

Svenska Elektriska Kommissionen, SEK

Fastställt	Utgåva	Sida	Ingår i
2005-01-24	1	1 (1+66)	SEK Område EMC

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EMC – Utrustning och metoder för mätning av radiostörningar och immunitet – Del 2-1: Mätning av ledningsbundna störningar

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

*Part 2-1: Methods of measurement of disturbances and immunity –
Conducted disturbance measurements*

Som svensk standard gäller europastandarden EN 55016-2-1:2004. Den svenska standarden innehåller den officiella engelska språkversionen av EN 55016-2-1:2004.

Nationellt förord

Europastandarden EN 55016-2-1:2004

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **CISPR 16-2-1, First edition, 2003 - Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-1: Methods of measurement of disturbances and immunity - Conducted disturbance measurements**

utarbetat inom International Electrotechnical Commission, IEC.

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Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

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Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK

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**Specification for radio disturbance and immunity
measuring apparatus and methods
Part 2-1: Methods of measurement of disturbances and immunity -
Conducted disturbance measurements
(CISPR 16-2-1:2003)**

Spécifications des méthodes
et des appareils de mesure
des perturbations radioélectriques
et de l'immunité aux perturbations
radioélectriques
Partie 2-1: Méthodes de mesure
des perturbations et de l'immunité -
Mesures des perturbations conduites
(CISPR 16-2-1:2003)

Anforderungen an Geräte und
Einrichtungen sowie Festlegung der
Verfahren zur Messung der
hochfrequenten Störaussendung
(Funkstörungen) und Störfestigkeit
Teil 2-1: Verfahren zur Messung der
hochfrequenten Störaussendung
(Funkstörungen) und Störfestigkeit -
Messung der leitungsgeführten
Störaussendung
(CISPR 16-2-1:2003)

This European Standard was approved by CENELEC on 2004-09-01. 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, 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 16-2-1:2003, prepared by CISPR SC A, Radio-interference measurements and statistical methods, was submitted to the formal vote and was approved by CENELEC as EN 55016-2-1 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.

Endorsement notice

The text of the International Standard CISPR 16-2-1:2003 was approved by CENELEC as a European Standard without any modification.

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 60083	1997	Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC	-	-
IEC 60364-4	Series	Electrical installations of buildings Part 4: Protection for safety	HD 384.4/ HD 60364-4	Series
CISPR 11	2003	Industrial scientific and medical (ISM) radio-frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement	-	-
CISPR 13 (mod)	2001	Sound and television broadcast receivers and associated equipment - Radio disturbance characteristics - Limits and methods of measurement	EN 55013	2001
CISPR 14-1	2000	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus Part 1: Emission	EN 55014-1	2000
CISPR 16-1-1	2003	Specification for radio disturbance and immunity measuring apparatus and methods Part 1-1: Radio disturbance and immunity measuring apparatus - Measuring apparatus	EN 55016-1-1	2004
CISPR 16-1-2	2003	Part 1-2: Radio disturbance and immunity measuring apparatus - Ancillary equipment - Conducted disturbances	EN 55016-1-2	2004
CISPR 16-2-2	2003	Part 2-2: Methods of measurement of disturbances and immunity - Measurement of disturbance power	EN 55016-2-2	2004
CISPR 16-2-3	2003	Part 2-3: Methods of measurement of disturbances and immunity - Radiated disturbance measurements	EN 55016-2-3	2004

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
CISPR 16-2-4	2003	Part 2-4: Methods of measurement of disturbances and immunity - Immunity measurements	EN 55016-2-4	2004
CISPR/TR 16-3	2003	Part 3: CISPR technical reports	-	-
CISPR/TR 16-4-1	2003	Part 4-1: Uncertainties, statistics and limit modeling - Uncertainties in standardized EMC tests	-	-
CISPR 16-4-2	2003	Part 4-2: Uncertainties, statistics and limit modelling - Uncertainty in EMC measurements	EN 55016-4-2	2004
CISPR/TR 16-4-3	2003	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	2003	Part 4-4: Uncertainties, statistics and limit modeling - Statistics of complaints and a model for the calculation of limits	-	-
ITU-R Recommendation BS.468-4	1994	Measurement of audio-frequency noise voltage level in sound broadcasting	-	-

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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

More specific information on the relation between the 'old' CISPR 16-2 and the present 'new' CISPR 16-2-1 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 16-2 consists of the following parts, under the general title *Specification for radio disturbance and immunity measuring apparatus and methods – Methods of measurement of disturbances and immunity*:

- Part 2-1: Conducted disturbance measurements,
- Part 2-2: Measurement of disturbance power,
- Part 2-3: Radiated disturbance measurements,
- Part 2-4: Immunity measurements.

TABLE RECAPITULATING CROSS-REFERENCES

Second edition of CISPR 16-2
Clauses, subclauses

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SPECIFICATION FOR RADIO DISTURBANCE AND IMMUNITY MEASURING APPARATUS AND METHODS –

Part 2-1: Methods of measurement of disturbances and immunity – Conducted disturbance measurements

1 Scope

This part of CISPR 16 is designated a basic standard, which specifies the methods of measurement of disturbance phenomena in general in the frequency range 9 kHz to 18 GHz and especially of conducted disturbance phenomena in the frequency range 9 kHz to 30 MHz.

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 60083:1997, *Plugs and socket-outlets for domestic and similar general use standardized in member countries of IEC*

IEC 60364-4: *Electrical installations of buildings – Part 4: Protection for safety*

CISPR 11:2003, *Industrial, scientific and medical (ISM) radio-frequency equipment – Electro-magnetic disturbance characteristics – Limits and methods of measurement*

CISPR 13:2001, *Sound and television broadcast receivers and associated equipment – Radio disturbance characteristics – Limits and methods of measurement*

CISPR 14-1:2000, *Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 1: Emission*

CISPR 16-1-1:2003, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 1-1: Radio disturbance and immunity measuring apparatus – Measuring apparatus*

CISPR 16-1-2:2003, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 1-2: Radio disturbance and immunity measuring apparatus – Ancillary equipment – Conducted disturbances*

CISPR 16-2-2:2003, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 2-2: Methods of measurement of disturbances and immunity – Measurement of disturbance power*

CISPR 16-2-3:2003, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 2-3: Methods of measurement of disturbances and immunity – Radiated disturbance measurements*