

SLOVENSKI STANDARD
oSIST prEN IEC 61010-2-011:2025
01-oktober-2025

Varnostne zahteve za električno opremo za meritve, nadzor in laboratorijsko uporabo - 2-011. del: Posebne zahteve za hladilno opremo

Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-011: Particular requirements for refrigerating equipment

Sicherheitsbestimmungen für elektrische Mess-, Steuer-, Regel- und Laborgeräte - Teil 2-011: Besondere Anforderungen für Kühlgeräte

Exigences de sécurité pour appareils électriques de mesurage, de régulation et de laboratoire - Partie 2-011: Exigences particulières pour appareils de réfrigération

Ta slovenski standard je istoveten z: prEN IEC 61010-2-011:2025

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ICS:

19.080	Električno in elektronsko preskušanje	Electrical and electronic testing
27.200	Hladilna tehnologija	Refrigerating technology
71.040.10	Kemijski laboratoriji. Laboratorijska oprema	Chemical laboratories. Laboratory equipment

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en,fr,de



66/859/CDV

COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER: IEC 61010-2-011 ED3	
DATE OF CIRCULATION: 2025-08-15	CLOSING DATE FOR VOTING: 2025-11-07
SUPERSEDES DOCUMENTS: 66/846/CD, 66/858/CC	

IEC TC 66 : SAFETY OF MEASURING, CONTROL AND LABORATORY EQUIPMENT	
SECRETARIAT: United Kingdom	SECRETARY: Ms Stephanie Lavy
OF INTEREST TO THE FOLLOWING COMMITTEES:	HORIZONTAL FUNCTION(S): TC 66 Horizontal Group Safety
ASPECTS CONCERNED: Safety	
<input checked="" type="checkbox"/> SUBMITTED FOR CENELEC PARALLEL VOTING <input type="checkbox"/> NOT SUBMITTED FOR CENELEC PARALLEL VOTING	
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TITLE:

Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-011: Particular requirements for refrigerating equipment

PROPOSED STABILITY DATE: 2030

NOTE FROM TC/SC OFFICERS:

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT
FOR MEASUREMENT, CONTROL, AND LABORATORY USE –****Part 2-011: Particular requirements for REFRIGERATING EQUIPMENT****FOREWORD**

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International Standard IEC 61010-2-011 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 2019. This edition constitutes a technical revision.

This edition includes the following significant changes from the second edition, as well as numerous other changes.

- a) adjustment of the scope to include CO₂ refrigeration systems including a TRANSCRITICAL REFRIGERATION SYSTEM and the ancillary components and requirements that such a system requires

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- b) addition of the supplemental requirements if the flammable charge exceeds 150g per stage to a maximum of 13 times the LFL of the flammable refrigerant per stage but still relying on risk mitigation if a leak occurs under single fault conditions.
- c) addresses the use of other equipment inside the refrigerated compartment.
- d) updated marking and documentation requirements.
- e) addition of requirements to prevent back-siphonage into potable water systems for water cooled systems.
- f) updated requirements for piping joints and fittings (clause 8.1.102).
- g) Additional requirements for the protection against cold surfaces (clause 10.1.101).
- h) Update to the requirements for fluidic pressure requirements for an R744 (CO₂) system (11.7.101 to 11.7.105.4.4)
- i) an update to the protective requirements for pressures caused by transport and storage temperatures.
- j) An update of material requirements for components using for REFRIGERATING SYSTEMS(14.102)
- k) Update of Annex CC for the safety requirements of components and piping
- l) Addition of Annex EE for determining the gas concentration beyond the boundary in a system using a FLAMMABLE REFRIGERANT charge greater than 150g per stage.
- m) Addition of Annex GG to provide an informative reference for the Globally Harmonized System of Classification and Labelling of Chemicals with respect to refrigerants.
- n) Update requirements to address the requirements for Stirling Refrigeration Systems

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

CDV	Report on voting
66/676/CDV	66/683/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, published under the general title *Safety requirements for electrical equipment for measurement, control, and laboratory use*, can be found on the IEC website.

This Part 2-011 is to be used in conjunction with the latest edition of IEC 61010-1. It was established on the basis of the third edition (2010) and its Amendment 1 (2016) and Amendment 2, hereinafter referred to as Part 1.

This Part 2-011 supplements or modifies the corresponding clauses in IEC 61010-1 so as to convert that publication into the IEC standard: *Particular requirements for REFRIGERATING EQUIPMENT*.

Where a particular subclause of Part 1 is not mentioned in this Part 2-011, that subclause applies as far as is reasonable. Where this Part 2-011 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 and definitions: in roman type;