SLOVENSKI STANDARD
SIST EN 55016-1-1:2010/A1:2010

01-december-2010

Specifikacija merilnih naprav in metod za merjenje radijskih motenj in odpornosti - 1-1. del: Merilne naprave za merjenje radijskih motenj in odpornosti - Merilne naprave - Dodatek A1

Specification for radio disturbance and immunity measuring apparatus and methods -- Part 1-1: Radio disturbance and immunity measuring apparatus - Measuring apparatus

Anforderungen an Geräte und Einrichtungen sowie Festlegung der Verfahren zur Messung der hochfrequenten Störaussendung (Funkstörungen) und Störfestigkeit -- Teil 1-1: Geräte und Einrichtungen zur Messung der hochfrequenten Störaussendung (Funkstörungen) und Störfestigkeit - Messgeräte

Spécifications des méthodes et des appareils de mesure des perturbations radioélectriques et de l'immunité aux perturbations radioélectriques -- Partie 1-1: Appareils de mesure des perturbations radioélectriques et de l'immunité aux perturbations radioélectriques - Appareils de mesure

Ta slovenski standard je istoveten z: **EN 55016-1-1:2010/A1:2010**

ICS:

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

SIST EN 55016-1-1:2010/A1:2010 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 55016-1-1/A1

October 2010

ICS 33.100.10

English version

Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-1: Radio disturbance and immunity measuring apparatus - Measuring apparatus
(CISPR 16-1-1:2010/A1:2010)

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This amendment A1 modifies the European Standard EN 55016-1-1:2010; it was approved by CENELEC on 2010-10-01. 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.

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

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Ref. No. EN 55016-1-1:2010/A1:2010 E

Foreword

The text of document CISPR/A/876/CDV, future amendment 1 to CISPR 16-1-1:2010, prepared by CISPR SC A, Radio-interference measurements and statistical methods, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 55016-1-1:2010 on 2010-10-01.

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)	2011-07-01
– latest date by which the national standards conflicting with the amendment have to be withdrawn	(dow)	2013-10-01

Endorsement notice

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

CISPR 16-1-1

Edition 3.0 2010-06

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

BASIC EMC PUBLICATION
PUBLICATION FONDAMENTALE EN CEM

AMENDMENT 1
AMENDEMENT 1

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

Spécifications des méthodes et des appareils de mesure des perturbations radioélectriques et de l'immunité aux perturbations radioélectriques – Partie 1-1: Appareils de mesure des perturbations radioélectriques et de l'immunité aux perturbations radioélectriques – Appareils de mesure

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

PRICE CODE
CODE PRIX D

ICS 33.100.10

ISBN 978-2-88912-008-6

FOREWORD

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

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

Enquiry draft	Report on voting
CISPR/A/876/CDV	CISPR/A/893/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.

INTRODUCTION

CISPR 16-1-1 uses a “black box” approach to define specifications for test instrumentation. All stated specifications in CISPR 16-1-1 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.

3.7
measuring receiver

Replace the existing definition and Notes 1 and 2 of 3.7 by the following new definition and note:

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 parts of this standard

NOTE See Annex I for further information.

Add, after the existing definition 3.11.5, the following new term and definition:

3.12
measurement time
T_m
effective, coherent time for a measurement result at a single frequency (in some areas also called dwell time)

– for the peak detector, the effective time to detect the maximum of the signal envelope
– for the quasi-peak detector, the effective time to measure the maximum of the weighted envelope
– for the average detector, the effective time to average the signal envelope
– for the rms detector, the effective time to determine the rms of the signal envelope

4.1 General

Add, after the existing text of this subclause, a new second paragraph as follows:

Spectrum analyzers and FFT-based measuring instruments that meet the requirements of this clause can be used for compliance measurements. For emission measurements, FFT-based measuring instruments shall sample and evaluate the signal continuously during the measurement time.

4.4.2 Variation with repetition frequency (relative calibration)

Replace the existing first paragraph of this subclause by the following new three paragraphs:

The response of the measuring receiver to repeated pulses shall be such that for a constant indication on the measuring receiver of e.g. 20 dB(µV), the relationship between pulse amplitude and repetition frequency is in accordance with Figure 1.

As an alternative the response of the measuring receiver to repeated pulses shall be such that for a constant voltage setting of the pulse generator of e.g. 50 dB(µV) at repetition frequencies of 25 Hz (Band A) and 100 Hz (Bands B, C and D), the relationship between receiver indication and repetition frequency is in accordance with Figure 1 under opposite sign conditions.

For all measurements, a sufficient signal-to-noise ratio is required. The use of a 10 dB attenuator at the output of the pulse generator is recommended.

4.5.4 Other spurious responses

Add, at the end of the existing note of this subclause, the following new sentence :

Examples of sources of spurious signals include local oscillators (or their harmonics), internal clocks, computer boards, and their mixing products with the input signal into the receiver.

4.7.2 Continuous wave

Replace the existing text of this subclause by the following new text:

The existence of spurious responses as described in the note to 4.5.4 shall not introduce a measurement error in excess of 1 dB for any signal input to the measuring receiver. This requirement shall be regarded as satisfied if the receiver complies with 4.7.1 when tested as described in 4.7.1.

4.9 Facilities for connection to a discontinuous disturbance analyzer

Replace the existing text of this subclause by the following new text:

For all bands the disturbance measuring receiver shall have an intermediate-frequency output if the instrument is to be used for the measurement of discontinuous disturbance. The loading of this output shall have no influence on the indication of the measurement result.

5.1 General

Replace the existing second paragraph of this subclause by the following new paragraph:

Spectrum analyzers and FFT-based measuring instruments that meet the requirements of this clause can be used for compliance measurements. For emission measurements, FFT-based measuring instruments shall sample and evaluate the signal continuously during the measurement time.

6.1 General

Replace the existing second paragraph of this subclause by the following new paragraph:

Spectrum analyzers and FFT-based measuring instruments that meet the requirements of this clause can be used for compliance measurements. For emission measurements, FFT-based measuring instruments shall sample and evaluate the signal continuously during the measurement time.

7.1 General

Replace the existing second paragraph of this subclause by the following new paragraph:

Spectrum analyzers and FFT-based measuring instruments that meet the requirements of this clause can be used for compliance measurements. For emission measurements, FFT-based measuring instruments shall sample and evaluate the signal continuously during the measurement time.

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