SIST

SLOVENSKI STANDARD
SIST EN 61000-4-3:2006/A2:2011

01-maj-2011

Elektromagnetna združljivost (EMC) - 4-3. del: Preskusne in merilne tehnike - Preskušanje odpornosti proti sevanim radiofrekvenčnim elektromagnetnim poljem - Dodatek A2 (IEC 61000-4-3:2006/A2:2010)

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

Elektromagnetische Verträglichkeit (EMV) - Teil 4-3: Prüf- und Messverfahren - Prüfung der Störfestigkeit gegen hochfrequente elektromagnetische Felder

Compatibilité électromagnétique (CEM) - Partie 4-3: Techniques d'essai et de mesure - Essai d'immunité aux champs électromagnétiques rayonnés aux fréquences radioélectriques

Ta slovenski standard je istoveten z: **EN 61000-4-3:2006/A2:2010**

ICS:

33.100.20	Imunost	Immunity

SIST EN 61000-4-3:2006/A2:2011 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61000-4-3/A2

July 2010

ICS 33.100.20

English version

Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test (IEC 61000-4-3:2006/A2:2010)

Compatibilité électromagnétique (CEM) - Partie 4-3: Techniques d'essai et de mesure - Essai d'immunité aux champs électromagnétiques rayonnés aux fréquences radioélectriques (CEI 61000-4-3:2006/A2:2010)

Elektromagnetische Verträglichkeit (EMV) - Teil 4-3: Prüf- und Messverfahren - Prüfung der Störfestigkeit gegen hochfrequente elektromagnetische Felder (IEC 61000-4-3:2006/A2:2010)

This amendment A2 modifies the European Standard EN 61000-4-3:2006; it was approved by CENELEC on 2010-07-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

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Foreword

The text of document 77B/626/FDIS, future amendment 2 to IEC 61000-4-3:2006, prepared by SC 77B, High frequency phenomena, of IEC TC 77, Electromagnetic compatibility, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A2 to EN 61000-4-3:2006 on 2010-07-01.

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

The following dates were fixed:

– latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2011-04-01
– latest date by which the national standards conflicting with the amendment have to be withdrawn	(dow)	2013-07-01

Endorsement notice

The text of amendment 2:2010 to the International Standard IEC 61000-4-3:2006 was approved by CENELEC as an amendment to the European Standard without any modification.

IEC 61000-4-3

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INTERNATIONAL STANDARD

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AMENDMENT 2

AMENDEMENT 2

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

Compatibilité électromagnétique (CEM) –
Partie 4-3: Techniques d'essai et de mesure – Essai d'immunité aux champs électromagnétiques rayonnés aux fréquences radioélectriques

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FOREWORD

This amendment has been prepared by subcommittee 77B: High frequency phenomena, of IEC technical committee 77: Electromagnetic compatibility.

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

FDIS	Report on voting
77B/626/FDIS	77B/629/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.

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.

CONTENTS

Add the title of Annex J as follows:

Annex J (informative) Measurement uncertainty due to test instrumentation

Add, after Annex I, the following new Annex J:

Annex J
(informative)

Measurement uncertainty due to test instrumentation

J.1 General

This annex gives information related to measurement uncertainty (MU) of the test level setting according to the particular needs of the test method contained in the main body of the standard. Further information can be found in [1, 2][1].

This annex shows an example of how an uncertainty budget can be prepared based upon level setting. Other parameters of the disturbance quantity such as modulation frequency and modulation depth, harmonics produced by the amplifier may also need to be considered in an appropriate way by the test laboratory. The methodology shown in this annex is considered to be applicable to all parameters of the disturbance quantity.

The uncertainty contribution for field homogeneity including test site effects is under consideration.

J.2 Uncertainty budgets for level setting

J.2.1 Definition of the measurand

The measurand is the hypothetical test electric field strength (without an EUT) at the point of the UFA selected according to the process of 6.2.1 step a) and 6.2.2 step a) of this standard.

J.2.2 MU contributors of the measurand

The following influence diagram (see Figure J.1) gives an **example** of influences upon level setting. It applies to both calibration and test processes and it should be understood that the diagram is not exhaustive. The most important contributors from the influence diagram have been selected for the uncertainty budget Tables J.1 and J.2. As a minimum, the contributions listed in Tables J.1 and J.2 shall be used for the calculation of the uncertainty budgets in order to get comparable budgets for different test sites or laboratories. It is noted that a laboratory may include additional contributors in the calculation of the MU, on the basis of its particular circumstances.

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1 Figures in square brackets refer to the reference documents in Clause J.4.

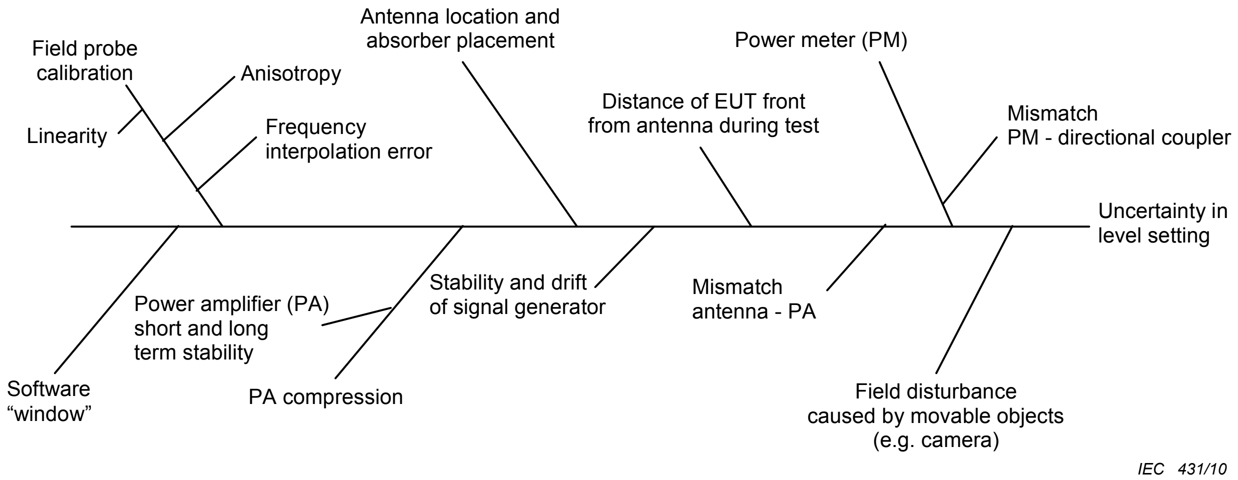

Figure J.1 – Example of influences upon level setting

J.2.3 Calculation examples for expanded uncertainty

It shall be recognized that the contributions that apply for calibration and for test may not be the same. This leads to different uncertainty budgets for each process.

In this basic standard, the field inside the chamber is calibrated before the test upon an EUT. Depending on the test setup, several contributors may not be a factor in calculating MU. Examples include those that are compensated by level control of the amplifier output power or that remain unchanged between calibration and test (e.g. mismatch between antenna and amplifier).

The field probe and the power monitoring instrumentation (repeatability rather than absolute measurement accuracy and linearity) are not included in the level control of the amplifier output power and their contributions shall be considered in evaluating MU.

Tables J.1 and J.2 give examples of an uncertainty budget for level setting. The uncertainty budget consists of two parts, the uncertainty for calibration and the uncertainty for test.

Table J.1 – Calibration process

Symbol	Uncertainty Source X_i	$U(x_i)$	Unit	Distribution	Divisor	$u(x_i)$	Unit	c_i	$u_i(y)$	Unit	$u_i(y)^2$
FP	Field probe calibration	1,7	dB	normal *k* =2	2	0,85	dB	1	0,85	dB	0,72
PM_c	Power meter	0,3	dB	rect	1,73	0,17	dB	1	0,17	dB	0,03
PA_c	PA rapid gain variation	0,2	dB	rect	1,73	0,12	dB	1	0,12	dB	0,01
SW_c	SW levelling precision	0,6	dB	rect	1,73	0,35	dB	1	0,35	dB	0,12
				$\Sigma u_i(y)^2$							0,88
				$\sqrt{\Sigma u_i(y)^2}$							0,94
				Expanded uncertainty U(y) (*CAL*) *k* =2							**1,88** dB