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**Varnostne zahteve za električno opremo za meritve, nadzor in laboratorijsko uporabo - 2-012. del: Posebne zahteve za opremo za klimatska in okoljska preskušanja ter drugo opremo za uravnavanje temperature - Dopolnilo A11**

Safety requirements for electrical equipment for measurement, control and laboratory use - Part 2-012: Particular requirements for climatic and environmental testing and other temperature conditioning equipment

Sicherheitsbestimmungen für elektrische Mess-, Steuer-, Regel- und Laborgeräte - Teil 2-012: Besondere Anforderungen an Klima- und Umwelttestgeräte und andere Temperatur-Konditionierungsgeräte

Règles de sécurité pour appareils électriques de mesure, de régulation et de laboratoire - Partie 2-012: Exigences particulières pour les appareils d'essais climatiques et d'environnement, et autres appareils de conditionnement de température

**Ta slovenski standard je istoveten z: EN IEC 61010-2-012:2022/A11:2022**

**ICS:**

19.040	Preskušanje v zvezi z okoljem	Environmental testing
19.080	Električno in elektronsko preskušanje	Electrical and electronic testing
71.040.10	Kemijski laboratoriji. Laboratorijska oprema	Chemical laboratories. Laboratory equipment

**SIST EN IEC 61010-2-012:2022/A11:2022 en,fr,de**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN IEC 61010-2-  
012:2022/A11**

April 2022

ICS 19.080

English Version

**Safety requirements for electrical equipment for measurement,  
control and laboratory use - Part 2-012: Particular requirements  
for climatic and environmental testing and other temperature  
conditioning equipment**

Règles de sécurité pour appareils électriques de mesurage,  
de régulation et de laboratoire - Partie 2-012: Exigences  
particulières pour les appareils d'essais climatiques et  
d'environnement, et autres appareils de conditionnement de  
température

Sicherheitsbestimmungen für elektrische Mess-, Steuer-,  
Regel- und Laborgeräte - Teil 2-012: Besondere  
Anforderungen an Klima- und Umwelttestgeräte und andere  
Temperatur-Konditionierungsgeräte

This amendment A11 modifies the European Standard EN IEC 61010-2-012:2022; it was approved by CENELEC on 2022-03-28. 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.

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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**

## Contents

European foreword.....	3
1 Addition to Clause 2, “Normative references” .....	4
2 Modification to 5.4.3, “Equipment installation” .....	5
3 Modifications to Clause 11, “Protection against HAZARDS from fluids and solid foreign objects” .....	5
4 Modification to Annex CC, “Safety requirements for components and piping” .....	5
5 Addition of Annex ZA, “Normative references to international publications with their corresponding European publications” .....	10
Annex ZA (normative) Normative references to international publications with their corresponding European publications .....	11
6 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” ....	13
Annex ZZ (informative) Relationship between this European standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered.....	14

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

[SIST EN IEC 61010-2-012:2022/A11:2022](https://standards.iteh.ai/catalog/standards/sist/a4a63c6e-e526-4d74-945a-438e91c064ab/sist-en-iec-61010-2-012-2022-a11-2022)

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## European foreword

This document (EN IEC 61010-2-012:2022/A11:2022) 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 implemented at national level by publication of an identical national standard or by endorsement (dop) 2023–03–28
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2025–03–28

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 amends EN IEC 61010-2-012:2022.

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 IEC 61010-2-012:2022/A11:2022](https://standards.iteh.ai/catalog/standards/sist/a4a63c6e-e526-4d74-945a-438e91c064ab/sist-en-iec-61010-2-012-2022-a11-2022)

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**EN IEC 61010-2-012:2022/A11:2022 (E)****1 Addition to Clause 2, “Normative references”**

Add the following normative references to Clause 2:

“

EN 809, *Pumps and pump units for liquids - Common safety requirements*

EN 837-1, *Pressure gauges - Part 1: Bourdon tube pressure gauges - Dimensions, metrology, requirements and testing*

EN 837-2, *Pressure gauges - Part 2: Selection and installation recommendations for pressure gauges*

EN 837-3, *Pressure gauges - Part 3: Diaphragm and capsule pressure gauges - Dimensions, metrology, requirements and testing*

EN 1736, *Refrigerating systems and heat pumps - Flexible pipe elements, vibration isolators, expansion joints and non-metallic tubes - Requirements, design and installation*

EN 1779:1999, *Non-destructive testing - Leak testing - Criteria for method and technique selection*

EN 12178, *Refrigerating systems and heat pumps - Liquid level indicating devices - Requirements, testing and marking*

