IEC 61010-031

Edition 2.0 2015-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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GROUP SAFETY PUBLICATION
PUBLICATION GROUPÉE DE SÉCURITÉ

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

Règles de sécurité pour appareils électriques de mesurage, de régulation et de laboratoire –
Partie 031: Exigences de sécurité pour sondes équipées tenues à la main pour mesurage et essais électriques

IEC 61010-031:2015-05(en-fr)

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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

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61010-031 has been prepared by IEC technical committee 66: Safety of measuring, control and laboratory equipment.

It has the status of a group safety publication in accordance with IEC GUIDE 104.

IEC 61010-031 is a stand-alone standard. This second edition cancels and replaces the first edition published in 2002 and Amendment 1:2008. This edition constitutes a technical revision.

This edition includes the following significant changes from the first edition, as well as numerous other changes:

a) Voltages above the levels of 30 V r.m.s., 42,4 V peak, or 60 V d.c. are deemed to be HAZARDOUS LIVE instead of 33 V r.m.s., 46,7 V peak, or 70 V d.c.

b) Servicing is now included within the scope.

c) Extended environmental conditions are included within the scope.

d) New terms have been defined.

e) Tests for REASONABLY FORESEEABLE MISUSE have been added, in particular for fuses.

f) Additional instruction requirements for probe assembly operation have been specified.

g) Limit values for ACCESSIBLE parts and for measurement of voltage and touch current have been modified.

h) SPACINGS requirements for mating of CONNECTORS have been modified.

i) PROBE TIPS and SPRING-LOADED CLIPS requirements have been modified. The PROTECTIVE FINGERGUARD replace the BARRIER with new requirements.

j) Insulation requirements (6.5) and test procedures (6.6.5) have been rewritten and aligned when relevant with Part 1. Specific requirements have been added for solid insulation and thin-film insulation.

k) The terminology for MEASUREMENT CATEGORY I has been replaced with the designation “not RATED for measurements within MEASUREMENT CATEGORIES II, III, or IV”.

l) The flexing/pull test (6.7.4.3) has been partially rewritten.

m) Surface temperature limits (Clause 10) have been modified to conform to the limits of IEC Guide 117.

n) Requirements for resistance of PROBE WIRES to mechanical stresses have been added in Clause 12 and a new Annex D.

o) Requirements have been added regarding the prevention of HAZARD from arc flash and short-circuits for SPRING-LOADED CLIPS.

p) A new informative Annex E defines the dimension of the 4 mm banana CONNECTORS.

The text of this standard is based on the following documents:

FDIS	Report on voting
66/569/FDIS	66/571/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 61010 series, under the general title, *Safety requirements for electrical equipment for measurement, control, and laboratory use*, may be found on the IEC website.

In this standard, the following print types are used:

– requirements and definitions: in roman type;

– NOTES and EXAMPLES: in smaller roman type;

– *conformity and tests: in italic type;*

– terms used throughout this standard which have been defined in Clause 3: SMALL ROMAN CAPITALS.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
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