

|            |  |                                 |
|------------|--|---------------------------------|
| <b>STN</b> | <b>Zdravotnícke elektrické prístroje<br/>Časť 1-11: Všeobecné požiadavky na základnú bezpečnosť a nevyhnutné prevádzkové vlastnosti<br/>Pridružená norma: Požiadavky na zdravotnícke elektrické prístroje a zdravotnícke elektrické systémy používané pri poskytovaní zdravotnej starostlivosti v domácom prostredí<br/>Zmena A1</b> | <b>STN<br/>EN 60601-1-11/A1</b> |
|            |  | 36 4800                         |

Medical electrical equipment - Part 1-11: General requirements for basic safety and essential performance - Collateral Standard:  
Requirements for medical electrical equipment and medical electrical systems used in the home healthcare environment

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 09/21

STN EN 60601-1-11 z decembra 2015 sa bez tejto zmeny A1 môže používať do 16. 7. 2024.

Obsahuje: EN 60601-1-11:2015/A1:2021, IEC 60601-1-11:2015/AMD1:2020

**133547**

**EUROPEAN STANDARD**  
**NORME EUROPÉENNE**  
**EUROPÄISCHE NORM**

**EN 60601-1-11:2015/A1**

July 2021

ICS 11.020.10; 11.040.01

English Version

**Medical electrical equipment - Part 1-11: General requirements  
for basic safety and essential performance - Collateral Standard:  
Requirements for medical electrical equipment and medical  
electrical systems used in the home healthcare environment  
(IEC 60601-1-11:2015/A1:2020)**

Appareils électromédicaux - Partie 1-11: Exigences  
générales pour la sécurité de base et les performances  
essentielles - Norme Collatérale: Exigences pour les  
appareils électromédicaux et les systèmes électromédicaux  
utilisés dans l'environnement des soins à domicile  
(IEC 60601-1-11:2015/A1:2020)

Medizinische elektrische Geräte - Teil 1-11: Besondere  
Festlegungen für die Sicherheit einschließlich der  
wesentlichen Leistungsmerkmale - Ergänzungsnorm:  
Anforderungen an medizinische elektrische Geräte und  
medizinische elektrische Systeme für die medizinische  
Versorgung in häuslicher Umgebung  
(IEC 60601-1-11:2015/A1:2020)

This amendment A1 modifies the European Standard EN 60601-1-11:2015; it was approved by CENELEC on 2020-08-26. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 CEN-CENELEC Management Centre or to any CENELEC member.

This amendment 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

**EN 60601-1-11:2015/A1:2021 (E)****European foreword**

The text of document 62A/1395/FDIS, future IEC 60601-1-11/A1, prepared by SC 62A "Common aspects of electrical equipment used in medical practice" of IEC/TC 62 "Electrical equipment in medical practice" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60601-1-11:2015/A1:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2022-01-16 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2024-07-16 document have to be withdrawn

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

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

**Endorsement notice**

The text of the International Standard IEC 60601-1-11:2015/A1:2020 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 62368-1:2018      NOTE      Harmonized as EN IEC 62368-1:2020 (not modified)

## **Annex ZA** (normative)

### **Normative references to international publications with their corresponding European publications**

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

*Replace Annex ZA by the following one:*

| <u>Publication</u> | <u>Year</u> | <u>Title</u>   | <u>EN/HD</u>       | <u>Year</u> |
|--------------------|-------------|--|--------------------|-------------|
| CISPR 11           | 2009        | Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement | -                  | -           |
| IEC 60068-2-27     | 2008        | Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock   | EN 60068-2-27      | 2009        |
| IEC 60068-2-31     | 2008        | Environmental testing - Part 2-31: Tests - Test Ec: Rough handling shocks, primarily for equipment-type specimens              | EN 60068-2-31      | 2008        |
| IEC 60068-2-64     | 2008        | Environmental testing - Part 2-64: Tests - Test Fh: Vibration, broadband random and guidance                                   | EN 60068-2-64      | 2008        |
| IEC 60529          | 1989        | Degrees of protection provided by enclosures (IP Code)   | EN 60529           | 1991        |
| -                  | -           |  | + corrigendum May  | 1993        |
| + A1               | 1999        |  | + A1               | 2000        |
| + A2               | 2013        |  | + A2               | 2013        |
| IEC 60601-1        | 2005        | Medical electrical equipment - Part 1: General requirements for basic safety and essential performance                         | EN 60601-1         | 2006        |
| -                  | -           |  | + corrigendum Mar. | 2010        |
| + A1               | 2012        |  | + A1               | 2013        |
| -                  | -           |  | + A12              | 2014        |
| + A2               | 2020        |  | + A2               | 2021        |

