

INTERNATIONAL STANDARD

NORME INTERNATIONALE



GROUP SAFETY PUBLICATION
PUBLICATION GROUPEE DE SÉCURITÉ

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

Part 2-010: Particular requirements for laboratory equipment for the heating of materials

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

Partie 2-010: Exigences particulières pour appareils de laboratoire utilisés pour l'échauffement des matières



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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

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IEC 61010-2-010

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CONTENTS

FOREWORD	3
1 Scope and object	6
2 Normative references	6
3 Terms and definitions	6
4 Tests	7
5 Marking and documentation	7
6 Protection against electric shock	10
7 Protection against mechanical HAZARDS	12
8 Resistance to mechanical stresses	12
9 Protection against the spread of fire	13
10 Equipment temperature limits and resistance to heat	13
11 Protection against HAZARDS from fluids	15
12 Protection against radiation, including laser sources, and against sonic and ultrasonic pressure	15
13 Protection against liberated gases and substances, explosion and implosion	15
14 Components and subassemblies	16
15 Protection by interlocks	17
16 HAZARDS resulting from application	17
17 RISK Assessment	17
Annexes	17
Bibliography	18
Table 1 – Symbols	7
Table 101 – Time-temperature conditions	15

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT
FOR MEASUREMENT, CONTROL AND LABORATORY USE –****Part 2-010: Particular requirements for laboratory equipment
for the heating of materials**

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 61010-2-010 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 third edition cancels and replaces the second edition published in 2003. It constitutes a technical revision and includes the following significant changes from the second edition, as well as numerous other changes:

- added a definition for HEAT TRANSFER MEDIUM to Clause 3;
- added a symbol for FLAMMABLE LIQUID to Table 1 in Clause 5;
- added a requirement for instructions pertaining to ventilation in Clause 5;
- modified the requirements for humidity preconditioning in Clause 6;

- added requirements for equipment containing or using flammable liquids to Clause 9;
- added requirements for over-temperature protection devices to Clause 10.

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

FDIS	Report on voting
66/532/FDIS	66/543/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.

This Part 2-010 is intended to be used in conjunction with IEC 61010-1. It was established on the basis of the third edition (2010).

This Part 2-010 supplements or modifies the corresponding clauses in IEC 61010-1 so as to convert that publication into the IEC standard *Safety requirements for laboratory equipment for the heating of materials*.

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”, “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. Additional annexes are lettered starting from AA.

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

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

Part 2-010: Particular requirements for laboratory equipment for the heating of materials

1 Scope and object

This clause of Part 1 is applicable except as follows:

1.1.1 Equipment included in scope

Replacement:

This part of IEC 61010 specifies safety requirements for electrically powered laboratory equipment for the heating of materials, where the heating of materials is one of the functions of the equipment.

NOTE If all or part of the equipment falls within the scope of one or more other part 2 standards of IEC 61010 as well as within the scope of this standard, it will also need to meet the requirements of those other part 2 standards. In particular, if equipment is intended to be used for IVD purposes, it will need to meet the requirements of IEC 61010-2-101.

1.1.2 Equipment excluded from scope

Addition after item j):

- aa) equipment for the heating and ventilation of laboratories;
- bb) sterilizing equipment;
- cc) heating and/or cooling equipment which the OPERATOR is intended to enter, and which is large enough for the OPERATOR to remain inside with the door or doors closed.

2 Normative references

This clause of Part 1 is applicable, except as follows:

Addition:

ISO 7010:2011, *Graphical symbols — Safety colours and safety signs — Registered safety signs*

3 Terms and definitions

This clause of Part 1 is applicable except as follows:

3.2 Parts and accessories

Addition:

3.2.101

HEAT TRANSFER MEDIUM

medium used to transfer heat to the material being processed