

---

**Varnostne zahteve za električno opremo za meritve, nadzor in laboratorijsko uporabo - 031. del: Varnostne zahteve za ročne sonde za električne meritve in preskušanje - Dopnilo A11**

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

Sicherheitsbestimmungen für elektrische Mess-, Steuer-, Regel- und Laborgeräte - Teil 031: Sicherheitsbestimmungen für handgehaltenes Messzubehör zum elektrischen Messen und Prüfen

Exigences de sécurité pour appareils électriques de mesure, de régulation et de laboratoire - Partie 2-031: Exigences de sécurité pour sondes équipées tenues à la main pour mesurage et essais électriques

**Ta slovenski standard je istoveten z: EN 61010-031:2015/A11:2021**

---

**ICS:**

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

**SIST EN 61010-031:2015/A11:2022**      **en,fr,de**

**iTeh STANDARD  
PREVIEW  
(standards.iteh.ai)**

SIST EN 61010-031:2015/A11:2022

<https://standards.iteh.ai/catalog/standards/sist/0201970f-8037-4798-8cc2-1a733678549e/sist-en-61010-031-2015-a11-2022>

EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 61010-031:2015/A11**

November 2021

ICS 19.080

English Version

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

Exigences de sécurité pour appareils électriques de mesurage, de régulation et de laboratoire - Partie 031: Exigences de sécurité pour sondes équipées portatives et manipulées à la main pour mesurage et essais électriques

Sicherheitsbestimmungen für elektrische Mess-, Steuer-, Regel- und Laborgeräte - Teil 031: Sicherheitsbestimmungen für handgehaltenes Messzubehör zum elektrischen Messen und Prüfen

This amendment A11 modifies the European Standard; it was approved by CENELEC on 2021-08-02. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 CEN-CENELEC Management Centre or to any CENELEC member.

This amendment 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

**EN 61010-031:2015/A11:2021 (E)****European foreword**

This document (EN 61010-031:2015/A11:2021) has been prepared by CLC/TC 66X "Safety of measuring, control, and laboratory equipment".

The following dates are fixed:

- latest date by which this document has to be (dop) 2022-05-12  
implemented at national level by publication of  
an identical national standard or by  
endorsement
- latest date by which the national standards (dow) 2024-11-12  
conflicting with this document have to be  
withdrawn

This document amends EN 61010-031:2015/A1:2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a Standardization Request given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For relationship with EU Directive(s) / Regulation(s), see informative Annex ZZ, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

SIST EN 61010-031:2015/A11:2022

<https://standards.iteh.ai/catalog/standards/sist/0201970f-8037-4798-8cc2-1a733678549e/sist-en-61010-031-2015-a11-2022>

## 1 Modifications to Clause 2, “Normative references”

Replace IEC 60027 (all parts), IEC 61180-1:1992 and IEC 61180-2 with the following documents in Clause 2 and throughout the document:

“

EN 60027-1:2006,<sup>1</sup> *Letters symbols to be used in electrical technology- Part 1: General (IEC 60027-1:1992+A1:1997)*

EN IEC 60027-2:2019, *Letter symbols to be used in electrical technology - Part 2: Telecommunications and electronics (IEC 60027-2:2019)*

EN 60027-3:2007, *Letter symbols to be used in electrical technology - Part 3: Logarithmic and related quantities, and their units (IEC 60027-3:2002)*

EN 60027-4:2007, *Letter symbols to be used in electrical technology - Part 4: Rotating electrical machines (IEC 60027-4:2006)*

EN 60027-6:2007, *Letter symbols to be used in electrical technology - Part 6: Control technology (IEC 60027-6:2006)*

EN 60027-7:2010, *Letter symbols to be used in electrical technology - Part 7: Power generation, transmission and distribution (IEC 60027-7:2010)*

EN 61180:2016, *High-voltage test techniques for low-voltage equipment - Definitions, test and procedure requirements, test equipment (IEC 61180:2016)*

## 2 Modifications to subclause 6.5.2.5.1.1

Replace the second paragraph with the following note:

“

NOTE 1 The manufacturer is supposed to take the expected life of the probe assembly into account when selecting insulating materials.”

As a result of this, renumber the existing note as NOTE 2.

## 3 Modifications to 6.5.2.6, “Solid insulation for probe assemblies which are not RATED for MEASUREMENT CATEGORIES”

Replace the second paragraph with the following note:

“

NOTE 1 The manufacturer is supposed to take the expected life of the probe assembly into account when selecting insulating materials.”

As a result of this, renumber the existing note as NOTE 2.

## 4 Modifications to subclause 6.6.1, “General”

Replace the first sentence of the second paragraph with the following sentence:

“Test equipment for the voltage tests is specified in EN 61180:2016.”

---

<sup>1</sup> As impacted by EN 60027-1:2006/A2:2007.

