



Fastställd 2017-06-14

Utgåva 4 Sida 1 (1+105) Ansvarig kommitté SEK TK EMC

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### EMC -

# Utrustning och metoder för mätning av radiostörningar och immunitet – Del 2-3: Mätning av utstrålade störningar

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

Som svensk standard gäller europastandarden EN 55016-2-3:2017. Den svenska standarden innehåller den officiella engelska språkversionen av EN 55016-2-3:2017.

### Nationellt förord

Europastandarden EN 55016-2-3:2017

består av:

- europastandardens ikraftsättningsdokument, utarbetat inom CENELEC
- CISPR 16-2-3, Fourth edition, 2016 Specification for radio disturbance and immunity measuring apparatus and methods Part 2-3: Methods of measurement of disturbances and immunity Radiated disturbance measurements

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 55016-2-3, utgåva 3, 2010, SS-EN 55016-2-3/A1, utgåva 1, 2010, SS-EN 55016-2-3/A2, utgåva 1, 2014 och SS-EN 55016-2-3 AC1, utgåva 1, 2013, gäller ej fr o m 2020-04-28.

ICS 33.100.10; 33.100.20

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### EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN 55016-2-3

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Supersedes EN 55016-2-3:2010

### **English Version**

Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-3: Methods of measurement of disturbances and immunity - Radiated disturbance measurements

(CISPR 16-2-3:2016)

Spécifications des méthodes et des appareils de mesure des perturbations radioélectriques et de l'immunité aux perturbations radioélectriques - Partie 2-3: Méthodes de mesure des perturbations et de l'immunité - Mesures des perturbations rayonnées (CISPR 16-2-3:2016) Anforderungen an Geräte und Einrichtungen sowie
Festlegung der Verfahren zur Messung der hochfrequenten
Störaussendung (Funkstörungen) und Störfestigkeit - Teil
2-3: Verfahren zur Messung der hochfrequenten
Störaussendung (Funkstörungen) und Störfestigkeit Messung der gestrahlten Störaussendung
(CISPR 16-2-3:2016)

This European Standard was approved by CENELEC on 2016-10-20. 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.

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

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### **European foreword**

The text of document CISPR/A/1176A/FDIS, future edition 4 of CISPR 16-2-3, prepared by CISPR SC A "Radio-Interference measurements and statistical methods" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 55016-2-3:2017.

The following dates are fixed:

•	latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2017-10-28
•	latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2020-04-28

This document supersedes EN 55016-2-3:2010.

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### **Endorsement notice**

The text of the International Standard CISPR 16-2-3:2016 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

CISPR 11:2015	NOTE	Harmonized as EN 55011:2016.
CISPR 16-1-6:2014	NOTE	Harmonized as EN 55016-1-6:2015.
CISPR 22:2008	NOTE	Harmonized as EN 55022:2010.
IEC 61140:2016	NOTE	Harmonized as EN 61140:2016.
ISO/IEC Guide 2:2004	NOTE	Harmonized as EN 45020:2006.
ISO/IEC 17000:2004	NOTE	Harmonized as EN ISO/IEC 17000:2004.
IEC 61000-4-21	NOTE	Harmonized as EN 61000-4-21.

### Annex ZA

(normative)

# Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here:

www.cenelec.eu.				
Publication IEC 60050-161	<u>Year</u> -	<u>Title</u> International Electrotechnical Vocabulary	EN/HD -	<u>Year</u> -
		(IEV) Chapter 161: Electromagnetic compatibility		
IEC 61000-4-3	2006	Electromagnetic compatibility (EMC) Par 4-3: Testing and measurement techniques		2006
		- Radiated, radio-frequency, electromagnetic field immunity test		
+ A1	2007	cicotromagnetto nota immanity test	+ A1	2008
+ A1 + A2	2010		+ A1 + A2	2010
	2010	Flootrom constituto accessoratibility (FMC)		2010
IEC 61000-4-20	-	Electromagnetic compatibility (EMC) Par	TEN 61000-4-20	
		4-20: Testing and measurement		
		techniques - Emission and immunity		
		testing in transverse electromagnetic		
01000 444	0040	(TEM) waveguides	E . EN 5504.4.4	0040
CISPR 14-1	2016	Electromagnetic compatibility -	FprEN 55014-1	2016
		Requirements for household appliances,		
		electric tools and similar apparatus - Part		
01000 40 4 4		1: Emission		
CISPR 16-1-1	-	Specification for radio disturbance and	-	-
		immunity measuring apparatus and methods - Part 1-1: Radio disturbance and	l	
		immunity measuring apparatus -		
CISPR 16-1-2	2014	Measuring appartus Specification for radio disturbance and	EN 55016-1-2	2014
0101 IX 10-1-2	2014	immunity measuring apparatus and	LIN 33010-1-2	2014
		methods - Part 1-2: Radio disturbance and		
		immunity measuring apparatus - Coupling	'	
		devices for conducted disturbance		
		measurements		
CISPR 16-1-4	2010	Specification for radio disturbance and	EN 55016-1-4	2010
		immunity measuring apparatus and		
		methods Part 1-4: Radio disturbance and	d	
		immunity measuring apparatus - Antennas		
		and test sites for radiated disturbance		
		measurements		
+ A1	2012		+ A1	2012
CISPR 16-2-1	2014	Specification for radio disturbance and	EN 55016-2-1	2014
		immunity measuring apparatus and		
		methods - Part 2-1: Methods of		
		measurement of disturbances and		
		immunity - Conducted disturbance		
CICDD 40 4 0		measurements	EN 55040 4 0	
CISPR 16-4-2	-	Specification for radio disturbance and	EN 55016-4-2	
		immunity measuring apparatus and methods Part 4-2: Uncertainties,		
		statistics and limit modelling -		
		Measurement instrumentation uncertainty		
		measurement motiumentation uncertainty		

