

SLOVENSKI STANDARD
SIST EN 61010-2-031:1995
01-avgust-1995

Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-031: Particular requirements for hand held probe assemblies for electrical measurement and test (IEC 1010-2-031:1993)

Safety requirements for electrical equipment for measurement, control and laboratory use -- Part 2-031: Particular requirements for hand-held probe assemblies for electrical measurement and test

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Sicherheitsbestimmungen für elektrische Meß-, Steuer-, Regel- und Laborgeräte -- Teil 2-031: Besondere Anforderungen an handgehaltene Meß-, Prüf- und Verbindungsleitungen (Meßzubehör) zum (elektrischen) Messen, Prüfen und Experimentieren

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Règles de sécurité pour appareils électriques de mesurage, de régulation et de laboratoire -- Partie 2-031: Prescriptions particulières pour sondes équipées manuelles de mesurage et d'essais électriques

Ta slovenski standard je istoveten z: EN 61010-2-031:1994

ICS:

19.080	Električno in elektronsko preskušanje	Electrical and electronic testing
71.040.10	Kemijski laboratoriji. Laboratorijska oprema	Chemical laboratories. Laboratory equipment

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en

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ICS 19.080

Descriptors: Electrical equipment for measurement, electrical equipment for control, electrical equipment for laboratory use, safety requirements, hand-held probe assemblies

ENGLISH VERSION

Safety requirements for electrical equipment for measurement, control and laboratory use
Part 2-031: Particular requirements for hand-held probe assemblies for electrical measurement and test
(IEC 1010-2-031:1993)

Règles de sécurité pour appareils électriques de mesure, de régulation et de laboratoire

Partie 2-031: Prescriptions particulières pour sondes équipées manuelles de mesure et d'essais électriques
(CEI 1010-2-031:1993)

Sicherheitsbestimmungen für elektrische Meß-, Steuer-, Regel- und Laborgeräte

Teil 2-031: Besondere Anforderungen an handgehaltene Meß-, Prüf- und Verbindungsleitungen (Meßzubehör) zum (elektrischen) Messen, Prüfen und Experimentieren
(IEC 1010-2-031:1993)

SIST EN 61010-2-031:1995

This European Standard was approved by CENELEC on 1994-03-08. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B-1050 Brussels

FOREWORD

The CENELEC questionnaire procedure, performed for finding out whether or not the International Standard IEC 1010-2-031:1993 could be accepted without textual changes, has shown that no common modifications were necessary for the acceptance as European Standard.

The reference document was submitted to the CENELEC members for formal vote and was approved by CENELEC as EN 61010-2-031 on 8 March 1994.

The following dates were fixed:

- latest date of publication of an identical national standard (dop) 1995-03-15
- latest date of withdrawal of conflicting national standards (dow) 1995-03-15

For products which have complied with the relevant national standard before 1995-03-15, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2000-03-15.

This Part 2 is intended to be used in conjunction with EN 61010-1:1993. Consideration may be given to future editions of, or amendments to EN 61010-1.

This Part 2 supplements or modifies the corresponding clauses in EN 61010-1. Where a particular subclause of Part 1 is not mentioned in this Part 2, that subclause applies as far as is reasonable. Where this part states "addition", "modification" or "replacement", the relevant text in Part 1 should be adapted accordingly.

ENDORSEMENT NOTICE

The text of the International Standard IEC 1010-2-031:1993 was approved by CENELEC as a European Standard without any modification.

**NORME
INTERNATIONALE
INTERNATIONAL
STANDARD**

**CEI
IEC
1010-2-031**

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GROUP SAFETY PUBLICATION

**Règles de sécurité pour appareils électriques
de mesurage, de régulation et de laboratoire**

Partie 2-031:

Prescriptions particulières pour SONDES ÉQUIPÉES
manuelles de mesurage et d'essais électriques

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

Part 2-031:

Particular requirements for hand-held PROBE
ASSEMBLIES for electrical measurement
and test

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT
FOR MEASUREMENT, CONTROL, AND LABORATORY USEPart 2-031: Particular requirements for hand-held PROBE
ASSEMBLIES for electrical measurement and test

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international cooperation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters, prepared by technical committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 3) They have the form of recommendations for international use published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.

International Standard 1010-2-031 has been prepared by IEC technical committee No. 66: Safety of measuring, control, and laboratory equipment.

