

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Plugs and socket-outlets for household and similar purposes –
Part 1: General requirements**

**Prises de courant pour usages domestiques et analogues –
Partie 1: Règles générales**

[IEC 60884-1:2002](https://standards.iteh.ai/standards/iec/60884-1:2002)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

PLUGS AND SOCKET-OUTLETS FOR HOUSEHOLD AND SIMILAR PURPOSES –

Part 1: General requirements

FOREWORD

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IEC 60884-1 edition 3.2 contains the third edition (2002) [documents 23B/658/FDIS and 23B/664/RVD], its amendment 1 (2006) [documents 23B/816/FDIS and 23B/821/RVD] and its amendment 2 (2013) [documents 23B/1088/FDIS and 23B/1096/RVD].

A vertical line in the margin shows where the base publication has been modified by amendments 1 and 2.

International Standard IEC 60884-1 has been prepared by subcommittee 23B: Plugs, socket-outlets and switches, of IEC technical committee 23: Electrical accessories.

Annexes A and B form an integral part of this standard.

Annex C is for information only.

IEC 60884-1 consists of the following parts, under the general title *Plugs, and socket-outlets for household and similar purposes*:

- Part 1: General requirements
- Part 2-1: Particular requirements for fused plugs,
- Part 2-2: Particular requirements for socket-outlets for appliances
- Part 2-3: Particular requirements for switched socket-outlets without interlock for fixed installations
- Part 2-4: Particular requirements for plugs and socket-outlets for SELV
- Part 2-5: Particular requirements for adaptors
- Part 2-6: Particular requirements for switched socket-outlets with interlock for fixed installations

NOTE In this standard, the following print types are used.

- Requirements proper: in roman type;
- *Test specification: in italic type;*
- Explanatory matter: in smaller roman type.

The committee has decided that the contents of the base publication and its amendments will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

The contents of the corrigendum to Amendment 2 (March 2014) have been included in this copy.

2

INTRODUCTION to Amendment 2

The changes listed in this Amendment 2 apply to IEC 60884-1:2002 as amended by Amendment 1:2006.

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PLUGS AND SOCKET-OUTLETS FOR HOUSEHOLD AND SIMILAR PURPOSES –

Part 1: General requirements

1 Scope

This part of IEC 60884 applies to plugs and fixed or portable socket-outlets for a.c. only, with or without earthing contact, with a rated voltage greater than 50 V but not exceeding 440 V and a rated current not exceeding 32 A, intended for household and similar purposes, either indoors or outdoors.

The rated current is limited to 16 A maximum for fixed socket-outlets provided with screwless terminals.

This standard does not cover requirements for flush mounting boxes; however, it covers only those requirements for surface-type mounting boxes which are necessary for the tests on the socket-outlet.

NOTE 1 General requirements for mounting boxes are given in IEC 60670.

- 2 | This standard also applies to plugs which are a part of cord sets, to plugs and portable socket-outlets which are a part of cord extension sets and to plugs and socket-outlets which are a component of an appliance, unless otherwise stated in the standard for the relevant appliance.

This standard does not apply to

- plugs, socket-outlets and couplers for industrial purposes;
- appliance couplers;
- plugs, fixed and portable socket-outlets for ELV;

NOTE 2 ELV values are specified in IEC 60364-4-41.

- fixed socket-outlets combined with fuses, automatic switches, etc.

NOTE 3 Socket-outlets with pilot lights are allowed provided that pilot lights comply with the relevant standard, if any.

- 2 | *Plugs and socket-outlets complying with this standard should be suitable for use at ambient temperatures not normally exceeding +40 °C, but their average over a period of 24 h does not exceed +35 °C, with a lower limit of the ambient air temperature of –5 °C.*

NOTE 4 Socket-outlets complying with this standard are only suitable for incorporation or mounting in equipment in such a way and in such a place that it is unlikely that the surrounding temperature exceeds 35 °C.

NOTE 5 In the following country it is required that plugs and socket-outlets complying with this standard are suitable for use at ambient temperatures not normally exceeding 35 °C, but occasionally reaching 40 °C: CN.

In locations where special conditions prevail, such as in ships, vehicles and the like and in hazardous locations, for example where explosions are liable to occur, special constructions may be required.

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 60050-151:2001, *International Electrotechnical Vocabulary – Part 151: Electrical and magnetic devices*

IEC 60050-442:1998, *International Electrotechnical Vocabulary – Part 442: Electrical accessories*

IEC 60050-826:1982, *International Electrotechnical Vocabulary – Part 826: Electrical installations of buildings*

2 | IEC 60068-2-30, *Environmental testing – Part 2-30: Tests – Test Db: Damp heat, cyclic (12 + 12 h cycle).*

IEC 60068-2-31, *Environmental testing – Part 2-31: Tests – Test Ec: Rough handling shocks, primarily for equipment-type specimens.*

IEC 60068-2-75, *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 60227 (all parts), *Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V*

IEC 60245 (all parts), *Rubber insulated cables – Rated voltages up to and including 450/750 V*

