IEC 60884-2-7

Edition 2.0 2025-02
REDLINE VERSION

INTERNATIONAL STANDARD

Plugs and socket-outlets for household and similar purposes – Part 2-7: Particular requirements for cord extension sets

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 29.120.30

ISBN 978-2-8327-0267-3

Warning! Make sure that you obtained this publication from an authorized distributor.

® Registered trademark of the International Electrotechnical Commission

CONTENTS

FOREWORD 4
1 Scope 6
2 Normative references 6
3 Terms and definitions 7
4 General requirements 8
5 General remarks on tests 9
6 Ratings 10
7 Classification 10
8 Marking 11
9 Checking of dimensions 11
10 Protection against electric shock 12
11 Provision for earthing 12
12 Terminals and terminations 12
13 Construction of fixed socket-outlets 12
14 Construction of plugs and portable socket-outlets 12
15 Interlocked socket-outlets 15
16 Resistance to ageing, protection provided by the enclosures, and resistance to humidity 15
17 Insulation resistance and electric strength 15
18 Operation of earthing contacts 15
19 Temperature rise 15
20 Breaking capacity 15
21 Normal operation 15
22 Force necessary to withdraw the plug 15
23 Flexible cables and their connection 16
24 Mechanical strength 16
25 Resistance to heat 16
26 Screws, current-carrying parts and connections 16
27 Creepage distances, clearances and distances through sealing compound 16
28 Resistance of insulating material to abnormal heat, to fire and to tracking 16
29 Resistance to rusting 16
30 Additional tests on pins provided with insulating sleeves 16
31 EMC requirements 16
32 Electromagnetic fields (EMF) requirements 16
~~101 EMC requirements~~ .....
Annexes 18
Annex A (normative) Safety-related routine tests for factory-wired portable accessories (protection against electric shock and correct polarity) 18
Annex B (informative) Alternative gripping tests 19
Annex C (normative) Switches incorporated in portable socket-outlets 19
Annex D (normative) Requirements for plugs and fixed or portable socket-outlets intended to be used with AWG cables 19

Annex E (informative) Tests to be applied during the production of crimped connections in accessories 19
Annex F (normative) Additional requirements for accessories provided with insulation-piercing terminals 19
Annex G (informative) Additional tests and requirements for accessories intended to be used in ambient temperatures below −5 °C down to and including −45 °C 20
Annex I (normative) Additional requirements and tests for plugs and socket-outlets for high-load (HL) application 20
Bibliography 21

Figure 101 – Examples of cord extension sets 8

Table 101 – Type and length of the flexible cable and nominal cross-sectional area of the conductors of cord extension sets 13

INTERNATIONAL ELECTROTECHNICAL COMMISSION

_____

PLUGS AND SOCKET-OUTLETS FOR HOUSEHOLD AND SIMILAR PURPOSES –

Part 2-7: Particular requirements for cord extension sets

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at https://patents.iec.ch. IEC shall not be held responsible for identifying any or all such patent rights.

This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 60884-2-7:2011+AMD1:2013 CSV. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

IEC 60884-2-7 has been prepared by subcommittee 23B: Plugs, socket-outlets and switches, of IEC technical committee 23: Electrical accessories. It is an International Standard.

This second edition cancels and replaces the first edition published in 2011, and Amendment 1:2013. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) alignment to IEC 60884-1, fourth edition.

The text of this International Standard is based on the following documents:

Draft	Report on voting
23B/1548/FDIS	23B/1562/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

This document is to be used in conjunction with IEC 60884-1:2022.

This document supplements or modifies the corresponding clauses in IEC 60884-1:2022, so as to convert that publication into the IEC Standard: Particular requirements for cord extension sets.

Where this document states "addition", "modification" or "replacement", the relevant requirement, test specifications or explanatory matter in IEC 60884-1:2022 shall be adapted accordingly.