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

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

DIS	Report on Voting
66E(CO)13	66(CO)53*

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

This Part 2 is intended to be used in conjunction with IEC 1010-1. It was established on the basis of the first edition (1990) and its Amendment 1 (1991). Consideration may be given to future editions of, or amendments to, IEC 1010-1.

* TC 66 has taken over the scope of SC 66E

This Part 2 supplements or modifies the corresponding clauses in IEC 1010-1 so as to convert that publication into the IEC standard: Safety requirements for hand-held PROBE ASSEMBLIES for electrical measurement and test.

Where a particular subclause of Part 1 is not mentioned in this Part 2, that subclause applies as far as is reasonable. Where this part states "addition", "modification" or "replacement", the relevant requirement, test specification or note in Part 1 should be adapted accordingly.

In this standard:

the following print types are used:

- requirements: in roman type;
- NOTES: in small roman type;
- *compliance*: in italic type;
- terms used throughout this standard which have been defined in clause 3: SMALL ROMAN CAPITALS.

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SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE

Part 2-031: Particular requirements for hand-held PROBE ASSEMBLIES for electrical measurement and test

1 Scope and object

This clause of part 1 is applicable except as follows:

1.1 Scope

Replacement:

This International Standard applies to hand-held and hand-manipulated PROBE ASSEMBLIES of the types described below, and related accessories. These PROBE ASSEMBLIES are for use in the interface between an electrical phenomenon and a measuring or test instrument. They may be stand-alone PROBE ASSEMBLIES which are themselves within the scope of part 1, or accessories to other equipment within the scope of part 1.

a) Low-voltage and high-voltage, non-attenuating PROBE ASSEMBLIES (type A).

Non-attenuating PROBE ASSEMBLIES for direct connection to voltages not exceeding 63 kV r.m.s. or d.c. They do not incorporate active components, nor are they intended to provide a voltage divider function or a signal conditioning function, but they may contain passive non-attenuating components such as fuses.

b) High-voltage attenuating or divider PROBE ASSEMBLIES (type B).

Attenuating or divider PROBE ASSEMBLIES for direct connection to voltages exceeding 1 kV r.m.s. or d.c. but not exceeding 63 kV r.m.s. or d.c. The divider function may be carried out wholly within the PROBE ASSEMBLY, or partly in the test or measuring equipment intended to be used with the PROBE ASSEMBLY.

c) Low-voltage attenuating or divider PROBE ASSEMBLIES (type C).

Attenuating, divider or other signal conditioning PROBE ASSEMBLIES for direct connection to voltages exceeding 30 V r.m.s. or 42,4 V peak or 60 V d.c., but not exceeding 1 kV r.m.s., peak or d.c. The signal conditioning function may be carried out wholly within the PROBE ASSEMBLY, or partly within the test or measuring equipment intended to be used with the PROBE ASSEMBLY.

2 Normative references

This clause of part 1 is applicable.

3 Definitions

This clause of part 1 is applicable with the following additions:

Additional definitions:

3.101 PROBE ASSEMBLIES and parts

3.101.1 PROBE ASSEMBLY: A device for making temporary contact between measuring or test equipment and a point on an electrical circuit being measured or tested. It includes the cable and the means for making a connection with the measuring or test equipment.

NOTE - See figures 101 and 102 for examples of PROBE ASSEMBLIES and an explanation of the function of their parts.

3.101.2 PROBE TIP: The part of the PROBE ASSEMBLY which makes the connection to the point being measured or tested.

3.101.3 REFERENCE CONNECTOR: A device used to connect a reference point in the measuring or test equipment (usually the FUNCTIONAL EARTH TERMINAL) to a reference point on the electrical circuit being measured or tested.

4 Tests

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This clause of part 1 is applicable with the following addition:

Additional subclause: <https://standards.iteh.ai/catalog/standards/sist/fdde38b6-16a6-4559-b2a8-0bc9525342b9/sist-en-61010-2-031-1995>

4.4.2.101 Components

Components (except HIGH INTEGRITY components) of type B and type C PROBE ASSEMBLIES shall be short-circuited or open-circuited, whichever is less favourable.