**EN 61010-031:2015/A11:2021 (E)****5 Modification to 6.6.5.1, “The a.c. voltage test”**

*Replace the first sentence of the first paragraph with the following sentence:*

*“The voltage tester shall have a regulated output capable of maintaining the test voltage throughout the test within  $\pm 5\%$  of the specified value.”*

**6 Modification to 6.6.5.2, “The 1 min d.c. voltage test”**

*Replace the first sentence of the first paragraph with the following sentence:*

*“The voltage tester shall have a regulated output capable of maintaining the test voltage throughout the test within  $\pm 5\%$  of the specified value.”*

**7 Modification to 6.6.5.3, “The impulse voltage test”**

*Replace the second sentence of the first paragraph with the following sentence:*

*“The impulse voltage test is carried out with a 1,2/50  $\mu$ s waveform (see EN 61180:2016, Figure 1).”*

**8 Modification to Annex ZA, “Normative references to international publications with their corresponding European publications”**

*Replace the Annex ZA with the following:*

“

**ITEH STANDARD  
PREVIEW  
(standards.iteh.ai)**

SIST EN 61010-031:2015/A11:2022

<https://standards.iteh.ai/catalog/standards/sist/0201970f-8037-4798-8cc2-1a733678549e/sist-en-61010-031-2015-a11-2022>

## Annex ZA

### (normative)

### Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

Publication	Year	Title	EN/HD	Year
IEC 60529	-	Degrees of protection provided by enclosures (IP Code)	EN 60529 + A1 + A2	1991 2000 2013
IEC 61010-1	2010	Safety requirements for electrical equipment for measurement, control and laboratory use - Part 1: General requirements	EN 61010-1	2010
IEC Guide 104	-	The preparation of safety publications and the use of basic safety publications and group safety publications	IEC Guide 104	2019
ISO/IEC Guide 51	2014	Safety aspects - Guidelines for their inclusion in standards	ISO/IEC Guide 51	2014

“

EN 61010-031:2015/A11:2021 (E)

**9 Addition of Annex ZZ, “Relationship between this European standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered”**

*Add the following Annex ZZ:*

“

**iTeh STANDARD  
PREVIEW  
(standards.iteh.ai)**

SIST EN 61010-031:2015/A11:2022

<https://standards.iteh.ai/catalog/standards/sist/0201970f-8037-4798-8cc2-1a733678549e/sist-en-61010-031-2015-a11-2022>



## Annex ZZ (informative)

### Relationship between this European standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered

This European Standard has been prepared under a Commission's standardization request relating to harmonized standards in the field of the Low Voltage Directive, M/511, to provide one voluntary means of conforming to safety objectives of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZ.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding safety objectives of that Directive, and associated EFTA regulations.

**Table ZZ.1 — Correspondence between this European standard and Annex I of Directive 2014/35/EU [2014 OJ L96]**

Safety objectives of Directive 2014/35/EU (Annex I)	Clause(s) / subclause(s) of this EN	Remarks / Notes
<b>1. General conditions</b>		
1 (a) the essential characteristics, the recognition and observance of which will ensure that electrical equipment will be used safely and in applications for which it was made, shall be marked on the electrical equipment, or, if this is not possible, on an accompanying document	5	This standard only deals with accessories for measuring equipment.
1 (b) the electrical equipment, together with its component parts, shall be made in such a way as to ensure that it can be safely and properly assembled and connected	5.4	
1 (c) the electrical equipment shall be so designed and manufactured as to ensure that protection against the hazards set out in points 2 and 3 is ensured, providing that the equipment is used in applications for which it was made and is adequately maintained	5.4, Annex F See also the details in points 2 and 3	
<b>2. Protection against hazards arising from the electrical equipment</b>		
Measures of a technical nature shall be laid down in accordance with point 1, in order to ensure that:		
2 (a) persons and domestic animals are adequately protected against the danger of physical injury or other harm which might be caused by direct or indirect contact	4, 6, 11.2, Annex A, Annex D	

## EN 61010-031:2015/A11:2021 (E)

Safety objectives of Directive 2014/35/EU (Annex I)	Clause(s) / subclause(s) of this EN	Remarks / Notes
2 (b) temperatures, arcs or radiation which would cause a danger, are not produced	4, 4.5.2, 6.3.1, 6.3.2, 9, 12.2, 13	
2 (c) persons, domestic animals and property are adequately protected against non-electrical dangers caused by the electrical equipment which are revealed by experience	7, 12.3.6	The products dealt with in this standard are all passive accessories.
2 (d) the insulation is suitable for foreseeable conditions	4, 6.7, 12.3, Annex D	
<b>3. Protection against hazards which may be caused by external influences on the electrical equipment</b> Technical measures shall be laid down in accordance with point 1, in order to ensure that the electrical equipment:		
3 (a) meets the expected mechanical requirements in such a way that persons, domestic animals and property are not endangered	4, 7, 8, 12.3.6	
3 (b) is resistant to non-mechanical influences in expected environmental conditions, in such a way that persons, domestic animals and property are not endangered	4, 6.5.2.5.1.1, 10	
3 (c) does not endanger persons, domestic animals and property in foreseeable conditions of overload	4, 9, 12, 13	

**WARNING 1** — Presumption of conformity stays valid only as long as a reference to this European standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

**WARNING 2** — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

“