Subclauses, figures, tables or notes which are additional to those in IEC 60884-1:2022 are numbered starting from 101.

A list of all the parts in the IEC 60884 series, under the general title *Plugs and socket-outlets for household and similar purposes*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

PLUGS AND SOCKET-OUTLETS FOR HOUSEHOLD AND SIMILAR PURPOSES –

Part 2-7: Particular requirements for cord extension sets

1 Scope

Replacement:

This part of IEC 60884 applies to cord extension sets, rewirable and non-rewirable, with or without earthing contact, with a rated voltage greater than 50 V but not exceeding 440 V and a rated current not exceeding 16 A, intended for household and similar purposes, either indoors or outdoors.

NOTE 1 In the following countries, cord extension sets only for equipment of class II are not allowed: DE, DK and UK ~~and CZ~~.

~~NOTE 2 In the following country, rewirable cord extension sets are not allowed: ZA.~~

This document does not apply to cord extension sets with means for reeling.

Cord extension sets intended to be used as socket-outlets for furniture are additionally covered by IEC 60884-2-8.

This document also applies to cord extension sets which are intended to be used in a cable reel, and which therefore become cable reels with a detachable flexible cable. For the combination of the cord extension set, the reel requirements and tests of IEC 61242 ~~have to be fulfilled~~ apply in addition.

Cord extension sets are suitable for use at ambient temperatures not normally exceeding +40 °C, but their average temperature over a period of 24 h does not exceed +35 °C, with a lower limit of the ambient air temperature of −5 °C.

NOTE 2 In the following country, cord extension sets comprising a socket-outlet for class II equipment are not permitted; socket-outlets in cord extension sets shall always be Class I as defined in IEC 61140: UK.

2 Normative references

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.

IEC 60884-1:2022, Clause 2 is applicable with the following exceptions:

Addition:

IEC 60884-1:~~2002~~2022, *Plugs and socket-outlets for household and similar purposes – Part 1: General requirements*
~~Amendment 1 (2006)~~

~~IEC 60884-2-1, *Plugs and socket-outlets for household and similar purposes – Part 2-1: Particular requirements for fused plugs*~~

IEC 60884-2-8:—, *Socket-outlets for furniture*[1]

~~IEC 61242, *Electrical accessories – Cable reels for household and similar purposes*~~

[1] Under preparation. Stage at the time of publication: IEC CDV 60884-2-8:2024.

IEC 60884-2-7

Edition 2.0 2025-02

INTERNATIONAL STANDARD

Plugs and socket-outlets for household and similar purposes – Part 2-7: Particular requirements for cord extension sets



IEC 60884-2-7:2025-02(en)

CONTENTS

FOREWORD 4
1 Scope 6
2 Normative references 6
3 Terms and definitions 7
4 General requirements 8
5 General remarks on tests 8
6 Ratings 9
7 Classification 10
8 Marking 10
9 Checking of dimensions 10
10 Protection against electric shock 11
11 Provision for earthing 11
12 Terminals and terminations 11
13 Construction of fixed socket-outlets 11
14 Construction of plugs and portable socket-outlets 11
15 Interlocked socket-outlets 13
16 Resistance to ageing, protection provided by the enclosures, and resistance to humidity 13
17 Insulation resistance and electric strength 14
18 Operation of earthing contacts 14
19 Temperature rise 14
20 Breaking capacity 14
21 Normal operation 14
22 Force necessary to withdraw the plug 14
23 Flexible cables and their connection 14
24 Mechanical strength 14
25 Resistance to heat 14
26 Screws, current-carrying parts and connections 14
27 Creepage distances, clearances and distances through sealing compound 14
28 Resistance of insulating material to abnormal heat, to fire and to tracking 15
29 Resistance to rusting 15
30 Additional tests on pins provided with insulating sleeves 15
31 EMC requirements 15
32 Electromagnetic fields (EMF) requirements 15
Annexes 16
Annex A (normative) Safety-related routine tests for factory-wired portable accessories (protection against electric shock and correct polarity) 16
Annex B (informative) Alternative gripping tests 17
Annex C (normative) Switches incorporated in portable socket-outlets 17
Annex D (normative) Requirements for plugs and fixed or portable socket-outlets intended to be used with AWG cables 17
Annex E (informative) Tests to be applied during the production of crimped connections in accessories 17

