SLOVENSKI STANDARD
oSIST prEN IEC 61010-2-032:2026

01-maj-2026

Varnostne zahteve za električno opremo za meritve, nadzor in laboratorijsko uporabo - 2-032. del: Posebne zahteve za ročne in ročno vodene tokovne senzorje za električno preskušanje in meritve

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

Sicherheitsbestimmungen für elektrische Mess-, Steuer-, Regel- und Laborgeräte – Teil 2-032: Besondere Anforderungen für handgehaltene und handbediente Stromsonden für elektrische Prüfungen und Messungen

Exigences de sécurité pour appareils électriques de mesurage, de régulation et de laboratoire - Partie 2-032: Exigences particulières pour les capteurs de courant, portatifs et manipulés manuellement, pour essai électrique et mesurage

Ta slovenski standard je istoveten z: **prEN IEC 61010-2-032:2026**

ICS:

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

oSIST prEN IEC 61010-2-032:2026 **en,fr,de**

66/877/CDV

COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER: **IEC 61010-2-032 ED6**	
DATE OF CIRCULATION: **2026-03-13**	CLOSING DATE FOR VOTING: **2026-06-05**
SUPERSEDES DOCUMENTS: **66/865/CD, 66/870/CC**	

IEC TC 66 : SAFETY OF MEASURING, CONTROL AND LABORATORY EQUIPMENT	
SECRETARIAT: United Kingdom	SECRETARY: Ms Stephanie Lavy
OF INTEREST TO THE FOLLOWING COMMITTEES: TC 38,TC 85	HORIZONTAL FUNCTION(S):
ASPECTS CONCERNED: Safety	
☒ SUBMITTED FOR CENELEC PARALLEL VOTING	☐ NOT SUBMITTED FOR CENELEC PARALLEL VOTING

Attention IEC-CENELEC parallel voting

The attention of IEC National Committees, members of CENELEC, is drawn to the fact that this Committee Draft for Vote (CDV) is submitted for parallel voting.

The CENELEC members are invited to vote through the CENELEC online voting system.

This document is still under study and subject to change. It should not be used for reference purposes.

Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Recipients of this document are invited to submit, with their comments, notification of any relevant "In Some Countries" clauses to be included should this proposal proceed. Recipients are reminded that the CDV stage is the final stage for submitting ISC clauses. (SEE AC/22/2007 OR NEW GUIDANCE DOC).

TITLE:

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

PROPOSED STABILITY DATE: 2031

NOTE FROM TC/SC OFFICERS:

Please note: We kindly ask NCs to submit their comments by 2026-05-29 as the WG has a planned meeting on June 4th and 5th, 2026.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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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

FOREWORD

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8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 61010-2-032 has been prepared by IEC technical committee 66: Safety of measuring, control and laboratory equipment. It is an International Standard.

This sixth edition cancels and replaces the fifth edition published in 2023. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) Introduction has been reorganized;
b) IEC 61010-2-130 is used in conjunction with this document for equipment in both scopes;
c) impact of amendment 2 to IEC 61010-1:2010+A1:2016 has been taken into consideration:
    1) Clause 2 and Bibliography have been updated;
    2) MAINS definition has been modified;

3) in 4.3.2.5, specific requirements for power supply have been deleted since Amendment 2 of IEC 61010-1 take them now into account;

4) Figure 101 has been replaced by Figure 3;

5) modifications of 6.8.3.1 and 6.8.3.2 have been deleted;

6) conformity statements of K.3.2 and K.101.2 have been modified;

7) a few conformity statements for constructional requirements of solid insulation have been modified;

d) definition of MEASUREMENT CATEGORY has been modified, added a definition for MEASURING CIRCUITS and HIGH INTEGRITY component;

e) added a new 3.101 for abbreviated terms and a Table 101;

f) in 4.4.2.101, requirements for surge protective components have been modified;

g) former symbol 101 for Type B and Type C current sensors has been deleted and former symbol 102 is now symbol 101;

h) in 5.1.5.101.2, markings of terminals for MEASUREMENT CATEGORIES have been completed, including the nature of the voltage AC or DC only which is now explicitly permissible;

i) in 6.6.101.5, the conformity statement has been modified;

j) a note has been added to 6.7.1.3 for guidance about signification of long-term for CREEPAGE DISTANCES;

k) in 6.101.4 and Annex D, insulation of type C and type D current sensors have been amended;

l) subclause 9.1 has been modified;

m) 9.101.1 and 9.101.2.1 have been redrafted for clarification, in particular to take into account the recommendations of new Annex N about REASONABLY FORESEEABLE MISUSE and the levels of protection;

n) a new 9.101.4 for protection against the spread of fire when opening internally the secondary circuit of a current sensor with a current transformer;

o) the reference test method for 10.5.101 has been defined;

p) requirements for SPD have been added to 14.8;

q) requirements for capacitors have been added to 14.9;

r) requirements for HIGH INTEGRITY components have been added in a new 14.102;

s) Clause 101 has been deleted; its requirements have need moved to Clause 9 and Clause 16;

t) Annex D has been modified to consider the situations of current sensors in closed and open position;

u) installation limit of CAT IV has been modified in Figure AA.1;

v) a new Annex BB for MEASURING CIRCUIT has been added; other annexes have been renumbered.

