

**SLOVENSKI STANDARD**  
**SIST EN 55016-2-1:2009/A1:2011**  
**01-junij-2011**

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**Specifikacija za merilne naprave in metode za merjenje radijskih motenj in odpornosti - 2-1. del: Metode za merjenje radijskih motenj in odpornosti - Merjenje motenj po vodnikih - Dodatek A1 (CISPR 16-2-1:2008/A1:2010)**

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

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

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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

**Ta slovenski standard je istoveten z: EN 55016-2-1:2009/A1:2011**

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**ICS:**

17.220.20	Merjenje električnih in magnetnih veličin	Measurement of electrical and magnetic quantities
33.100.20	Imunost	Immunity

**SIST EN 55016-2-1:2009/A1:2011**      **en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 55016-2-1/A1**

April 2011

ICS 33.100.10; 33.100.20

English version

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

**Part 2-1: Methods of measurement of disturbances and immunity -  
Conducted disturbance measurements  
(CISPR 16-2-1:2008/A1:2010)**

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 16-2-1:2008/A1:2010)

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 16-2-1:2008/A1:2010)

<https://standards.iteh.ai/catalog/standards/sist/1870c0903391787/sist-en-55016-2-1-2009-a1-2011>

This amendment A1 modifies the European Standard EN 55016-2-1:2009; it was approved by CENELEC on 2011-01-02. 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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, 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

**Management Centre: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of amendment 1:2010 to the International Standard CISPR 16-2-1:2008, prepared by CISPR SC A, Radio-interference measurements and statistical methods, was submitted to the formal vote and was approved by CENELEC as amendment A1 to EN 55016-2-1:2009 on 2011-01-02 without any modification.

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) 2011-10-02
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2014-01-02

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of amendment 1:2010 to the International Standard CISPR 16-2-1:2008 was approved by CENELEC as an amendment to the European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

CISPR 16-1-4:2010 NOTE Harmonized as EN 55016-1-4:2010 (not modified).  
[SIST EN 55016-2-1:2009/A1:2011](https://standards.iteh.ai/catalog/standards/sist/167540e2-9a17-4b76-b3c5-0c0903391787/sist-en-55016-2-1-2009-a1-2011)  
<https://standards.iteh.ai/catalog/standards/sist/167540e2-9a17-4b76-b3c5-0c0903391787/sist-en-55016-2-1-2009-a1-2011>

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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>
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*Replace the existing reference to CISPR 16-1-1 by the following new reference:*

CISPR 16-1-1	2010	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	2010
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*Remove the existing reference to CISPR/TR 16-3 and its Amendments 1 and 2.*

*Add to the existing list, the title of the following new standard as follows:*

IEC 60050-161	1990	International Electrotechnical Vocabulary (IEV) - Chapter 161: Electromagnetic compatibility	-	-
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CISPR 16-2-1

Edition 2.0 2010-07

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

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

AMENDMENT 1  
AMENDEMENT 1

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

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

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

**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**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
ELECTROTECHNIQUE  
INTERNATIONALE

PRICE CODE  
CODE PRIX

**M**

ICS 33.100.10; 33.100.20

ISBN 978-2-88912-098-7

## FOREWORD

This amendment has been prepared by subcommittee A: Radio-interference measurements and statistical methods, of IEC technical committee CISPR: International special committee on radio interference in cooperation with CISPR subcommittee D: Electromagnetic disturbances related to electric/electronic equipment on vehicles and internal combustion engine powered devices.

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

CDV	Report on voting
CISPR/A/874/CDV	CISPR/A/897/RVC

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 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.

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(standards.iteh.ai)

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## INTRODUCTION

All stated specifications in CISPR 16-2-1 are met by an instrument independent of the selected implementation or technology in order to be considered suitable for measurements in accordance with CISPR standards. The addition of FFT-based measuring instrumentation requires further specifications as addressed in this amendment. A new Annex F is added as a result of provisions recently introduced into CISPR 16-1-1 on the use of spectrum analyzers for compliance measurements.

### 2 Normative references

*Replace the existing reference to CISPR 16-1-1 by the following new reference:*

CISPR 16-1-1:2010, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 1-1: Radio disturbance and immunity measuring apparatus – Measuring apparatus*

*Remove the existing reference to CISPR/TR 16-3 and its Amendments 1 and 2.*

*Add to the existing list, the title of the following new standard as follows:*

IEC 60050-161:1990, *International Electrotechnical Vocabulary (IEV) – Chapter 161: Electromagnetic Compatibility*



### 3 Definitions

*Replace the existing term, definition and note 3.7 as follows:*

#### 3.7

##### reference ground plane

##### RGP

flat conductive surface that constitutes a defined parasitic capacitance to the surrounding of an EUT and serves as reference potential

NOTE 1 See also IEC 60050-161, 161-04-36.

NOTE 2 A reference ground plane is needed for conducted emission measurements, and serves as reference ground for unsymmetrical and asymmetrical disturbance voltage measurements.

#### 3.15

##### measuring receiver

*Replace the existing definition and note as follows:*

instrument such as a tunable voltmeter, an EMI receiver, a spectrum analyzer or an FFT-based measuring instrument, with or without preselection, that meets the relevant clauses of CISPR 16-1-1

NOTE See Annex I of CISPR 16-1-1 for further information.

#### 3.16

##### test configuration

*Delete the existing note in definition 3.16.*

*Replace the existing term, definition and Notes 1 and 2 in definition 3.19 by the following new terms, notes and definitions 3.19, 3.19.1, 3.19.2, 3.19.3, 3.19.4 and 3.19.5:*

#### 3.19

##### weighting (of e.g. impulsive disturbance)

pulse-repetition-frequency (PRF) dependent conversion (mostly reduction) of a peak-detected impulse voltage level to an indication that corresponds to the interference effect on radio reception

NOTE 1 For the analogue receiver, the psychophysical annoyance of the interference is a subjective quantity (audible or visual, usually not a certain number of misunderstandings of a spoken text).

NOTE 2 For the digital receiver, the interference effect is an objective quantity that may be defined by the critical bit error ratio (BER) or bit error probability (BEP) for which perfect error correction can still occur or by another, objective and reproducible parameter.

#### 3.19.1

##### weighted disturbance measurement

measurement of disturbance using a weighting detector

#### 3.19.2

##### weighting characteristic

peak voltage level as a function of PRF for a constant effect on a specific radiocommunication system, i.e. the disturbance is weighted by the radiocommunication system itself

#### 3.19.3

##### weighting detector

detector that provides an agreed weighting function