



BSI Standards Publication

Boxes and enclosures for electrical accessories for household and similar fixed electrical installations

Part 24: Particular requirements for enclosures for housing protective devices and other power dissipating electrical equipment

National foreword

This British Standard is the UK implementation of EN 60670-24:2013+A11:2023. It is derived from IEC 60670-24:2011. It supersedes BS EN 60670-24:2013, which will be withdrawn on 5 May 2026.

The CENELEC common modifications have been implemented at the appropriate places in the text. The start and finish of each common modification is indicated in the text by **[C]** **[C]**.

The start and finish of text introduced or altered by amendment A11 is indicated in the text by tags. Tags indicating changes to text carry the number of the CENELEC amendment. For example, text altered by CENELEC amendment A11 is indicated by **[A11]** **[A11]**.

The UK participation in its preparation was entrusted to Technical Committee PEL/23, Electrical accessories.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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This publication has been prepared under a mandate given to the European Standards Organizations by the European Commission and the European Free Trade Association. It is intended to support requirements of the EU legislation detailed in the European Foreword. A European Annex, usually Annex ZA or ZZ, describes how this publication relates to that EU legislation.

For the Great Britain market (England, Scotland and Wales), if UK Government has designated this publication for conformity with UKCA marking (or similar) legislation, it may contain an additional National Annex. Where such a National Annex exists, it shows the correlation between this publication and the relevant UK legislation. If there is no National Annex of this kind, the relevant Annex ZA or ZZ in the body of the European text will indicate the relationship to UK regulation applicable in Great Britain. References to EU legislation may need to be read in accordance with the UK designation and the applicable UK law. Further information on designated standards can be found at www.bsigroup.com/standardsandregulation.

For the Northern Ireland market, UK law will continue to implement relevant EU law subject to periodic confirmation. Therefore

Annex ZA/ZZ in the European text, and references to EU legislation, are still valid for this market.

UK Government is responsible for legislation. For information on legislation and policies relating to that legislation, consult the relevant pages of www.gov.uk.

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Amendments/corrigenda issued since publication

Date	Text affected
31 October 2023	Implementation of CENELEC amendment A11:2023

Boxes and enclosures for electrical accessories for household and similar fixed electrical installations -
Part 24: Particular requirements for enclosures for housing protective devices and other power dissipating electrical equipment
(IEC 60670-24:2011, modified)

Boîtes et enveloppes pour appareillage électrique pour installations électriques fixes pour usages domestiques et analogues -
Partie 24: Exigences particulières pour enveloppes pour appareillages de protection et autres appareillages électriques ayant une puissance dissipée (CEI 60670-24:2011, modifiée)

Dosen und Gehäuse für Installationsgeräte für Haushalt und ähnliche ortsfeste elektrische Installationen -
Teil 24: Besondere Anforderungen für Gehäuse zur Aufnahme von Schutzgeräten und ähnlichen energieverbrauchenden Geräten (IEC 60670-24:2011, modifiziert)

This European Standard was approved by CENELEC on 2013-03-04. 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

This document (EN 60670-24:2013) consists of the text of IEC 60670-24:2011 prepared by IEC/SC 23B "Plugs, socket-outlets and switches" of IEC/TC 23 "Electrical accessories", together with the common modifications prepared by CLC/TC 23BX "Switches, boxes and enclosures for household and similar purposes, plugs and socket outlets for d.c. and for the charging of electrical vehicles including their connectors".

The following dates are fixed:

- latest date by which this document has to be implemented (dop) 2014-03-04
at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting (dow) 2018-03-04
with this document have to be withdrawn

This Part 24 is to be used in conjunction with EN 60670-1:2005. It lists the changes necessary to convert that standard into a specific standard for housing protective devices and other power dissipating electrical equipment.

Where this Part 24 states "addition", "modification" or "replacement", the relevant requirement, test specifications or explanatory matter in Part 1 shall be adapted accordingly.

Clauses and subclauses, notes, figures or tables which are additional to those in Part 1 are numbered starting from 101.

Additional annexes to Part 1 are numbered AA, BB, etc.

In this publication the following print types are used:

- requirements proper: in roman type.
- *test specifications: in italic type.*
- notes: in smaller roman type.

Clauses, subclauses, notes, tables and figures which are additional to those in IEC 60670-24:2011 are prefixed "Z".