**EN 60601-1-11:2015/A1:2021 (E)**

| <u>Publication</u> | <u>Year</u> | <u>Title</u>   | <u>EN/HD</u>   | <u>Year</u> |
|--------------------|-------------|--|----------------|-------------|
| IEC 60601-1-2      | 2014        | Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance - Collateral Standard: Electromagnetic disturbances - Requirements and tests  | EN 60601-1-2   | 2015        |
| + A1               | 2020        |  | + A1           | 2021        |
| IEC 60601-1-6      | 2010        | Medical electrical equipment - Part 1-6: General requirements for basic safety and essential performance - Collateral standard: Usability  | EN 60601-1-6   | 2010        |
| + A1               | 2013        |  | + A1           | 2015        |
| + A2               | 2020        |  | + A2           | 2021        |
| IEC 60601-1-8      | 2006        | Medical electrical equipment – Part 1-8: General requirements for basic safety and essential performance - Collateral standard: General requirements, tests and guidance for alarm systems in medical electrical equipment and medical electrical systems                    | -              | -           |
| + A1               | 2012        |  | + A1           | 2013        |
| -                  | -           |  | + AC           | 2014        |
| + A2               | 2020        |  | + A2           | 2021        |
| IEC 60601-1-12     | 2014        | Medical electrical equipment – Part 1-12: General requirements for basic safety and essential performance - Collateral Standard: Requirements for medical electrical equipment and medical electrical systems intended for use in the emergency medical services environment | -              | -           |
| + A1               | 2020        |  | + A1           | 2020        |
| IEC 62366-1        | 2015        | Medical devices - Part 1: Application of usability engineering to medical devices  | EN 62366-1     | 2015        |
| -                  | -           |  | + AC           | 2015        |
| + A1               | 2020        |  | + A1           | 2020        |
| ISO 7000           | -           | Graphical symbols for use on equipment - Registered symbols  | -              | -           |
| ISO 7010           | 2019        | Graphical symbols - Safety colours and safety signs - Registered safety signs  | -              | -           |
| ISO 15223-1        | 2016        | Medical devices - Symbols to be used with medical device labels,<br>labelling and information to be supplied - Part 1: General requirements  | EN ISO 15223-1 | 2016        |



# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

### AMENDMENT 1

### AMENDEMENT 1

**Medical electrical equipment –**

**Part 1-11: General requirements for basic safety and essential performance –  
Collateral Standard: Requirements for medical electrical equipment and medical  
electrical systems used in the home healthcare environment**

**Appareils électromédicaux –**

**Partie 1-11: Exigences générales pour la sécurité de base et les performances  
essentielles – Norme Collatérale: Exigences pour les appareils électromédicaux  
et les systèmes électromédicaux utilisés dans l'environnement des soins à  
domicile**





## THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2020 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requestor. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'IEC ou du Comité national de l'IEC du pays du demandeur. Si vous avez des questions sur le copyright de l'IEC ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de l'IEC de votre pays de résidence.

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

Tel.: +41 22 919 02 11  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://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](http://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](http://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](http://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](mailto:sales@iec.ch).

#### Electropedia - [www.electropedia.org](http://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 16 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

#### IEC Glossary - [std.iec.ch/glossary](http://std.iec.ch/glossary)

67 000 electrotechnical terminology entries in English and French extracted from the Terms and definitions clause of IEC publications issued between 2002 and 2015. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

### 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](http://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.

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.

#### Glossaire IEC - [std.iec.ch/glossary](http://std.iec.ch/glossary)

67 000 entrées terminologiques électrotechniques, en anglais et en français, extraites des articles Termes et définitions des publications IEC parues entre 2002 et 2015. Plus certaines entrées antérieures extraites des publications des CE 37, 77, 86 et CISPR de l'IEC.

#### Service Clients - [webstore.iec.ch/csc](http://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](mailto:sales@iec.ch).

#### Electropedia - [www.electropedia.org](http://www.electropedia.org)



# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

## AMENDMENT 1

## AMENDEMENT 1

**Medical electrical equipment –**

**Part 1-11: General requirements for basic safety and essential performance –  
Collateral Standard: Requirements for medical electrical equipment and medical  
electrical systems used in the home healthcare environment**

**Appareils électromédicaux –**

**Partie 1-11: Exigences générales pour la sécurité de base et les performances  
essentielles – Norme Collatérale: Exigences pour les appareils électromédicaux  
et les systèmes électromédicaux utilisés dans l'environnement des soins à  
domicile**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

## FOREWORD

This amendment has been prepared by subcommittee 62A: Common aspects of electrical equipment used in medical practice, of IEC technical committee 62: Electrical equipment in medical practice, and ISO subcommittee 3: Respiratory devices and related equipment used for patient care of ISO technical committee 121: Anaesthetic and respiratory equipment.

