

Appliance couplers for household and similar general purposes —

Part 2: Specification for individual types of coupler —

Section 2.2 Interconnection couplers for household and similar equipment

The European Standard EN 60320-2-2:1991 has the status of a British Standard

Cooperating organizations

The European Committee for Electrotechnical Standardization (CENELEC), under whose supervision this European Standard was prepared, comprises the national committees of the following countries:

Austria	Italy
Belgium	Luxembourg
Denmark	Netherlands
Finland	Norway
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Germany	Spain
Greece	Sweden
Iceland	Switzerland
Ireland	United Kingdom

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National foreword

This British Standard has been prepared under the direction of the Power Electrical Engineering Standards Policy Committee and is the English language version of EN 60320-2-2 “*Appliance couplers for household and similar general purposes — Part 2: Interconnection couplers for household and similar equipment*”, published by the European Committee for Electrotechnical Standardization (CENELEC). It was derived by CENELEC from IEC 320-2-2:1990 published by the International Electrotechnical Commission (IEC), which has the same title as the European Standard.

The CENELEC common modifications have been implemented at the appropriate places in the text and are indicated by a sideline in the margin. Parts of the original IEC text that have been modified by CENELEC have been quoted in National annex NA.

This British Standard is to be read in conjunction with BS 4491-1:1989 “*Appliance couplers for household and similar general purposes — Part 1: Specification of general requirements*”, which is the English language version of EN 60320-1:1987, and with BS 4491-2.1:1990 “*Appliance couplers for household and similar general purposes — Part 2: Specification of requirements for individual types of coupler — Section 2.1 Sewing machine couplers*” which is the English language version of EN 60320-2.1:1987.

The following print types are used in this standard:

- requirements proper: in roman type
- *test specifications:* in italic type
- explanatory matter: in smaller roman type

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 22, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Descriptors: Low-voltage equipment household appliance, similar general use, interconnection coupler, interconnection cord, rating, dimension, construction, test

English version

Appliance couplers for household and similar general
purposes
Part 2: Interconnection couplers for household and similar
equipment

(IEC 320-2-2:1990, modified)

Connecteurs pour usages domestiques et
usages généraux analogues
Deuxième partie: Connecteurs d'interconnexion
pour matériaux électriques domestiques et
analogues
(CEI 320-2-2:1990, modifiée)

Gerätesteckvorrichtungen für den
Hausgebrauch und ähnliche allgemeine Zwecke
Teil 2: Netzweiterverbindungen für Geräte für
den Hausgebrauch und ähnliche Einrichtungen
(IEC 320-2-2:1990, modifiziert)

This European Standard was approved by CENELEC on 1991-06-25. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

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Foreword

The CENELEC questionnaire procedure, performed for finding out whether or not the International Standard IEC 320-2-2:1990, as corrected by corrigendum August 1990, could be accepted without textual changes, has shown that some CENELEC common modifications were necessary for the acceptance as European Standard.

The reference document, together with the common modifications prepared by the CENELEC Reporting Secretariat SR 23G, was submitted to the CENELEC members for formal vote.

The text of the draft was approved by CENELEC as EN 60320-2-2 on 25 June 1991.

The following dates were fixed:

- latest date of publication of (dop) 1992-07-01
an identical national standard
- latest date of withdrawal of (dow) 1992-07-01
conflicting national standards

For products which have complied with the relevant national standard before 1992-07-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1997-07-01.

Annexes designated “normative” are part of the body of the standard. In this standard, Annex ZA is normative.

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Introduction

Where in EN 60320-1 the words “appliance coupler”, “connector” or “appliance inlet” appear, they should be deleted and replaced with “interconnection coupler”, “plug connector” or “appliance outlet” respectively.

1 Scope

This clause of EN 60321-1 is replaced as follows:

This standard is applicable to:

- two-pole interconnection couplers for a.c. only, with and without earthing contact, with a rated voltage not exceeding 250 V and a rated current not exceeding 10 A, for household and similar appliances and equipment and intended for the interconnection of the electrical supply to electrical appliances or equipment for 50 Hz or 60 Hz supply;
- interconnection cord sets incorporating plug connectors of such interconnection couplers.

Appliance outlets integrated in or incorporated in appliances or other equipment are within the scope of this standard. The dimensional and general requirements of this standard apply to such outlets, but certain tests may not be relevant.

The requirements for plug connectors are based on the assumption that the temperature of the socket contacts of the corresponding appliance outlets does not exceed 65 °C (cold conditions).

Interconnection couplers complying with this standard are suitable for use at ambient temperatures not normally exceeding 25 °C, but occasionally reaching 35 °C.

Interconnection couplers complying with the standard sheets in this standard are intended for the interconnection of appliances or equipment having no special protection against moisture; for the interconnection of other appliances or equipment and of an appliance or equipment which is subject to spillage of liquid in normal use, additional requirements are necessary.

Special constructions may be required:

- in locations where special conditions prevail as, for example, in ships, vehicles and the like;
- in hazardous locations, for example, where explosions are liable to occur.

2 Definitions

This clause of EN 60320-1 applies with the following additions:

Additional definitions:

2.101 An interconnection coupler is a means enabling the connection and disconnection at will of an appliance or equipment to a flexible cable or cord leading to another appliance or equipment.

it consists of two parts:

- *a plug connector*, which is the part integral with, or intended to be attached to, the flexible cable or cord;
- *an appliance outlet*, which is the part integrated or incorporated in the appliance or equipment or intended to be fixed to it, and from which the supply is obtained.