The text of this International Standard is based on the following documents:

Draft	Report on voting
66/xxx/FDIS	66/xxx/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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*, can be found on the IEC website.

This document is to be used in conjunction with IEC 61010-1:2010, IEC 61010-1:2010/AMD1:2016 and IEC 61010-1:2010/AMD2:—[1].

This document supplements or modifies the corresponding clauses in IEC 61010-1 so as to convert that publication into the IEC standard: *Particular requirements for hand-held and hand-manipulated current sensors for electrical test and measurement*.

Where a particular subclause of IEC 61010-1 is not mentioned in this document, that subclause applies as far as is reasonable. Where this document states "addition", "modification", "replacement", or "deletion", the relevant requirement, test specification or note in IEC 61010-1 should be adapted accordingly.

In this standard:

a) the following print types are used:
   - requirements: in roman type;
   - NOTES: in small roman type;
   - *conformity and tests: in italic type;*
   - terms used throughout this standard which have been defined in Clause 3: SMALL ROMAN CAPITALS;

b) subclauses, figures, tables and notes which are additional to those in IEC 61010-1 are numbered starting from 101. Additional annexes are lettered starting from AA and additional list items are lettered from aa).

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The "colour inside" logo on the cover page of this document indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

[1] Second amendment under preparation. Stage at the time of publication: IEC FDIS 61010-1/AMD2:2026.

INTRODUCTION

IEC 61010-1 specifies the safety requirements that are generally applicable to all equipment within its scope. For certain types of equipment, the requirements of IEC 61010-1 and its amendments will be supplemented or modified by the special requirements of one or more standard from the IEC 61010-2 series which is/are read in conjunction with the requirements of IEC 61010-1.

This document and IEC 61010-2-030, IEC 61010-2-033 and IEC 61010-2-034 specify the safety requirements for equipment having testing or measuring circuits which are connected for test or measurement purposes to devices or circuits outside the measurement equipment itself.

According to the type of equipment and combination of functions, several IEC 61010 standards are used in conjunction (see Table 0.1).

Table 0.1 – IEC 61010 standards to be applied in case of combined equipment

Type of equipment (example)	Applicable IEC 61010 standards	Additional standards to be applied in case of combined equipment with additional features or equipment designed for specific use					
		Hand-held current sensing	Multimeter function	Insulation resistance test or measurement function	Other measuring and test functions	Hand-held and hand-manipulated probe	Equipment used in educational establishment by pupil OPERATORS
Hand-held and hand-manipulated current sensors	Part 1 + Part 2-032	Function included in the scope	Part 2-033 is included	Part 2-034 is used in conjunction	Other functions are included	Part 031 applies to relevant accessories	Part 2-130 is used in conjunction
Hand-held multimeters and other meters for measuring mains voltage	Part 1 + Part 2-033	Part 2-032 supersedes	Function included in the scope	Part 2-034 is used in conjunction	It depends		
Insulation resistance and test equipment for electric strength	Part 1 + Part 2-034	Part 2-032 is used in conjunction	Not apply	Function included in the scope	Other functions are included		
Other equipment having testing or measuring circuits	Part 1 + Part 2-030	Part 2-032 is used in conjunction	It depends	Part 2-034 supersedes	Functions included in the scope		

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

All Clauses and their subclauses, all Annexes, their Clauses and subclauses, and Bibliography of IEC 61010-1:2010, IEC 61010-1:2010/AMD1:2016 and IEC 61010-1:2010/AMD2:—[2] apply except as follows.

1.1.1 Equipment included in scope

Replace the existing text of 1.1.1 with the following new text:

This part of IEC 61010 specifies safety requirements for HAND-HELD and hand-manipulated current sensors intended for measuring, detecting or injecting current, or indicating current waveforms on circuits without physically opening the current path of the circuit being measured.

These current sensors are hand-manipulated before and/or after a test or measurement, but are not necessarily HAND-HELD during the test or measurement. They can be stand-alone current sensors or accessories to other equipment or parts of combined equipment. These include measurement circuits which are part of electrical test and measurement equipment, laboratory equipment, or process control equipment.