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

Endorsement notice

The text of the International Standard IEC 60670-24:2011 was approved by CENELEC as a European Standard with agreed common modifications.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 60439-3:1991 NOTE Harmonised as EN 60439-3:1991 (modified).

European foreword to Amendment A11

This document (EN 60670-24:2013/A11:2023) has been prepared by CLC/TC 23BX "Switches, boxes and enclosures for household and similar purposes, plugs and socket outlet for D.C."

The following dates are fixed:

- latest date by which this document has to be (dop) 2023-11-05 implemented at national level by publication of an identical national standard or by endorsement
- latest date by which the national standards (dow) 2026-05-05 conflicting with this document have to be withdrawn

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 Part 24 is read in conjunction with EN IEC 60670-1:2021 and EN IEC 60670-1:2021/A11:2021. It lists the changes necessary to convert that standard into a specific standard for housing protective devices and other power dissipating electrical equipment

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.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Annex ZA of EN IEC 60670-1:2021 applies except as follows.

Addition:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60417	2002 ¹	Graphical Symbols for Use on Equipment	-	-
IEC 60898-1	-	Electrical accessories - Circuit-breakers for overcurrent protection for household and similar installations - Part 1: Circuit-breakers for a.c. operation	EN 60898-1	2019
IEC 61008-2-1	-	Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCB's) - Part 2-1: Applicability of the general rules to RCCB's functionally independent of line voltage	EN 61008-2-1	1994
			EN 61008-2-1/A11	1998
IEC 61009-2-1	-	Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBO's) - Part 2-1: Applicability of the general rules to RCBO's functionally independent of line voltage	EN 61009-2-1	1994
			EN 61009-2-1/A11	1998
IEC 61032	1997	Protection of persons and equipment by enclosures-probes for verification	EN 61032	1998
IEC 62262	-	Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)	EN 62262	2002
			+ A1	2021



¹ Dated as no equivalent European Standard exists.



Annex ZB (normative)

Special national conditions

Special national condition: National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions.

NOTE If it affects harmonization, it forms part of the European Standard / Harmonization Document.

For the countries in which the relevant special national conditions apply these provisions are normative, for other countries they are informative.

<u>Clause</u>	<u>Special national condition</u>
1	<p>Denmark</p> <p>This standard can only be used for GP enclosures with the instructions according to Annex A. For the other types of enclosures the integration of mechanical and electrical devices into an enclosures are verified by compliance with DS EN 61439-3.</p>
7	<p>Denmark, Italy</p> <p>Only enclosures according to 7.101.1 and 7.102.1 can be used.</p> <p>Belgium, Germany, France, Greece</p> <p>Only enclosures classified according to 7.101.2 and 7.102.2 can be used.</p>
9	<p>Germany</p> <p>Enclosure intended to be used for distribution boards up to 63 A in electrical installations in residential buildings according DIN 18015 shall comply with DIN 43871.</p>
12.101	<p>United Kingdom</p> <p>The text of this clause does not apply. Cables are retained using fixing means applied during installation by the installer.</p>
13.2	<p>Denmark</p> <p>In the case of an enclosure with a door or a lid which can be opened without the use of a tool during normal use, a minimum degree of IP30 shall be maintained after opening the door or the lid.</p>
102	<p>Germany</p> <p>For enclosures complying with DIN 43871 with a rated current up to 63 A the temperature rise verification is not necessary and therewith chapter 102 (Verification of temperature rise) does not apply. </p>

 Annex ZC
(normative)

A-deviations

A-deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CENELEC national member.

This European Standard falls under Directive 2014/35/EU.

NOTE (from CEN/CENELEC IR Part 2:2018, 2.16) Where standards fall under EC Directives or Regulations, it is the view of the Commission of the European Communities (OJ No C 59, 1982-03-09) that the effect of the decision of the Court of Justice in case 815/79 Cremonini/Vrankovich (European Court Reports 1980, p. 3583) is that compliance with A-deviations is no longer mandatory and that the free movement of products complying with such a standard should not be restricted except under the safeguard procedure provided for in the relevant Directive or Regulation.

A-deviations in an EFTA-country are valid instead of the relevant provisions of the European Standard in that country until they have been removed.

