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## Elektrisk utrustning för mätning, styrning och för laboratorieändamål – Säkerhet –

### Del 2-061: Särskilda fordringar på automatspektrometrar för laboratoriebruk med termisk atomisering och jonisering

*Safety requirements for electrical equipment for measurement, control and laboratory use –  
Part 2-061: Particular requirements for laboratory atomic spectrometers with thermal atomization and ionization*

Som svensk standard gäller europastandarden EN IEC 61010-2-061:2021. Den svenska standarden innehåller de officiella engelska språkversionerna av EN IEC 61010-2-061:2021 och EN IEC 61010-2-061:2021/A11:2021.

#### Nationellt förord

Europastandarden EN IEC 61010-2-061:2021

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 61010-2-061, Fourth edition, 2018 - Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-061: Particular requirements for laboratory atomic spectrometers with thermal atomization and ionization**

utarbetad inom International Electrotechnical Commission, IEC.

Standarden ska användas tillsammans med SS-EN 61010-1, utgåva 3, 2010 och dess separat utgivna tillägg.

Tidigare fastställd svensk standard SS-EN 61010-2-061, utgåva 3, 2015, gäller ej fr o m 2024-08-02.

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ICS 19.080.00; 71.040.20

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Denna standard är fastställd av SEK Svensk Elstandard, som också kan lämna upplysningar om **sakinnehållet** i standarden.  
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### *Standarder underlättar utvecklingen och höjer elsäkerheten*

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

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### *Stora delar av arbetet sker internationellt*

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

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Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

### **SEK Svensk Elstandard**

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English Version

Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-061: Particular requirements for laboratory atomic spectrometers with thermal atomization and ionization  
(IEC 61010-2-061:2018)

Règles de sécurité pour appareils électriques de mesurage, de régulation et de laboratoire - Partie 2-061: Exigences particulières pour spectromètres atomiques de laboratoire avec vaporisation et ionisation thermiques  
(IEC 61010-2-061:2018)

Sicherheitsbestimmungen für elektrische Mess-, Steuer-, Regel- und Laborgeräte -Teil 2-061: Besondere Anforderungen an Labor-Atom-spektrometer mit thermischer Atomisierung und Ionisation  
(IEC 61010-2-061:2018)

This European Standard was approved by CENELEC on 2018-10-26. 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 CEN-CENELEC Management Centre 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 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

## **European foreword**

The text of document 66/643/CDV, future edition 4 of IEC 61010-2-061, prepared by IEC/TC 66 "Safety of measuring, control and laboratory equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61010-2-061:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2022-08-02
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2024-08-02

This document supersedes EN 61010-2-061:2015 and all of its amendments and corrigenda (if any).

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 the relationship with EU Directive(s) / Regulation(s), see informative Annex ZZ, which is an integral part of EN IEC 61010-2-061:2021/A11:2021.

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.

### **Endorsement notice**

The text of the International Standard IEC 61010-2-061:2018 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

- |                    |      |                                     |
|--------------------|------|-------------------------------------|
| IEC 62061          | NOTE | Harmonized as EN 62061              |
| ISO 13849 (series) | NOTE | Harmonized as EN ISO 13849 (series) |



# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

GROUP SAFETY PUBLICATION  
PUBLICATION GROUPEE DE SÉCURITÉ

**Safety requirements for electrical equipment for measurement, control, and laboratory use –  
Part 2-061: Particular requirements for laboratory atomic spectrometers with thermal atomization and ionization**

**Exigences de sécurité pour appareils électriques de mesurage, de régulation et de laboratoire –  
Partie 2-061: Exigences particulières pour spectromètres atomiques de laboratoire avec vaporisation et ionisation thermiques**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

ICS 19.080; 71.040.20

ISBN 978-2-8322-6040-1

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR  
MEASUREMENT, CONTROL, AND LABORATORY USE –****Part 2-061: Particular requirements for laboratory atomic  
spectrometers with thermal atomization and ionization**

## 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 61010-2-061 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.

This fourth edition cancels and replaces the third edition published in 2015. This edition constitutes a technical revision.

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

- a) adaptation of changes introduced by Amendment 1 of IEC 61010-1;
- b) added tolerance for stability of AC voltage test equipment to Clause 6;

- c) added requirement for interlock systems containing electric/electronic or programmable components to Clause 15.

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

CDV	Report on voting
66/643/CDV	66/668/RVC

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

This document 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.

This Part 2-061 is intended to be used in conjunction with IEC 61010-1. It was established on the basis of the third edition (2010) and its Amendment 1 (2016).

This Part 2-061 supplements or modifies the corresponding clauses in IEC 61010-1 so as to convert that publication into the IEC standard: *Particular requirements for laboratory atomic spectrometers with thermal atomization and ionization*.

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”, or “deletion”, the relevant requirement, test specification or note in Part 1 should be adapted accordingly.

In this standard:

- 1) the following print types are used:
  - requirements: in roman type;
  - NOTES: in small roman type;
  - *conformity and test: in italic type;*
  - terms used throughout this standard which have been defined in Clause 3: SMALL ROMAN CAPITALS;
- 2) subclauses, figures, tables and notes which are additional to those in Part 1 are numbered starting from 101. The 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 "<http://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.

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

## Part 2-061: Particular requirements for laboratory atomic spectrometers with thermal atomization and ionization

### 1 Scope and object

This clause of Part 1 is applicable except as follows:

#### 1.1 Scope

##### 1.1.1 Equipment included in scope

*Replacement:*

*Replace the text, except the first paragraph, with the following new text:*

This part of IEC 61010 applies to electrically powered laboratory atomic spectrometers with thermal atomization.

NOTE 1 Examples include atomic absorption spectrometers, emission flame photometers, atomic fluorescence spectrophotometers, inductively coupled plasma spectrometers, microwave coupled plasma spectrometers and mass spectrometers, all with thermal atomization and ionization (including tubing and connectors which are provided by the manufacturer for connection to external supplies).

NOTE 2 If all or part of the equipment falls within the scope of one or more other Part 2 documents of IEC 61010 as well as within the scope of this document, consideration is given to those other Part 2 documents.

##### 1.1.2 Equipment excluded from scope

*Addition:*

*Add, before the first paragraph, the following new text:*

This document does not apply to thermal atomization detectors (flame ionization detectors) used in gas chromatography.

### 2 Normative references

This clause of Part 1 is applicable.