It is published as a double logo amendment.

The text of this amendment is based on the following documents of IEC:

| FDIS          | Report on voting |
|---------------|------------------|
| 62A/1395/FDIS | 62A/1410/RVD     |

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table. In ISO, the amendment has been approved by 15 P members out of 15 having cast a vote.

The committee has decided that the contents of this amendment and the base publication 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.

NOTE The attention of users of this document is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC or ISO publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests. It is the recommendation of the committee that the content of this publication be adopted for mandatory implementation nationally not earlier than 3 years from the date of publication.

---

## INTRODUCTION TO AMENDMENT 1

The second edition of IEC 60601-1-11 was published in 2015. Since the publication of IEC 60601-1-11:2015, the IEC Subcommittee (SC) 62A Secretariat has been collecting issues from a variety of sources including comments from National Committees. At the November 2015 meeting of IEC/SC 62A in Kobe, Japan, the subcommittee initiated a process to identify high-priority issues that need to be considered in an amendment and should not wait until the third edition of IEC 60601-1-11, which is presently targeted for publication sometime after 2024.

Those issues selected for inclusion on the final "short list" to be addressed in Amendment 1 were those approved by a 2/3 majority of the National Committees present and voting at the Frankfurt meeting of SC 62A. At the meeting held on 10 October 2016, four items were presented to the National Committees present. All four items received the required 2/3 majority of the National Committees present and voting and have been included in the "short list" for consideration in preparing Amendment 1. All remaining issues have been placed on a "long list" for consideration in the third edition of IEC 60601-1-11.

The "short list" of issues was documented in the design specification for Amendment 1. As IEC 60601-1-11 was jointly developed with ISO/TC 121/SC 3, the work was assigned to IEC/SC 62A-ISO/TC 121/SC 3 Joint Working Group (JWG) 6. JWG 6 was directed to consider each issue described in Clause 6 of the design specification and develop an appropriate solution for the identified problem. That final solution in this amendment can encompass any technical solution proposed by the author of the issue or it can involve a different solution developed by the expert group. The expert group can also have recommended that no change to the standard was justified by the problem statement.

Because this is an amendment to IEC 60601-1-11:2015, the style in force at the time of publication of IEC 60601-1-11 has been applied to this amendment. The style specified in ISO/IEC Directives Part 2:2018 has only been applied when implementing the new style guidance would not result in additional editorial changes.

Users of this document should note that when constructing the dated references to specific elements in a standard, such as definitions, amendments are only referenced if they modified the text being cited. For example, if a reference is made to a definition that has not been modified by an amendment, then the reference to the amendment is not included in the dated reference.

### 1.3.1 IEC 60601-1

Add, in the first two dashes of the existing second paragraph, the words ", including any amendments".

## 2 Normative references

Replace the existing references to IEC 60601-1, IEC 60601-1-2, IEC 60601-1-6, IEC 60601-1-8, IEC 60601-1-12, IEC 62366-1, ISO 7010 and ISO 15223-1 with the following new references:

IEC 60601-1:2005, *Medical electrical equipment – Part 1: General requirements for basic safety and essential performance*

IEC 60601-1:2005/AMD1:2012

IEC 60601-1:2005/AMD2:2020

IEC 60601-1-2:2014, *Medical electrical equipment – Part 1-2: General requirements for basic safety and essential performance – Collateral Standard: Electromagnetic disturbances – Requirements and tests*

IEC 60601-1-2:2014/AMD1:2020

IEC 60601-1-6:2010, *Medical electrical equipment – Part 1-6: General requirements for basic safety and essential performance – Collateral standard: Usability*

IEC 60601-1-6:2010/AMD1:2013

IEC 60601-1-6:2010/AMD2:2020

IEC 60601-1-8:2006, *Medical electrical equipment – Part 1-8: General requirements for basic safety and essential performance – Collateral Standard: General requirements, tests and guidance for alarm systems in medical electrical equipment and medical electrical systems*

IEC 60601-1-8:2006/AMD1:2012

IEC 60601-1-8:2006/AMD2:2020

IEC 60601-1-12:2014, *Medical electrical equipment – Part 1-12: General requirements for basic safety and essential performance – Collateral Standard: Requirements for medical electrical equipment and medical electrical systems intended for use in the emergency medical services environment*

IEC 60601-1-12:2014/AMD1:2020

IEC 62366-1:2015, *Medical devices – Part 1: Application of usability engineering to medical devices*

IEC 62366-1:2015/AMD1:2020

ISO 7010:2019, *Graphical symbols – Safety colours and safety signs – Registered safety signs*

ISO 15223-1:2016, *Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied – Part 1: General requirements*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN