



National Standards Authority of Ireland
Údarás um Chaighdeáin Náisiúnta na hÉireann

IRISH STANDARD

I.S. EN 62233:2008

ICS 97.030

**MEASUREMENT METHODS FOR
ELECTROMAGNETIC FIELDS OF
HOUSEHOLD APPLIANCES AND SIMILAR
APPARATUS WITH REGARD TO HUMAN
EXPOSURE (IEC 62233:2005 (MOD))**

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**Measurement methods for electromagnetic fields of household appliances
and similar apparatus with regard to human exposure**
(IEC 62233:2005, modified)

Méthodes de mesures des champs
électromagnétiques des appareils
électrodomestiques et similaires
en relation avec l'exposition humaine
(CEI 62233:2005, modifiée)

Verfahren zur Messung
der elektromagnetischen Felder
von Haushaltgeräten und ähnlichen
Elektrogeräten im Hinblick
auf die Sicherheit von Personen
in elektromagnetischen Feldern
(IEC 62233:2005, modifiziert)

This European Standard was approved by CENELEC on 2007-12-01. 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.

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 Central Secretariat has the same status as the official versions.

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

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

I.S. EN 62233:2008

EN 62233:2008

- 2 -

Foreword

The text of the International Standard IEC 62233:2005, prepared by IEC TC 106, Methods for the assessment of electric, magnetic and electromagnetic fields associated with human exposure, together with common modifications prepared by a Joint Editing Group of the Technical Committee CENELEC TC 61, Safety of household and similar electrical appliances, and CENELEC TC 106X, Electromagnetic fields in the human environment, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 62233 on 2007-12-01.

This European Standard supersedes EN 50366:2003 + A1:2006, to which it is technically equivalent.

The following dates are applicable:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2008-12-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2012-12-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62233:2005 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

Contents

p Delete “and limit sets” from the title of Clause 4.

p Add:

Annex ZA (normative) Normative references to international publications with their corresponding European publications

1 Scope

Add the following note:

NOTE The methods are not suitable for comparing the fields of different appliances.

3 Definitions

p **3.2.1** Delete “(basic limitations)” in the term.

Add:

3.2.Z1

operator distance

distance between the surface of the appliance and the closest point of the head or torso of the operator

4 Choice of test method and limit sets

p Replace the title by:

4 Choice of test method

p Delete the first and third paragraphs.

p In the fifth paragraph, replace “alternative test methods” by “simplified test methods”.

5 Measuring methods

5.5.1 General

p Delete the second sentence of the first paragraph.

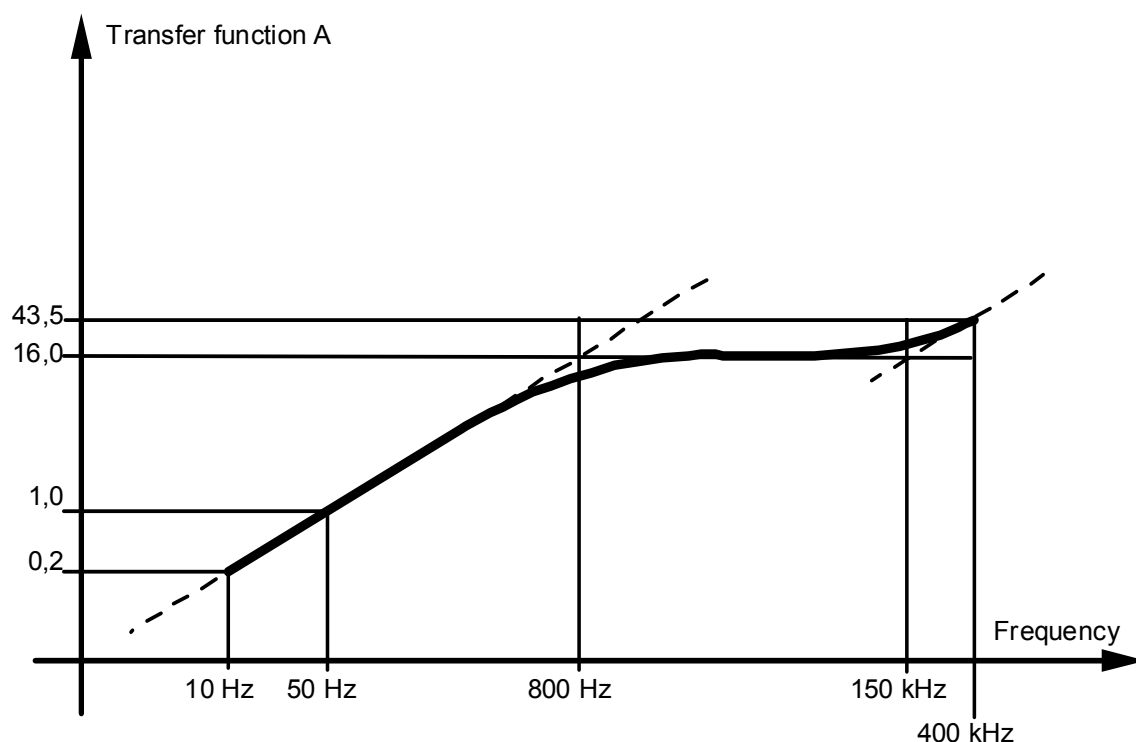
5.5.2 Time domain evaluation

p Replace the entire subclause by:

This is the reference method and is used in case of doubt.

Independent of the type of the signal, a time domain measurement of the value of the magnetic flux density can be carried out. For fields with several frequency components, the dependency on frequency of the reference levels is taken into account by implementing a transfer function A which is inverse of the reference level expressed as a function of the frequency.

The transfer function is to be established using a first order filter and shall have the characteristics shown in Figure Z1.



NOTE Logarithmic scales are used for both axes.

Figure Z1 - Transfer function

The following sequence is used for the measurements:

- perform a separate measurement of each coil signal;
- apply a weighting to each signal using the transfer function;
- square the weighted signals;
- add the squared signals;
- average the sum;
- obtain the square root of the average.

The result is the weighted r.m.s. value of the magnetic flux density.

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