NOTE 1 Combined equipment is equipment that is electrically connected to a current sensor by means of a permanent connection which can be detached only by the use of a TOOL.

NOTE 2 Some current sensors are also known as current clamps, CLAMP MULTIMETERS and current probes.

The types of current sensors covered by this document are defined in Annex GG.

1.1.2 Equipment excluded from scope

Add the following new paragraph at the end of 1.1.2:

This document does not apply to current sensors used as FIXED EQUIPMENT.

1.2 Aspects

1.2.1 Aspects included in scope

Replace item c) and item h) from the list of the second paragraph of 1.2.1 with the following new item c) and item h):

c) spread of fire or arc flash from the current sensor (see Clause 9);

h) HAZARDS related to the use and REASONABLY FORESEEABLE MISUSE of the current sensor (see Clause 16 and Annex BB).

[2] Second amendment under preparation. Stage at the time of publication: IEC FDIS 61010-1/AMD2:2026.

Insert the following new paragraph between the third paragraph and the NOTE of 1.2.1:

Annex BB and Annex CC provide guidance to equipment manufacturers on HAZARDS that should be considered for equipment intended for performing tests and measurements on hazardous conductors, including MAINS conductors and telecommunication network conductors.

1.2.2 Aspects excluded from scope

Add a new item aa) after item h) of the list of 1.2.2:

aa) HAZARDS related to the use by pupil OPERATORS in educational establishments (see IEC 61010-2-130).

2 Normative references

Replace the following existing normative reference:

IEC 60695-11-10, *Fire hazard testing – Part 11-10: Test flames – 50 W horizontal and vertical flame test methods*

with the following new normative references:

IEC 60695-11-10:2013, *Fire hazard testing – Part 11-10: Test flames – 50 W horizontal and vertical flame test methods*

Insert the following five new normative references in Clause 2:

IEC 60364-4-44:2024*, Low-voltage electrical installations – Part 4-44: Protection for safety – Protection against voltage disturbances and electromagnetic disturbances*

IEC 61010-1:2010, *Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements*
IEC 61010-1:2010/AMD1:2016
IEC 61010-1:2010/AMD2:—[3]

IEC 61010-2-030:—[4], *Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-030: Special requirements for testing and measuring circuits*

IEC 61010-2-034:—[5], *Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-034: Particular requirements for measurement equipment for insulation resistance and test equipment for electric strength*

[3] Second amendment under preparation. Stage at the time of publication: IEC FDIS 61010-1/AMD2:2026.

[4] Fourth edition under preparation. Stage at the time of publication: IEC CDV 61010-2-030:2026.

[5] Fourth edition under preparation. Stage at the time of publication: IEC CDV 61010-2-034:2026.

IEC 61010-031:2022, *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*

Replace the existing title of Clause 3 with the following new title:

3 Terms, definitions and abbreviated terms

Add the following two new terms and definitions after 3.1.8:

3.1.101
HAND-HELD
intended to be supported by one hand during NORMAL USE

3.1.102
CLAMP MULTIMETER
HAND-HELD multi-range and multifunction measuring instrument intended to measure current on a live MAINS without physically opening the conductors, voltage on a live MAINS and other electrical quantities such as resistance

Add the following four new terms and definitions after item 3.2.5:

3.2.101
MEASURING CIRCUIT
testing or measuring circuit (internal to the equipment) which is connected for test or measurement purposes to devices or circuits outside the equipment itself

3.2.102
JAW
part of a current sensor which surrounds or partially surrounds the conductor under test

3.2.103
JAW END
part of the JAW where opening occurs while clamping around a conductor

3.2.104
PROTECTIVE FINGERGUARD
part of the enclosure that indicates the limit of safe access and that reduces the RISK of the operator touching HAZARDOUS LIVE parts

Replace the definition of 3.5.4 with the following new definition:

3.5.4
MAINS
AC or DC electrical power distribution system (external to the equipment)

NOTE 1 to entry: MAINS include public or private electrical utilities and, unless otherwise specified in this document, equivalent sources such as motor-driven generators and uninterruptible power supplies.

NOTE 2 to entry: This definition differs from the IEC 61010-1:2010/AMD2:— definition by allowing voltages greater than 1 000 V AC and 1 500 V DC and MAINS can be used to power the equipment or be measured.

Add the following two new terms and definitions after 3.5.24:

3.5.101
HIGH INTEGRITY
providing a degree of protection against HAZARDS equivalent to two levels of protection

NOTE 1 to entry: A HIGH INTEGRITY part is considered as not subject to failure when tests under fault conditions are made.