### EN 55016-2-3:2017

CISPR TR 16-4-1 - Specification for radio disturbance and - immunity measuring apparatus and methods - Part 4-1: Uncertainties, statistics and limit modelling - Uncertainties in standardized EMC tests

CISPR TR 16-4-5 - Specification for radio disturbance and - immunity measuring apparatus and methods - Part 4-5: Uncertainties, statistics and limit modelling - Conditions for the use of alternative test methods

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# INTERNATIONAL ELECTROTECHNICAL COMMISSION INTERNATIONAL SPECIAL COMMITTEE ON RADIO INTERFERENCE

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

# Part 2-3: Methods of measurement of disturbances and immunity – Radiated disturbance 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 16-2-3 has been prepared by CISPR subcommittee A: Radio-interference measurements and statistical methods.

This fourth edition edition cancels and replaces the third edition published in 2010, its Amendment 1:2010 and its Amendment 2:2014. This edition constitutes a technical revision.

This edition includes the following significant technical change with respect to the previous edition: addition of content on correction of the electric field strength to account for phase centre of log-periodic dipole array antennas.

It has the status of a basic EMC publication in accordance with IEC Guide 107, Electromagnetic compatibility – Guide to the drafting of electromagnetic compatibility publications.

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

FDIS	Report on voting	
CISPR/A/1176A/FDIS	CISPR/A/1182/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.

A list of all parts of the CISPR 16 series, published under the general title *Specification for radio disturbance and immunity measuring apparatus and methods,* can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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.

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

# Part 2-3: Methods of measurement of disturbances and immunity – Radiated disturbance measurements

### 1 Scope

This part of CISPR 16 specifies the methods of measurement of radiated disturbance phenomena in the frequency range of 9 kHz to 18 GHz. The aspects of measurement uncertainty are specified in CISPR 16-4-1 and CISPR 16-4-2.

NOTE In accordance with IEC Guide 107 [13]<sup>1</sup>, CISPR 16-2-3 is a basic EMC publication for use by product committees of the IEC. As stated in Guide 107, product committees are responsible for determining the applicability of the EMC standard. CISPR and its subcommittees are prepared to co-operate with product committees in the evaluation of the value of particular EMC tests for specific products.

#### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

CISPR 14-1:2016, Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus – Part 1: Emission

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

CISPR 16-1-2:2014, Specification for radio disturbance and immunity measuring apparatus and methods – Part 1-2: Radio disturbance and immunity measuring apparatus – Coupling devices for conducted disturbance measurements

CISPR 16-1-4:2010, Specification for radio disturbance and immunity measuring apparatus and methods – Part 1-4: Radio disturbance and immunity measuring apparatus – Antennas and test sites for radiated disturbance measurements
CISPR 16-1-4:2010/AMD1:2012

CISPR 16-2-1:2014, Specification for radio disturbance and immunity measuring apparatus and methods – Part 2-1: Methods of measurement of disturbances and immunity – Conducted disturbance measurements

CISPR TR 16-4-1, Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-1: Uncertainties, statistics and limit modelling – Uncertainties in standardized EMC tests

CISPR 16-4-2, Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-2: Uncertainties, statistics and limit modelling – Measurement instrumentation uncertainty

<sup>1</sup> Numbers in square brackets refer to the Bibliography.

CISPR TR 16-4-5, Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-5: Uncertainties, statistics and limit modelling – Conditions for the use of alternative test methods

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

IEC 61000-4-3:2006, Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test IEC 61000-4-3:2006/AMD1:2007 IEC 61000-4-3:2006/AMD2:2010

IEC 61000-4-20, Electromagnetic compatibility (EMC) – Part 4-20: Testing and measurement techniques – Emission and immunity testing in transverse electromagnetic (TEM) waveguides