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**Specifikacija za merilne naprave in metode za merjenje radijskih motenj in odpornosti – 4-2. del: Modeliranje negotovosti, statistike in mejnih vrednosti – Negotovost pri meritvah EMC (CISPR 16-4-2:2003)**

Specification for radio disturbance and immunity measuring apparatus and methods -- Part 4-2: Uncertainties, statistics and limit modelling - Uncertainty in EMC measurements

Anforderungen an Geräte und Einrichtungen sowie Festlegung der Verfahren zur Messung der hochfrequenten Störaussendung (Funkstörungen) und Störfestigkeit -- Teil 4-2: Unsicherheiten, Statistik und Modelle zur Ableitung von Grenzwerten (Störmodell) - Unsicherheit bei EMV-Messungen

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Spécifications des méthodes et des appareils de mesure des perturbations radioélectriques et de l'immunité aux perturbations radioélectriques -- Partie 4-2: Incertitudes, statistiques et modélisation des limites - Incertitudes de mesure CEM

**Ta slovenski standard je istoveten z: EN 55016-4-2:2004**

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**ICS:**

17.220.20	Merjenje električnih in magnetnih veličin	Measurement of electrical and magnetic quantities
33.100.01	Elektromagnetna združljivost na splošno	Electromagnetic compatibility in general

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EUROPEAN STANDARD

**EN 55016-4-2**

NORME EUROPÉENNE

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October 2004

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English version

**Specification for radio disturbance and immunity measuring apparatus and methods**  
**Part 4-2: Uncertainties, statistics and limit modelling –**  
**Uncertainty in EMC measurements**  
**(CISPR 16-4-2:2003)**

Spécifications des méthodes  
 et des appareils de mesure  
 des perturbations radioélectriques  
 et de l'immunité aux perturbations  
 radioélectriques  
 Partie 4-2: Incertitudes, statistiques  
 et modélisation des limites –  
 Incertitudes de mesure CEM  
 (CISPR 16-4-2:2003)

Anforderungen an Geräte und  
 Einrichtungen sowie Festlegung der  
 Verfahren zur Messung der  
 hochfrequenten Störaussendung  
 (Funkstörungen) und Störfestigkeit  
 Teil 4-2: Unsicherheiten, Statistik  
 und Modelle zur Ableitung von  
 Grenzwerten (Störmodell) –  
 Unsicherheit bei EMV-Messungen  
 (CISPR 16-4-2:2003)

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

## Foreword

The text of the International Standard CISPR 16-4-2:2003, prepared by CISPR SC A, Radio-interference measurements and statistical methods, was submitted to the formal vote and was approved by CENELEC as EN 55016-4-2 on 2004-09-01 without any modification.

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) 2005-09-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2007-09-01

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard CISPR 16-4-2:2003 was approved by CENELEC as a European Standard without any modification.

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## 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>
CISPR 16-1	Series	Specification for radio disturbance and immunity measuring apparatus and methods Part 1: Radio disturbance and immunity measuring apparatus	EN 55016-1	Series
CISPR 16-2	Series	Part 2: Methods of measurement of disturbances and immunity	EN 55016-2	Series
CISPR/TR 16-3	- <sup>1)</sup>	Part 3: CISPR technical reports	-	-
CISPR/TR 16-4-1	- <sup>1)</sup>	Part 4-1: Uncertainties, statistics and limit modelling - Uncertainties in standardized EMC tests	-	-
CISPR/TR 16-4-3	- <sup>1)</sup>	Part 4-3: Uncertainties, statistics and limit modelling - Statistical considerations in the determination of EMC compliance of mass-produced products	-	-
CISPR/TR 16-4-4	- <sup>1)</sup>	Part 4-4: Uncertainties, statistics and limit modeling - Statistics of complaints and a model for the calculation of limits	-	-

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<sup>1)</sup> Undated reference.