EN 12263, *Refrigerating systems and heat pumps - Safety switching devices for limiting the pressure - Requirements and tests*

EN 12284, *Refrigerating systems and heat pumps - Valves - Requirements, testing and marking*

EN 12693, *Refrigerating systems and heat pumps - Safety and environmental requirements - Positive displacement refrigerant compressors*

EN 13136, *Refrigerating systems and heat pumps - Pressure relief devices and their associated piping - Methods for calculation*

EN 13445-1, *Unfired pressure vessels - Part 1: General*

EN 13445-2, *Unfired pressure vessels - Part 2: Materials*

EN 13445-3, *Unfired pressure vessels - Part 3: Design*

EN 13445-4, *Unfired pressure vessels - Part 4: Fabrication*

EN 13445-5, *Unfired pressure vessels - Part 5: Inspection and testing*

EN 13445-6, *Unfired pressure vessels - Part 6: Requirements for the design and fabrication of pressure vessels and pressure parts constructed from spheroidal graphite cast iron*

EN 13445-8, *Unfired pressure vessels - Part 8: Additional requirements for pressure vessels of aluminium and aluminium alloys*

EN 13445-10, *Unfired pressure vessels - Part 10: Additional requirements for pressure vessels of nickel and nickel alloys*

EN 13480-1, *Metallic industrial piping - Part 1: General*

EN 13480-2, *Metallic industrial piping - Part 2: Materials*

EN 13480-3, *Metallic industrial piping - Part 3: Design and calculation*

## EN IEC 61010-2-012:2022/A11:2022 (E)

EN 13480-4, *Metallic industrial piping - Part 4: Fabrication and installation*

EN 13480-5, *Metallic industrial piping - Part 5: Inspection and testing*

EN 13480-6, *Metallic industrial piping - Part 6: Additional requirements for buried piping*

EN 13480-8, *Metallic industrial piping - Part 8: Additional requirements for aluminium and aluminium alloy piping*

EN 14276-1, *Pressure equipment for refrigerating systems and heat pumps - Part 1: Vessels - General requirements*

EN 14276-2, *Pressure equipment for refrigerating systems and heat pumps - Part 2: Piping - General requirements*

EN 61770, *Electric appliances connected to the water mains - Avoidance of backsiphonage and failure of hose-sets*

IEC 60204-1, *Safety of machinery - Electrical equipment of machines - Part 1: General requirements*

ISO 4126-1, *Safety devices for protection against excessive pressure — Part 1: Safety valves*

ISO 4126-2, *Safety devices for protection against excessive pressure — Part 2: Bursting disc safety devices*

## 2 Modification to 5.4.3, “Equipment installation”

Add the following item after n):

“o) Instructions on the prevention of back-siphonage into potable water systems (see 11.101)”

## 3 Modifications to Clause 11, “Protection against HAZARDS from fluids and solid foreign objects”

In 11.1, “General”, delete the added text after the first conformity statement.

Add the following subclause:

### “11.101 Protection of hot and cold water services

Back-siphonage from the equipment to the potable water services shall be prevented by means meeting the relevant requirements of EN 61770. Attention is drawn to the existence of national and local regulations. If the means are to be provided by the RESPONSIBLE BODY, this shall be stated in the manufacturer’s installation instructions.

Conformity is checked by inspection and by examination of the manufacturer’s instructions.”

## 4 Modification to Annex CC, “Safety requirements for components and piping”

Replace Annex CC by the following text:

“

## EN IEC 61010-2-012:2022/A11:2022 (E)

**Annex CC**  
(normative)

**Safety requirements for components and piping**

The sealed system components can be considered pressure vessels as stated in the Pressure Equipment Directive (PED) 2014/68/EU according to the classification in Table CC.1 and Table CC.2. If the components or piping are classified as a Category II or a higher pressure vessel as stated in the PED, then the requirements of Table CC.3 shall apply including the use of a Notified Body to the PED.

**Table CC.1 — Parameters of pressure vessels according to EN 14276-1**

Fluid	Nature	PS (bar) <sup>a</sup>	V (L)	PS × V (bar × L)	Category/Article
if	and	and	and	and	then
Group 1	Gas	≤ 0,5	-	-	Not subjected to PED b
		> 0,5 and ≤ 200	≤ 1	-	Art. 4.3 <sup>c</sup>
			> 1	≤ 25	Art. 4.3 <sup>c</sup>
				> 25 and ≤ 50	I
		> 50 and ≤ 200	II		
		> 200 and ≤ 1 000	≤ 1	-	III
		≤ 1 000	> 1	> 200 and ≤ 1 000	III
	> 1 000		-	IV	
	Liquid <sup>d</sup>	≤ 0,5	-	-	Not subjected to PED b
		> 0,5 and ≤ 500	≤ 1	-	Art. 4.3 <sup>c</sup>
			> 1	≤ 200	Art. 4.3 <sup>c</sup>
		> 0,5 and ≤ 10		> 200	I
		> 10 and ≤ 500			II
		> 500	< 1	-	II
> 500		> 1	-	III	



