

Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz to 300 GHz)

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN IEC 62311:2020 sisaldab Euroopa standardi EN IEC 62311:2020 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 62311:2020 consists of the English text of the European standard EN IEC 62311:2020.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 24.01.2020.	Date of Availability of the European standard is 24.01.2020.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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ICS 97.030

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EUROPEAN STANDARD

**EN IEC 62311**

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2020

ICS 97.030

Supersedes EN 62311:2008 and all of its amendments  
and corrigenda (if any)

English Version

**Assessment of electronic and electrical equipment related to  
human exposure restrictions for electromagnetic fields (0 Hz to  
300 GHz)  
(IEC 62311:2019)**

Évaluation des équipements électroniques et électriques en  
relation avec les restrictions d'exposition humaine aux  
champs électromagnétiques (0 Hz à 300 GHz)  
(IEC 62311:2019)

Bewertung von elektrischen und elektronischen  
Einrichtungen in Bezug auf Begrenzungen der Exposition  
von Personen in elektromagnetischen Feldern (0 Hz - 300  
GHz)  
(IEC 62311:2019)

This European Standard was approved by CENELEC on 2019-05-23. 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 CEN-CENELEC Management Centre 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 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**

## European foreword

The text of document 106/480/FDIS, future edition 2 of IEC 62311, prepared by IEC/TC 106 "Methods for the assessment of electric, magnetic and electromagnetic fields associated with human exposure" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62311:2020.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2020-07-24
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-01-24

This document supersedes EN 62311:2008 and all of its amendments and corrigenda (if any).

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.

## Endorsement notice

The text of the International Standard IEC 62311:2019 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

ISO/IEC 17025	NOTE	Harmonized as EN ISO/IEC 17025
CISPR 32	NOTE	Harmonized as EN 55032
IEC 61786-1:2013	NOTE	Harmonized as EN 61786-1:2014 (not modified)
IEC 62110:2009	NOTE	Harmonized as EN 62110:2009/AC:2015 (not modified)
IEC 62209-1:2016	NOTE	Harmonized as EN 62209-1:2016 (not modified)
IEC 62209-2:2010	NOTE	Harmonized as EN 62209-2:2010 (not modified)

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# INTERNATIONAL ELECTROTECHNICAL COMMISSION

## ASSESSMENT OF ELECTRONIC AND ELECTRICAL EQUIPMENT RELATED TO HUMAN EXPOSURE RESTRICTIONS FOR ELECTROMAGNETIC FIELDS (0 Hz to 300 GHz)

### FOREWORD

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International Standard IEC 62311 has been prepared by IEC technical committee 106: Methods for the assessment of electric, magnetic and electromagnetic fields associated with human exposure.

This second edition cancels and replaces the first edition published in 2007. This edition constitutes a technical revision.

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

- a) a clear distinction between intentional and unintentional radiators has been introduced;
- b) the exposure to non-uniform fields is considered;
- c) the treatment of uncertainty for the assessment procedures has been improved;
- d) various summation regimes are described in Annex A;
- e) the information from meanwhile published basic standards has been used and hence all informative annexes of the previous edition have been removed.

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

FDIS	Report on voting
106/480/FDIS	106/486/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

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.

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# ASSESSMENT OF ELECTRONIC AND ELECTRICAL EQUIPMENT RELATED TO HUMAN EXPOSURE RESTRICTIONS FOR ELECTROMAGNETIC FIELDS (0 Hz to 300 GHz)

## 1 Scope

This document applies to electronic and electrical equipment for which no dedicated product standard or product family standard regarding human exposure to electromagnetic fields applies. It covers equipment with intentional or non-intentional radiators as well as a combination thereof.

This document provides assessment methods and criteria to evaluate equipment against limits on exposure of people related to electric, magnetic and electromagnetic fields. The frequency range covered is from 0 Hz to 300 GHz.

NOTE 1 Further guidance concerning the application of this document and its relationship to other EMF standards is given in Figure 1.

This document does not specify limits expressed by means of basic restrictions and/or reference levels. Such limits are subject to the applied assessment scheme, for example by means of regional limits.

NOTE 2 The assessment methods and criteria to evaluate equipment against basic restrictions or reference levels can be used with regard to either general public or occupational exposure.

## 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 60050-161:1990, *International Electrotechnical Vocabulary – Chapter 161: Electromagnetic compatibility* (available at <http://www.electropedia.org>)

IEC 62232:2017, *Determination of RF field strength, power density and SAR in the vicinity of radiocommunication base stations for the purpose of evaluating human exposure*

## 3 Terms, definitions and abbreviated terms

### 3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-161 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>