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**CISPR**  
**16-4-2**

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Première édition  
First edition  
2003-11

COMITÉ INTERNATIONAL SPÉCIAL DES PERTURBATIONS RADIOÉLECTRIQUES  
INTERNATIONAL SPECIAL COMMITTEE ON RADIO INTERFERENCE

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**Spécifications des méthodes et des appareils  
de mesure des perturbations radioélectriques et  
de l'immunité aux perturbations radioélectriques –**

**Partie 4-2:**

**Incertitudes, statistiques et modélisation des  
limites – Incertitudes de mesure CEM**  
(standards.iteh.ai)

**Specification for radio disturbance and immunity  
measuring apparatus and methods –**

**Part 4-2:**

**Uncertainties, statistics and limit modelling –  
Uncertainty in EMC measurements**

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Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

CODE PRIX  
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For price, see current catalogue

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INTERNATIONAL ELECTROTECHNICAL COMMISSION  
INTERNATIONAL SPECIAL COMMITTEE ON RADIO INTERFERENCE

**SPECIFICATION FOR RADIO DISTURBANCE AND IMMUNITY  
MEASURING APPARATUS AND METHODS –**

**Part 4-2: Uncertainties, statistics and limit modelling –  
Uncertainty in EMC measurements**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard CISPR 16-4-2 has been prepared by CISPR subcommittee A: Radio interference measurements and statistical methods.

This first edition of CISPR 16-4-2 cancels and replaces the first edition of CISPR 16-4 published in 2002. It contains the clauses of CISPR 16-4 without technical changes.

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 2006. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

## INTRODUCTION

CISPR 16-1, CISPR 16-2, CISPR 16-3 and CISPR 16-4 have been reorganised into 14 parts, to accommodate growth and easier maintenance. The new parts have also been renumbered. See the list given below.

Old CISPR 16 publications		New CISPR 16 publications	
CISPR 16-1	Radio disturbance and immunity measuring apparatus	CISPR 16-1-1	Measuring apparatus
		CISPR 16-1-2	Ancillary equipment – Conducted disturbances
		CISPR 16-1-3	Ancillary equipment – Disturbance power
		CISPR 16-1-4	Ancillary equipment – Radiated disturbances
		CISPR 16-1-5	Antenna calibration test sites for 30 MHz to 1 000 MHz
CISPR 16-2	Methods of measurement of disturbances and immunity	CISPR 16-2-1	Conducted disturbance measurements
		CISPR 16-2-2	Measurement of disturbance power
		CISPR 16-2-3	Radiated disturbance measurements
		CISPR 16-2-4	Immunity measurements
CISPR 16-3	Reports and recommendations of CISPR	CISPR 16-3	CISPR technical reports
		CISPR 16-4-1	Uncertainties in standardised EMC tests
		CISPR 16-4-2	Measurement instrumentation uncertainty
		CISPR 16-4-3	Statistical considerations in the determination of EMC compliance of mass-produced products
CISPR 16-4	Uncertainty in EMC measurements	CISPR 16-4-4	Statistics of complaints and a model for the calculation of limits

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More specific information on the relation between the 'old' CISPR 16-4 and the present 'new' CISPR 16-4-2 is given in the table after this introduction (TABLE RECAPITULATING CROSS REFERENCES).

Measurement instrumentation specifications are given in five new parts of CISPR 16-1, while the methods of measurement are covered now in four new parts of CISPR 16-2. Various reports with further information and background on CISPR and radio disturbances in general are given in CISPR 16-3. CISPR 16-4 contains information related to uncertainties, statistics and limit modelling.

CISPR 16-4 consists of the following parts, under the general title *Specification for radio disturbance and immunity measuring apparatus and methods - Uncertainties, statistics and limit modelling*:

- Part 4-1: Uncertainties in standardised EMC tests,
- Part 4-2: Uncertainty in EMC measurements,
- Part 4-3: Statistical considerations in the determination of EMC compliance of mass-produced products,
- Part 4-4: Statistics of complaints and a model for the calculation of limits.

## TABLE RECAPITULATING CROSS-REFERENCES

First edition of CISPR 16-4 Clauses	First edition of CISPR 16-4-2 Clauses
1	1
2	2
3	3
4	4
Annex	Annex
A	A

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