An appliance outlet integrated in an appliance or equipment is an appliance outlet (the shroud and bottom of) which is formed by the housing of the appliance or equipment. An appliance outlet incorporated in an appliance or equipment is a separate appliance outlet built in or fixed to an appliance or equipment.

2.102 An interconnection cord set is an assembly consisting of a flexible cable or cord with an non-rewirable plug connector and a non-rewirable connector, intended for the interconnection of the electrical supply from one electrical appliance or equipment to another.

2.3 Replacement The term “accessory” is used as a general term covering plug connectors and/or appliance outlets.

3 General requirements

This clause of EN 60320-1 is replaced as follows:

Interconnection couplers shall be so designed and constructed that in normal use their performance is reliable and without danger to the user or surroundings.

In general, compliance is checked by carrying out all the tests specified.

4 General notes on tests

This clause of EN 60320-1 applies amended as follows:

4.4 Replacement:

Unless otherwise specified, plug connectors and appliance outlets are tested in conjunction with an appropriate appliance outlet or plug connector complying with this standard.

4.5 Replacement:

For appliance outlets, six samples are required, three of which are subjected to the tests specified with the exception of those of Clauses 13, 14, 15, 18, 19 and 20; the other three samples are subjected to the tests of Clauses 13, 14, 15, 18, 19 and 20 (including the repetition of the test of Sub-clause 15.2).

For plug connectors, nine samples are required, three of which are subjected to the tests specified with the exception of those of Clauses 13, 14 and 16 and Sub-clauses 21.4 and 23.2; three other samples are subjected to the tests of Clauses 13, 14 and 16; the other three samples are subjected to the test of Sub-clause 21.4.

For plug connectors of rubber or similar material, two additional samples are required which are subjected to the test of Sub-clause 23.2.1.

For plug connectors of polyvinyl chloride (PVC) or similar material, two additional samples are subjected to the test of Sub-clause 23.2.3.

Accordingly, for plug connectors the total number of samples is:

Plug connector made of	Number of samples
rigid insulating material	9
PVC, rubber or similar material	11

5 Standard ratings

This clause of EN 60320-1 applies amended as follows:

5.2 Replacement:

Standard rated currents are 2,5 A and 10 A as specified in Sub-clause 8.1 of this standard.

6 Classification

This clause of EN 60320-1 applies amended as follows:

Replacement:

6.1 Interconnection couplers are classified according to the type of appliance or equipment to be connected:

- interconnection couplers for Class I equipment;
- interconnection couplers for Class II equipment.

For a description of the classes, see IEC Publication 536.

6.2 Plug connectors are, moreover, classified according to the method of connecting the flexible cable or cord:

- rewirable plug connectors;
- non-rewirable plug connectors.

7 Marking

This clause of EN 60320-1 applies amended as follows:

7.1 Replacement:

Plug connectors shall be marked with:

- rated current in amperes;
- rated voltage in volts;
- symbol for nature of supply;
- name, trade mark or identification mark of the manufacturer or of the responsible vendor;
- type reference.

The type reference may be a catalogue number.

7.2 Replacement:

Appliance outlets other than those integrated in an appliance or equipment shall be marked with:

- the name, trade mark or identification mark of the manufacturer or of the responsible vendor, and
- a type reference, the latter being not visible after the appliance outlet is correctly mounted or when a plug connector is in engagement.

The type reference may be a catalogue number.

7.3 Replacement:

Plug connectors, appliance outlets and interconnection cord sets for Class II equipment shall not be marked with the symbol for Class II construction.

7.5 Replacement:

The marking specified in Sub-clause 7.1 shall be easily discernible when the plug connector is wired ready for use.

The term “ready for use” does not imply that the plug connector is in engagement with an appliance outlet.

7.6 Replacement:

In non-reversible plug connectors, the contact positions shall be established by looking at the engagement face of the plug connectors and their disposition shall be as follows:

- earthing contact: upper central position;
- line contact: lower left-hand position;
- neutral contact: lower right-hand position.

In rewirable, non-reversible plug connectors, terminals shall be indicated as follows:

- earthing terminal: the symbol $\perp$;
- neutral terminal: the letter N.

In non-rewirable, non-reversible plug connectors, no marking of contacts is necessary, but cores shall be connected as specified in Sub-clause 21.1.

Appliance outlets other than those integrated or incorporated in an appliance or equipment, for use with plug connectors according to this sub-clause, shall have terminal markings to correspond with this sub-clause.

The marking symbol or letters shall not be placed on screws, removable washers or other removable parts.

The requirement concerning the marking of terminals and the connection of conductors has been introduced to align with the corresponding requirement for appliance couplers, which was introduced to take account of those countries which require a polarized supply system and the introduction of the IEC plug and socket-outlet system (see IEC Publication 906).

8 Dimensions and compatibility

This clause of EN 60320-1 applies amended as follows:

Replacement:

8.1 Interconnection couplers shall comply with the appropriate standard sheets as specified below, except as permitted by Sub-clause 8.6:

2,5 A 250 V interconnection coupler for Class I equipment:

- plug connector Sheet A
- appliance outlet Sheet B

2,5 A 250 V interconnection coupler for Class II equipment:

- plug connector Sheet C
- appliance outlet Sheet D

10 A 250 V interconnection coupler for Class I equipment:

- plug connector Sheet E
- appliance outlet Sheet F