<u>Clause</u>	<u>Deviation</u>
1	<p>United Kingdom</p> <p>{Electricity, Safety, Quality and Continuity Regulations; SI '2002 2665' and BS 7671:2018}</p> <p>Add after the second paragraph:</p> <p>Products to this standard cannot be used in installations intended to be operated by ordinary persons. The Integration of mechanical and electrical devices and components e.g. circuit-breakers, control devices, busbars into an empty enclosure intended to be operated by ordinary persons must be verified by conformity with BS EN 61439-3. </p>

 Annex ZZ
(informative)

Relationship between this European standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered

This European standard has been prepared under a Commission's standardization request relating to harmonized standards in the field of the Low Voltage Directive, M/511, to provide one voluntary means of conforming to safety objectives of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZ.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding safety objectives of that Directive, and associated EFTA regulations.

Table ZZ.1 — Correspondence between this European standard and Annex I of Directive 2014/35/EU [2014 OJ L96]

Safety objectives of Directive 2014/35/EU	Clause(s) / subclause(s) of this EN	Remarks / Notes
1. General conditions		
(a) the essential characteristics, the recognition and observance of which will ensure that electrical equipment will be used safely and in applications for which it was made, shall be marked on the electrical equipment , or, if this is not possible, on an accompanying document;	8 - Marking	
(b) the electrical equipment, together with its component parts, shall be made in such a way as to ensure that it can be safely and properly assembled and connected ;	8 - Marking 10 - Protection against electrical shock 11 - Provision for earthing 12 - Construction 13 - Resistance to ageing, protection against ingress of solid objects and against harmful ingress of water	
(c) the electrical equipment shall be so designed and manufactured as to ensure that protection against the hazards set out in points 2 and 3 is ensured, providing that the equipment is used in applications for which it was made and is adequately maintained.	10 - Protection against electrical shock 11 - Provision for earthing 12 - Construction 14 - Insulation resistance and electrical strength 15 - Mechanical strength 17 - Creepage distances, clearances and distances through sealing compound	

Safety objectives of Directive 2014/35/EU	Clause(s) / subclause(s) of this EN	Remarks / Notes
2. Protection against hazards arising from the electrical equipment Measures of a technical nature shall be laid down in accordance with point 1, in order to ensure that:		
(a) persons and domestic animals are adequately protected against the danger of physical injury or other harm which might be caused by direct or indirect contact ;	10 - Protection against electrical shock 11 - Provision for earthing 14 - Insulation resistance and electrical strength 15 - Mechanical strength 17 - Creepage distances, clearances and distances through sealing compound 18 - Resistance of insulating material to abnormal heat and fire 19 - Resistance to tracking	
(b) temperatures, arcs or radiation which would cause a danger, are not produced;	14 - Insulation resistance and electrical strength 16 - Resistance to heat 17 - Creepage distances, clearances and distances through sealing compound 18 - Resistance of insulating material to abnormal heat and fire 19 - Resistance to tracking Z1 - Electromagnetic fields (EMF) requirements 101 - Verification of the maximum capability to dissipate power (P_{de}) 102 - Verification of temperature rise	
(c) persons, domestic animals and property are adequately protected against non- electrical dangers caused by the electrical equipment which are revealed by experience;	12 - Construction 15 - Mechanical strength	
(d) the insulation is suitable for foreseeable conditions.	14 - Insulation resistance and electrical strength 15 - Mechanical strength 16 - Resistance to heat 17 - Creepage distances, clearances and distances through sealing compound 18 - Resistance of insulating material to abnormal heat and fire 19 - Resistance to tracking	

Safety objectives of Directive 2014/35/EU	Clause(s) / subclause(s) of this EN	Remarks / Notes
3. Protection against hazards which may be caused by external influences on the electrical equipment Technical measures shall be laid down in accordance with point 1, in order to ensure that the electrical equipment:		
(a) meets the expected mechanical requirements in such a way that persons, domestic animals and property are not endangered;	12 - Construction 13 - Resistance to ageing, protection against ingress of solid objects and against harmful ingress of water 15 - Mechanical strength 20 - Resistance to corrosion	
(b) is resistant to non- mechanical influences in expected environmental conditions , in such a way that persons, domestic animals and property are not endangered;	13 - Resistance to ageing, protection against ingress of solid objects and against harmful ingress of water 18 - Resistance of insulating material to abnormal heat and fire	
(c) does not endanger persons, domestic animals and property in foreseeable conditions of overload .	16 - Resistance to heat	

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.