NOTE 2 to entry: See reinforced protection defined in IEC 60050-903:2013, 903-02-08.

3.5.102
MEASUREMENT CATEGORY
numeral defining MEASURING CIRCUITS according to the type of MAINS to which they are intended to be connected

Add the following new term and definition after 3.6.12:

3.6.101
UNINSULATED CONDUCTOR
conductor which is not insulated by solid insulation or which is insulated by solid insulation that does not meet the requirements for BASIC INSULATION for the relevant voltage to earth

Add the new following and a new Table 101 3.101 after 3.6:

3.101 Abbreviated terms

The list of abbreviated terms and symbols used in this document is given in Table 101.

Table 101 – Abbreviated terms

Abbreviated term or symbol	Term	Note
AC	alternating current	Pertaining to alternating electric quantities such as voltage or current, to devices operated with these, or to quantities associated with these devices (IEC 60050-151:2001, 151-15-01, modified).
DC	direct current	Pertaining to time-independent electric quantities such as voltage or current, to devices operated with direct voltage and current, or to quantities associated with these devices (IEC 60050-151:2001, 151-15-02, modified).
RMS	root-mean-square	For a time-dependent quantity, positive square root of the mean value of the square of the quantity taken over a given time interval (IEC 60050-103:2009/AMD1:2017, 103-02-03, modified).
SPD	surge protective device	Surge protective devices connected to low-voltage power systems described in IEC 61643-11.
SPC	surge protective component	Components for low-voltage surge protective devices (SPD) described in IEC 61643 series such as IEC 61643-311, IEC 61643-331, IEC 61643-341.
OVC	OVERVOLTAGE CATEGORY	"OVC" precedes the OVERVOLTAGE CATEGORY numeral.
CAT	MEASUREMENT CATEGORY	"CAT" precedes the MEASUREMENT CATEGORY numeral.
B	BASIC INSULATION or SUPPLEMENTARY INSULATION	BASIC INSULATION or SUPPLEMENTARY INSULATION is required or allowed.
D	DOUBLE INSULATION or REINFORCED INSULATION	DOUBLE INSULATION or REINFORCED INSULATION is required or allowed.
D_1	CLEARANCE for TRANSIENT OVERVOLTAGE	D_1 is the CLEARANCE that would be applicable to a TRANSIENT OVERVOLTAGE with the shape of a 1,2 × 50 µs impulse (see K.3.2).
D_2	CLEARANCE for WORKING VOLTAGE	D_2 is the CLEARANCE that would be applicable to the peak WORKING VOLTAGE without any TRANSIENT OVERVOLTAGE (see K.3.2).
U_m	maximum peak value	U_m is maximum peak value of the working voltage plus the maximum additional transient overvoltage (see K.3.2).

4.3.2.6 Input and output voltages

Replace the existing title and text of 4.3.2.6 with the following new title and text:

4.3.2.6 Input and output voltages or currents

Input and output voltages or currents, including floating voltages but excluding the electrical supply source (see 4.3.2.5), shall be set to any voltage or current within their RATED range, in normal and reverse polarity if possible.

4.4.2.1 General

Replace the item 2) of the first paragraph of 4.4.2.1 with the following new item 2):

2) Applicable fault conditions specified in 4.4.2.2 to 4.4.2.15 and 4.4.2.101;

Add the following 4.4.2.101 after 4.4.2.15:

4.4.2.101 Surge protective components (SPC)

SPC used in MAINS CIRCUITS or MEASURING CIRCUITS connected to MAINS shall be short-circuited and open-circuited, only one at a time in turn in any convenient order (see also 14.8).

5.1.2 Identification

Add the following three new items to the list of 5.1.2:

aa) for current sensors designed for use only with a specific model of equipment, a clear identification of the equipment, or with symbol 14 of Table 1 if this information is available only in the documentation;

bb) for Type A current sensors, with symbol 101 of Table 1;

cc) for Type B, Type C and Type D current sensors, with symbol 14 of Table 1.

Add a new paragraph before the conformity statement of 5.1.2:

The relevant symbol (14 or 101) of Table 1 shall be marked adjacent to the JAWS or adjacent to the marking of the MEASUREMENT CATEGORY for the JAWS, if present (see 5.1.5.101 and 5.1.5.102).

Table 1 – Symbols

Add the following new symbol to Table 1:

Number	Symbol	Reference	Description
101		IEC 60417-6300 (2016-03)	To indicate that the current sensor can safely be used with UNINSULATED HAZARDOUS LIVE CONDUCTORS

5.1.5 TERMINALS, connections and operating devices

Add the following 5.1.5.101 and 5.1.5.102 after 5.1.5.2: