IEC 60884-3-1

Edition 1.0 2021-10

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Plugs and socket-outlets for household and similar purposes – Part 3-1: Particular requirements for socket-outlets incorporating USB power supply

Prises de courant pour usages domestiques et analogues – Partie 3-1: Exigences particulières pour les socles de prise de courant qui intègrent l'alimentation électrique par port USB

IEC 60884-3-1:2021-10(en-fr)

IEC Central Office
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

About the IEC
The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications
The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigendum or an amendment might have been published.

IEC publications search - webstore.iec.ch/advsearchform
The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee, …). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished
Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and once a month by email.

IEC Customer Service Centre - webstore.iec.ch/csc
If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: sales@iec.ch.

IEC online collection - oc.iec.ch
Discover our powerful search engine and read freely all the publications previews. With a subscription you will always have access to up to date content tailored to your needs.

Electropedia - www.electropedia.org
The world's leading online dictionary on electrotechnology, containing more than 22 000 terminological entries in English and French, with equivalent terms in 18 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

A propos de l'IEC
La Commission Electrotechnique Internationale (IEC) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

A propos des publications IEC
Le contenu technique des publications IEC est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

Recherche de publications IEC - webstore.iec.ch/advsearchform
La recherche avancée permet de trouver des publications IEC en utilisant différents critères (numéro de référence, texte, comité d'études, …). Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

IEC Just Published - webstore.iec.ch/justpublished
Restez informé sur les nouvelles publications IEC. Just Published détaille les nouvelles publications parues. Disponible en ligne et une fois par mois par email.

Service Clients - webstore.iec.ch/csc
Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: sales@iec.ch.

IEC online collection - oc.iec.ch
Découvrez notre puissant moteur de recherche et consultez gratuitement tous les aperçus des publications. Avec un abonnement, vous aurez toujours accès à un contenu à jour adapté à vos besoins.

Electropedia - www.electropedia.org
Le premier dictionnaire d'électrotechnologie en ligne au monde, avec plus de 22 000 articles terminologiques en anglais et en français, ainsi que les termes équivalents dans 16 langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (IEV) en ligne.

IEC 60884-3-1

Edition 1.0 2021-10

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Plugs and socket-outlets for household and similar purposes – Part 3-1: Particular requirements for socket-outlets incorporating USB power supply

Prises de courant pour usages domestiques et analogues – Partie 3-1: Exigences particulières pour les socles de prise de courant qui intègrent l'alimentation électrique par port USB

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

ICS 29.120.30

ISBN 978-2-8322-1029-0

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

_____

PLUGS AND SOCKET-OUTLETS FOR HOUSEHOLD AND SIMILAR PURPOSES –

Part 3-1: Particular requirements for socket-outlets incorporating USB power supply

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) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 60884-3-1 has been prepared by subcommittee 23B: Plugs, socket-outlets and switches, of IEC technical committee 23: Electrical accessories. It is an International Standard.

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

Draft	Report on voting
23B/1360/FDIS	23B/1362/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/standardsdev/publications.

This document shall be used in conjunction with IEC 60884-1:—[1].

This document supplements or modifies the corresponding clauses in IEC 60884-1, so as to convert that publication into the IEC International Standard: Particular requirements for socket-outlets incorporating USB power supply.

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

Subclauses, figures, tables or notes which are additional to those in IEC 60884-1 are numbered starting from 101. Additional annexes are lettered starting from AA.

A list of all parts in the IEC 60884 series, published 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 "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

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

[1] Fourth edition under preparation. Stage at the time of publication: IEC FDIS 60884-1:2021.

PLUGS AND SOCKET-OUTLETS FOR HOUSEHOLD AND SIMILAR PURPOSES –

Part 3-1: Particular requirements for socket-outlets incorporating USB power supply

1 Scope

IEC 60884-1:—, Clause 1 is applicable except as follows:

Replace the first paragraph by the following:

This part of IEC 60884 applies to fixed or portable socket-outlets for AC 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, incorporating a USB power supply.

This document defines the safety and EMC requirements for socket-outlets incorporating a USB power supply.

Specifications, performance and dimensional requirements of the USB technologies are not covered by this document; these are defined in the relevant part(s) of IEC 62680.

2 Normative references

IEC 60884-1:—, Clause 2 is applicable except as follows:

Addition:

IEC 60317-0-1:2013, *Specifications for particular types of winding wires – Part 0-1: General requirements – Enamelled round copper wire*
IEC 60317-0-1:2013/AMD1:2019

IEC 60884-1:—[2], *Plugs and socket-outlets for household and similar purposes – Part 1: General requirements*

IEC 61000-3-2, *Electromagnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current ≤16 A per phase)*

IEC 61000-4-2, *Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test*

IEC 61000-4-3, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test*

IEC 61000-4-4, *Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement techniques – Electrical fast transient/burst immunity test*

---

2 Fourth edition under preparation. Stage at the time of publication: IEC FDIS 60884-1:2021.

IEC 61000-4-5, *Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Surge immunity test*

IEC 61000-4-6, *Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields*

IEC 61000-4-8, *Electromagnetic compatibility (EMC) – Part 4-8: Testing and measurement techniques – Power frequency magnetic field immunity test*

IEC 61000-4-11, *Electromagnetic compatibility (EMC) – Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests for equipment with input current up to 16 A per phase*

IEC 62368-1:2018, *Audio/video, information and communication technology equipment – Part 1: Safety requirements*

IEC 62368-3:2017, *Audio/video, information and communication technology equipment – Part 3: Safety aspects for DC power transfer through communication cables and ports*

CISPR 32, *Electromagnetic compatibility of multimedia equipment – Emission requirements*

3 Terms and definitions

IEC 60884-1:—, Clause 3 is applicable except as follows:

Replacement of NOTE 3:

NOTE 3 The term "accessory" is used as a general term covering socket-outlets and socket-outlets incorporating a USB power supply; the term "portable accessory" covers portable socket-outlets and portable socket-outlets incorporating a USB power supply.

Add the following terms and definitions:

3.101
universal serial bus
USB
standardized bus using serial transmission

[SOURCE: IEC 60050-171:2019, 171-04-48, modified – Note 1 to entry is deleted.]

3.102
USB port
IEC 62680 series female connector used to supply power to a connected portable device

3.103
USB power supply
electronic circuit, including connections to the socket-outlet, PCB, connectors, internal wiring and similar that converts mains voltage into a lower voltage with smoothed direct current that is delivered through one or more USB port

Note 1 to entry: USB connector types are defined in the IEC 62680 series.

3.104
SELV
electric system in which the voltage cannot exceed the value of extra-low voltage:

– under normal conditions and