5 Marking and documentation

This clause of part 1 is applicable except as follows:

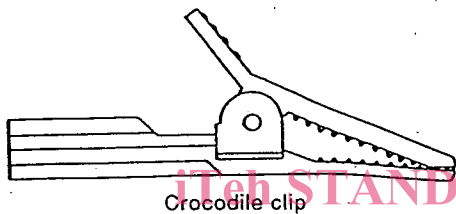
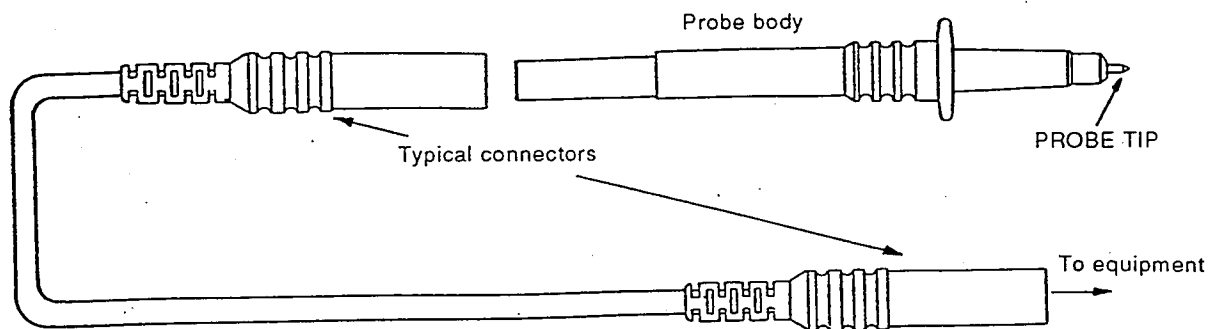
5.1.2 Identification

Replacement:

Each PROBE ASSEMBLY and separable mating part of a PROBE ASSEMBLY shall, as a minimum, be identified by marking showing:

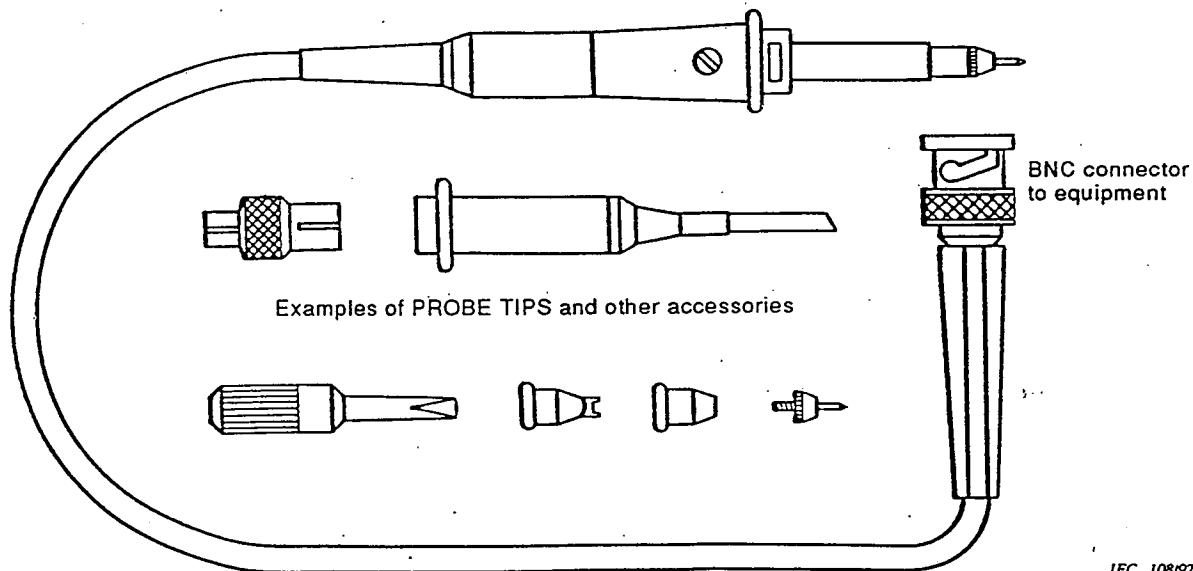
- the name or registered trade mark of the manufacturer or supplier;
- in addition for types B and C only, the model number or name or other means of identifying the PROBE ASSEMBLY or part.

NOTE - It is not necessary to mark small general-purpose accessory parts such as alligator/crocodile clips, spade lugs, and screw-on or detachable PROBE TIPS.



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REFERENCE CONNECTOR



IEC 108/92

Figure 101 – Examples of type A and type C PROBE ASSEMBLIES