Type C CURRENT SENSORS are intended to be applied to or removed from uninsulated HAZARDOUS LIVE conductors only when they are de-energised.

NOTE Type C CURRENT SENSORS include some types of split-core transducers.

2 Normative references

This clause of part 1 is applicable except as follows:

Addition:

~~IEC 61010-031, *Safety requirements for electrical equipment for measurement, control and laboratory use – Safety requirements for hand-held probe assemblies for electrical measurement and test*~~

