

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

Part 1: General requirements

ICS 29.120.10

National foreword

This British Standard is the UK implementation of EN 60670-1:2005+A1:2013, incorporating corrigenda November 2007 and March 2010. It is derived from IEC 60670-1:2002, incorporating corrigendum February 2003 and amendment 1:2011. It supersedes BS EN 60670-1:2005, which will be withdrawn on 31 December 2017.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to IEC text carry the number of the IEC amendment. For example, text altered by IEC amendment 1 is indicated by **A1** **A1**.

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 tags **C** **C**.

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National Annex NA (informative) reproduces CENELEC Interpretation Sheet 1, June 2009.

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 secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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**Boxes and enclosures for electrical accessories
for household and similar fixed electrical installations
Part 1: General requirements
(IEC 60670-1:2002 + corrigendum 2003, modified)**

Boîtes et enveloppes pour appareillage
électrique pour installations électriques
fixes pour usages domestiques et
analogues
Partie 1: Règles générales
(CEI 60670-1:2002 + corrigendum 2003,
modifiée)

Dosen und Gehäuse
für Installationsgeräte für Haushalt
und ähnliche ortsfeste elektrische
Installationen
Teil 1: Allgemeine Anforderungen
(IEC 60670-1:2002 + Corrigendum 2003,
modifiziert)

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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 Central Secretariat has the same status as the official versions.

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CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of the International Standard IEC 60670-1:2002, prepared by SC 23B, Plugs, socket-outlets and switches, of IEC TC 23, Electrical accessories, together with the common modifications prepared by the Technical Committee CENELEC TC 23B, Switches for household and similar fixed electrical installations, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 60670-1 on 2004-09-22.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2005-10-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2009-07-01

In this standard, the following print types are used:

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

Figures and annexes which are additional to those in IEC 60670-1 are prefixed “Z”.

Endorsement notice

The text of the International Standard IEC 60670-1:2002 + corrigendum February 2003 was approved by CENELEC as a European Standard with agreed common modifications.

Foreword to amendment A1

This document (EN 60670-1:2005/A1:2013) consists of the text of IEC 60670-1:2002/A1:2011 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:

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at national level by publication of an identical
national standard or by endorsement
- latest date by which the national standards conflicting (dow) 2017-12-31
with this document have to be withdrawn

Annexes which are additional to those in IEC 60670-1:2002/A1:2011 are prefixed “Z”.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

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 60670-1:2002/A1:2011 was approved by CENELEC as a European Standard with agreed common modifications

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BOXES AND ENCLOSURES FOR ELECTRICAL ACCESSORIES FOR HOUSEHOLD AND SIMILAR FIXED ELECTRICAL INSTALLATIONS –

Part 1: General requirements

1 Scope

This part of IEC 60670 applies to boxes, enclosures and parts of enclosures (hereafter called “boxes” and “enclosures”) for electrical accessories with a rated voltage not exceeding 1 000 V a.c. and 1 500 V d.c. intended for household or similar fixed electrical installations, either indoors or outdoors.

NOTE Requirements for particular types of boxes and enclosures are given in the relevant parts 2 of IEC 60670.

Boxes and enclosures complying with this standard are suitable for use at ambient temperature not normally exceeding 25 °C but occasionally reaching 35 °C.

This International Standard is intended to apply to boxes and enclosures for electrical accessories within the scope of IEC technical committee 23.

NOTE This standard may also be used as a reference document for other IEC technical committees and subcommittees.

A box or an enclosure which is an integral part of an electrical accessory and provides protection for that accessory against external influences (for example mechanical impact, ingress of solid objects or water, etc.) is covered by the relevant standard for such an accessory.

This standard does not apply to

- ceiling roses;
- luminaire supporting couplers;
- boxes, enclosures and parts of enclosures specifically designed to be used for cable trunking and ducting systems complying with IEC 61084 and which are not intended to be installed outside of these systems.

2 Normative references

The following referenced documents are indispensable for the application 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.

IEC 60068-2-75:1997, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*

IEC 60112:1979, *Method for determining the comparative and the proof-tracking indices of solid insulating materials under moist conditions*

IEC 60423:1993, *Conduits for electrical purposes – Outside diameters of conduits for electrical installations and threads for conduits and fittings*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 60695-2-11:2000, *Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end-products*

IEC 60695-10-2:1995, *Fire hazard testing – Part 10-2: Guidance and test methods for the minimization of the effects of abnormal heat on electrotechnical products involved in fires – Method for testing products made from non-metallic materials for resistance to heat using the ball pressure test*

☐ Text deleted ☐

IEC 61032:1997, *Protection of persons and equipment by enclosures – Probes for verification*

IEC 61084 (all parts), *Cable trunking and ducting systems for electrical installations*

IEC 61140:2001, *Protection against electric shock – Common aspects for installation and equipment*

☐ IEC 62444:2010, *Cable glands for electrical installations* ☐

3 Definitions

For the purposes of this part of IEC 60670, the following definitions apply.

3.1

enclosure

combination of parts, such as boxes, covers, cover-plates, lids, box extensions, accessories, etc., providing after assembly and installation as in normal use, an appropriate protection against external influences, and a defined protection against contact with enclosed live parts from any accessible direction (see Annex A)

3.2

box

part of an enclosure provided with means for fixing a cover, cover-plate, accessory, etc., and intended to receive accessories (such as socket-outlets, switches, etc.)

3.3

box extension

part of an enclosure which is intended to extend a box for the purpose of either increasing the internal volume of the box or enclosure or to adjust for mounting the box flush or semi-flush with the finished surface of a wall or the like

3.4

lid, cover or cover-plate

part of an enclosure, not integral with or part of an accessory, which may either retain an accessory in position or enclose it

3.5

raised cover

cover intended for mounting directly onto a box to provide for the attachment of accessories and to increase the internal volume of the enclosure

NOTE The centre portion of the cover is raised to accommodate a specific wall or ceiling thickness and to permit the mounting of the accessory on it, flush with the surface of the wall or ceiling.