## EN IEC 61010-2-012:2022/A11:2022 (E)

Group 2	Gas	$\leq 0,5$	-	-	Not subjected to PED <sup>b</sup>
		$> 0,5$ and $\leq 1\ 000$	$\leq 1$	-	Art. 4.3 <sup>c</sup>
			$> 1$	$\leq 50$	Art. 4.3 <sup>c</sup>
				$> 50$ and $\leq 200$	I
				$> 200$ and $\leq 1\ 000$	II
		$> 1\ 000$ and $\leq 3\ 000$	$\leq 1$	-	III
			$> 1$	$> 1\ 000$ and $\leq 3\ 000$	III
		$> 0,5$ and $\leq 4$		$> 1\ 000$	III
	$> 4$	$> 3\ 000$		IV	
	$> 3\ 000$	-	-	IV	
	Liquid <sup>d</sup>	$\leq 0,5$	-	-	Not subjected to PED <sup>b</sup>
		$> 0,5$ and $\leq 10$	-	-	Art. 4.3 <sup>c</sup>
		$> 10$ and $\leq 1\ 000$	$\leq 10$	-	Art. 4.3 <sup>c</sup>
		$> 10$ and $\leq 1\ 000$	$> 10$	$\leq 10\ 000$	Art. 4.3 <sup>c</sup>
		$> 10$ and $\leq 500$	-	$> 10\ 000$	I
$> 1\ 000$		$< 10$	-	I	
$> 500$		$> 10$	$> 10\ 000$	II	

<sup>a</sup> 1 bar = 0,1 Mpa.  
<sup>b</sup> PED = Pressure Equipment Directive.  
<sup>c</sup> Art. 4.3 = reference to Article 4.3 of the Pressure Equipment Directive.  
<sup>d</sup> Liquids are considered to be fluids having a vapour pressure of not more than 0,5 bar above the normal atmospheric pressure (1 013 mbar).

## EN IEC 61010-2-012:2022/A11:2022 (E)

Table CC.2 — Parameters of piping according to EN 14276-2

Fluid	Nature	PS (bar) <sup>a</sup>	DN	PS × DN (bar) <sup>a</sup>	Category/Article
if	and	and	And	and	then
Group 1	Gas	≤ 0,5	-	-	Not subjected to PED b
		> 0,5	≤ 25	-	Art. 4.3 <sup>c</sup>
			> 25 and ≤ 100	≤ 1 000	I
			> 100 and ≤ 350	> 1 000 and ≤ 3 500	II
			> 350	> 3 500	III
	Liquid <sup>d</sup>	≤ 0,5	-	-	Not subjected to PED b
		> 0,5	≤ 25	-	Art. 4.3 <sup>c</sup>
			-	≤ 2 000	Art. 4.3 <sup>c</sup>
		> 0,5 and ≤ 10	-	> 2 000	I
		> 10 and ≤ 500	-		II
> 500		> 25	-	III	
Group 2	Gas	≤ 0,5	-	-	Not subjected to PED b
		> 0,5	≤ 32	-	Art. 4.3 <sup>c</sup>
			-	≤ 1 000	Art. 4.3 <sup>c</sup>
			> 32 and ≤ 100	> 1 000 and ≤ 3 500	I
			> 100 and ≤ 250	> 3 500 and ≤ 5 000	II
	> 250	> 5 000	III		
	Liquid <sup>d</sup>	≤ 0,5	-	-	Not subjected to PED b
		> 0,5 and ≤ 10	-	-	Art. 4.3 <sup>c</sup>
		-	-	≤ 5 000	Art. 4.3 <sup>c</sup>
		-	≤ 200	-	Art. 4.3 <sup>c</sup>
		> 10 and ≤ 500	> 200	> 5 000	I
		> 500		-	II

<sup>a</sup> 1 bar = 0,1 Mpa.  
<sup>b</sup> PED = Pressure Equipment Directive.  
<sup>c</sup> Art. 4.3 = reference to Article 4.3 of the Pressure Equipment Directive.  
<sup>d</sup> Liquids are considered to be fluids having a vapour pressure of not more than 0,5 bar above the normal atmospheric pressure (1 013 mbar).