Annex F (normative) Additional requirements for accessories provided with insulation-piercing terminals 17
Annex G (informative) Additional tests and requirements for accessories intended to be used in ambient temperatures below −5 °C down to and including −45 °C 18
Annex I (normative) Additional requirements and tests for plugs and socket-outlets for high-load (HL) application 18
Bibliography 19

Figure 101 – Examples of cord extension sets 7

Table 101 – Type and length of the flexible cable and nominal cross-sectional area of the conductors of cord extension sets 12

INTERNATIONAL ELECTROTECHNICAL COMMISSION

_____

PLUGS AND SOCKET-OUTLETS FOR HOUSEHOLD AND SIMILAR PURPOSES –

Part 2-7: Particular requirements for cord extension sets

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at https://patents.iec.ch. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 60884-2-7 has been prepared by subcommittee 23B: Plugs, socket-outlets and switches, of IEC technical committee 23: Electrical accessories. It is an International Standard.

This second edition cancels and replaces the first edition published in 2011, and Amendment 1:2013. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) alignment to IEC 60884-1, fourth edition.

The text of this International Standard is based on the following documents:

Draft	Report on voting
23B/1548/FDIS	23B/1562/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

This document is to be used in conjunction with IEC 60884-1:2022.

This document supplements or modifies the corresponding clauses in IEC 60884-1:2022, so as to convert that publication into the IEC Standard: Particular requirements for cord extension sets.

Where this document states "addition", "modification" or "replacement", the relevant requirement, test specifications or explanatory matter in IEC 60884-1:2022 shall be adapted accordingly.

Subclauses, figures, tables or notes which are additional to those in IEC 60884-1:2022 are numbered starting from 101.

A list of all the parts in the IEC 60884 series, under the general title *Plugs and socket-outlets for household and similar purposes*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

PLUGS AND SOCKET-OUTLETS FOR HOUSEHOLD AND SIMILAR PURPOSES –

Part 2-7: Particular requirements for cord extension sets

1 Scope

Replacement:

This part of IEC 60884 applies to cord extension sets, rewirable and non-rewirable, with or without earthing contact, with a rated voltage greater than 50 V but not exceeding 440 V and a rated current not exceeding 16 A, intended for household and similar purposes, either indoors or outdoors.

NOTE 1 In the following countries, cord extension sets only for equipment of class II are not allowed: DE, DK and UK.

This document does not apply to cord extension sets with means for reeling.

Cord extension sets intended to be used as socket-outlets for furniture are additionally covered by IEC 60884-2-8.

This document also applies to cord extension sets which are intended to be used in a cable reel, and which therefore become cable reels with a detachable flexible cable. For the combination of the cord extension set, the reel requirements and tests of IEC 61242 apply in addition.

Cord extension sets are suitable for use at ambient temperatures not normally exceeding +40 °C, but their average temperature over a period of 24 h does not exceed +35 °C, with a lower limit of the ambient air temperature of −5 °C.

NOTE 2 In the following country, cord extension sets comprising a socket-outlet for class II equipment are not permitted; socket-outlets in cord extension sets shall always be Class I as defined in IEC 61140: UK.

2 Normative references

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.

IEC 60884-1:2022, Clause 2 is applicable with the following exceptions:

Addition:

IEC 60884-1:2022, *Plugs and socket-outlets for household and similar purposes – Part 1: General requirements*

IEC 60884-2-8:—, *Socket-outlets for furniture*[1]

[1] Under preparation. Stage at the time of publication: IEC CDV 60884-2-8:2024.