2 | IEC 60417, *Graphical symbols for use on equipment*

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

IEC 60529:2001, *Degrees of protection provided by enclosures (IP Code)*

2 | IEC 60669 (all parts), *Switches for household and similar fixed-electrical installations*

IEC 60695-2-10:2000, *Fire hazard testing – Part 2-10: Glowing/hot-wire based test methods – Glow-wire apparatus and common test procedure*

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 60884-2-6:1997, *Plugs and socket-outlets for household and similar purposes – Part 2-6: Particular requirements for switched socket-outlets with interlock for fixed electrical installations*

IEC 60999-1:1999, *Connecting devices – Electrical copper conductors – Safety requirements for screw-type and screwless-type clamping units – Part 1: General requirements and particular requirements for clamping units for conductors from 0,2 mm² up to 35 mm² (included)*

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

2 | IEC 61058 (all parts), *Switches for appliances*

IEC 61058-1, *Switches for appliances – Part 1: General requirements*

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

2 | ISO/IEC Guide 51, *Safety aspects – Guidelines for their inclusion in standards*

ISO 1456:1988, *Metallic coatings – Electrodeposited coatings of nickel plus chromium and of copper plus nickel plus chromium*

ISO 1639:1974, *Wrought copper alloys – Extruded sections – Mechanical properties* ¹⁾

ISO 2039-2:1987, *Plastics – Determination of hardness – Part 2: Rockwell hardness*

¹⁾ Withdrawn

ISO 2081:1986, *Metallic coatings – Electroplated coatings of zinc on iron or steel*

ISO 2093:1986, *Electroplated coatings of tin – Specification and test methods*

3 Definitions

For the purposes of this part of IEC 60884, the definitions given in IEC 60050(151) as well as the following definitions apply.

NOTE 1 Where the terms "voltage" and "current" are used, they imply r.m.s. values, unless otherwise specified.

NOTE 2 Throughout this standard the word "earthing" is used for "protective earthing".

NOTE 3 The term "accessory" is used as a general term covering plugs and socket-outlets; the term "portable accessory" covers plugs and portable socket-outlets. Examples of the use of accessories are shown in figure 1a.

NOTE 4 Throughout this standard the term "socket-outlet" covers both fixed and portable socket-outlets, except where the reference is specific to one type or the other.

3.1

plug

2 | accessory intended for frequent use by ordinary persons, having pins designed to engage with the contacts of a socket-outlet, also incorporating means for the electrical connection and mechanical retention of one flexible cable

NOTE For special purposes such as lighting chains (see also IEC 60598-2-20), two or three single-core cables can be connected within the plug.

3.2

socket-outlet

2 | accessory intended for frequent use by ordinary persons, having socket contacts designed to engage with the pins of a plug and having terminals or terminations for the connection of cable

3.3

fixed socket-outlet

socket-outlet intended to be connected to fixed wiring

3.4

portable socket-outlet

2 | socket-outlet intended to be connected to or integral with one flexible cable and which can easily be moved from one place to another while connected to the supply

3.5

multiple socket-outlet

combination of two or more socket-outlets

NOTE An example is shown in figure 1b.

3.6

socket-outlet for appliances

socket-outlet intended to be built in, or fixed to, appliances

3.7

rewirable plug or rewirable portable socket-outlet

accessory so constructed that the flexible cable can be replaced

3.8

non-rewirable plug or non-rewirable portable socket-outlet

accessory so constructed that it forms a complete unit with the flexible cable after connection and assembly by the manufacturer of the accessory (see also 14.1)

3.9

moulded-on accessory

non-rewirable portable accessory, the manufacture of which is completed by insulating material moulded around pre-assembled component parts and the terminations for the flexible cable

[IEV 442-01-14, modified]

3.10

mounting box

box intended for mounting in or on a wall, floor or ceiling, etc., for flush or surface application, intended for use with fixed socket-outlet(s)

3.11

cord set

assembly consisting of one flexible cable fitted with one plug and one single connector, intended for the connection of an electrical appliance to the electrical supply

3.12

cord extension set

assembly consisting of one flexible cable fitted with one plug and one single or multiple portable socket-outlet

3.13

terminal

insulated or non-insulated connecting device intended for reusable electrical connection of the external conductors

3.14

termination

insulated or non-insulated connecting device intended for non-reusable electrical connection of the external conductors

3.15

clamping unit

part or parts of a terminal necessary for the mechanical clamping and the electrical connection of the conductor(s)

3.16

screw-type terminal

terminal for the connection and subsequent disconnection of one conductor or the interconnection and subsequent disconnection of two or more conductors, the connection being made, directly or indirectly, by means of screws or nuts of any kind

3.17

pillar terminal

screw-type terminal in which the conductor is inserted into a hole or cavity, where it is clamped under the end of the screw or screws. The clamping pressure may be applied directly by the end of the screw or through an intermediate clamping member to which pressure is applied by the end of the screw

NOTE Examples of pillar terminals are shown in figure 2.

3.18

screw terminal

screw-type terminal in which the conductor is clamped under the head of the screw.

The clamping pressure may be applied directly to the head of a screw or through an intermediate part, such as a washer, clamping plate or anti-spread device

NOTE Examples of screw terminals are shown in figure 3.