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Standards

Irish Standard
I.S. EN 62311:2008

Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz) (IEC 62311:2007 (MOD))

I.S. EN 62311:2008

Incorporating amendments/corrigenda issued since publication:

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NSAI 1 Swift Square, Northwood, Santry Dublin 9	T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W NSAI.ie	Sales: T +353 1 857 6730 F +353 1 857 6729 W standards.ie	Price Code: AD
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EUROPEAN STANDARD

EN 62311

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2008

ICS 97.030

Supersedes EN 50392:2004

English version

**Assessment of electronic and electrical equipment
related to human exposure restrictions
for electromagnetic fields (0 Hz - 300 GHz)
(IEC 62311:2007, modified)**

Evaluation des équipements
électroniques et électriques
en relation avec les restrictions
d'exposition humaine
aux champs électromagnétiques
(0 Hz - 300 GHz)
(CEI 62311:2007, modifiée)

Bewertung von elektrischen
und elektronischen Einrichtungen
in Bezug auf Begrenzungen
der Exposition von Personen
in elektromagnetischen Feldern
(0 Hz - 300 GHz)
(IEC 62311:2007, modifiziert)

This European Standard was approved by CENELEC on 2007-12-04. 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 Central Secretariat or to any CENELEC member.

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CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 106/129/FDIS, future edition 1 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.

A draft amendment, prepared by the Technical Committee CENELEC TC 106X, Electromagnetic fields in the human environment, was submitted to the Unique Acceptance Procedure.

The combined texts of IEC 62311:2007 and the draft amendment prAA were approved by CENELEC as EN 62311 on 2007-12-04.

This European Standard supersedes EN 50392:2004.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2009-01-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2011-01-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62311:2007 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

2 Normative references

Add:

Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz), Official Journal L 199 of 30 July 1999

3 Definitions

3.4 Replace "current density" by "induced current density".

Replace the whole Clause 4 by:

4 Compliance criteria

The electronic and electrotechnical apparatus shall comply with the basic restriction as specified in Annex II of Council Recommendation 1999/519/EC.

NOTE 1 The time averaging in the EU-Recommendation applies.

The reference levels in the Council Recommendation 1999/519/EC on public exposure to electromagnetic fields are derived from the basic restrictions using worst-case assumptions about exposure. If the reference levels are met, then the basic restrictions will be complied with, but if the reference levels are exceeded, that does not necessarily mean that the basic restrictions will not be met. In some situations, it will be necessary to show compliance with the basic restrictions directly, but it may also be possible to derive compliance criteria that allow a simple measurement or calculation to demonstrate compliance with the basic restriction. Often these compliance criteria can be derived using realistic assumptions about conditions under which exposures from a device may occur, rather than the conservative assumptions that underly the reference levels.

NOTE 2 The limit is the basic restriction.

If the technology in the apparatus is not capable of producing an E-field, H-field or contact current, at the normal user position, at levels higher than 1/2 the limit values then the apparatus is deemed to comply with the requirements in this standard in respect of that E-field, H-field or contact current without further assessment.

Bibliography

Add the following note for the standard indicated:

ISO/IEC 17025 NOTE Harmonized as EN ISO/IEC 17025:2005 (not modified).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-161	-1)	International Electrotechnical Vocabulary (IEV) - Chapter 161: Electromagnetic compatibility	-	-

1) Undated reference.



IEC 62311

Edition 1.0 2007-08

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

**Evaluation des équipements électroniques et électriques en relation avec
les restrictions d'exposition humaine aux champs électromagnétiques
(0 Hz – 300 GHz)**





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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland
Email: inmail@iec.ch
Web: www.iec.ch

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IEC 62311

Edition 1.0 2007-08

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

**Evaluation des équipements électroniques et électriques en relation avec
les restrictions d'exposition humaine aux champs électromagnétiques
(0 Hz – 300 GHz)**

INTERNATIONAL
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COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ASSESSMENT OF ELECTRONIC AND ELECTRICAL EQUIPMENT
RELATED TO HUMAN EXPOSURE RESTRICTIONS
FOR ELECTROMAGNETIC FIELDS (0 Hz – 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.

The text of this standard is based on the following documents:

FDIS	Report on voting
106/129/FDIS	106/134/RVD

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

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

The committee has decided that the contents of this publication will remain unchanged until the maintenance result 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;
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ASSESSMENT OF ELECTRONIC AND ELECTRICAL EQUIPMENT RELATED TO HUMAN EXPOSURE RESTRICTIONS FOR ELECTROMAGNETIC FIELDS (0 Hz – 300 GHz)

1 Scope and object

This International Standard applies to electronic and electrical equipment for which no dedicated product- or product family standard regarding human exposure to electromagnetic fields applies.

The frequency range covered is 0 Hz to 300 GHz.

The object of this generic standard is to provide assessment methods and criteria to evaluate such equipment against basic restrictions or reference levels on exposure of the general public related to electric, magnetic and electromagnetic fields and induced and contact current.

NOTE This standard is intended to cover both intentional and non-intentional radiators. If the equipment complies with the requirements in another relevant standard, e.g. EN 50371 covering low power equipment, then the requirements of this standard (IEC 62311) are considered to be met and the application of this standard to that equipment is not necessary. See also Clause 7.2.

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 60050-161, *International Electrotechnical Vocabulary – Chapter 161: Electromagnetic compatibility*

3 Terms and definitions

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

3.1 averaging time

t_{avg}
appropriate time over which exposure is averaged for purposes of determining compliance

3.2 basic restriction

maximum exposure level that should not be exceeded under any conditions

NOTE Examples of basic restrictions can be found in Annex II of the Council Recommendation 1999/519/EC [6]¹⁾, ICNIRP Guidelines [1] IEEE Std C95.6™ [2] and IEEE Std C95.1™ [3].

¹⁾ Figures in square brackets refer to the Bibliography.

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