
Specifikacija za merilne naprave in metode za merjenje radijskih motenj in odpornosti - 1-3. del: Merilne naprave za merjenje radijskih motenj in odpornosti - Pomožna oprema - Moč motenj - Dopolnilo A2

Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-3: Radio disturbance and immunity measuring apparatus - Ancillary equipment - Disturbance power

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Spécifications des méthodes et des appareils de mesure des perturbations radioélectriques et de l'immunité aux perturbations radioélectriques - Partie 1-3: Appareils de mesure des perturbations radioélectriques et de l'immunité aux perturbations radioélectriques - Matériels auxiliaires - Puissance perturbatrice

Ta slovenski standard je istoveten z: EN 55016-1-3:2006/A2:2020

ICS:

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

SIST EN 55016-1-3:2007/A2:2020 **en**

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EUROPEAN STANDARD

EN 55016-1-3:2006/A2

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2020

ICS 33.100.10; 33.100.20

English Version

Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-3: Radio disturbance and immunity measuring apparatus - Ancillary equipment - Disturbance power
(CISPR 16-1-3:2004/A2:2020)

Spécifications des méthodes et des appareils de mesure des perturbations radioélectriques et de l'immunité aux perturbations radioélectriques - Partie 1-3: Appareils de mesure des perturbations radioélectriques et de l'immunité aux perturbations radioélectriques - Matériels auxiliaires - Puissance perturbatrice
(CISPR 16-1-3:2004/A2:2020)

Anforderungen an Geräte und Einrichtungen sowie Festlegung der Verfahren zur Messung der hochfrequenten Störaussendung (Funkstörungen) und Störfestigkeit - Teil 1-3: Geräte und Einrichtungen sowie Festlegung der Verfahren zur Messung der hochfrequenten Störaussendung (Funkstörungen) und Störfestigkeit - Zusatz-/Hilfseinrichtungen - Störleistungsmessung
(CISPR 16-1-3:2004/A2:2020)

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This amendment A2 modifies the European Standard EN 55016-1-3:2006; it was approved by CENELEC on 2020-03-03. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN 55016-1-3:2006/A2:2020 (E)**European foreword**

The text of document CIS/A/1305/FDIS, future CISPR 16-1-3/A2, prepared by CISPR SC A "Radio-interference measurements and statistical methods" of CISPR "International special committee on radio interference" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 55016-1-3:2006/A2:2020.

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) 2020-11-26
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-02-26

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

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The text of the International Standard CISPR 16-1-3:2004/A2:2020 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 documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 Where 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.

Add the following reference to Annex ZA of EN 55016-1-3:2006:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
CISPR TR 16-4-1	2009	Specification for radio disturbance and immunity measuring apparatus and methods - Part 4-1: Uncertainties, statistics and limit modelling - Uncertainties in standardized EMC tests	-	-

Delete the following reference to Annex ZA of EN 55016-1-3:2006:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
CISPR 16-4-2	-	Specification for radio disturbance and immunity measuring apparatus and methods Part 4-2: Uncertainties, statistics and limit modelling - Uncertainty in EMC measurements	EN 55016-4-2	-

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

AMENDMENT 2
AMENDEMENT 2

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Specification for radio disturbance and immunity measuring apparatus and methods –

[SIST EN 55016-1-3:2007/A2:2020](https://standards.iteh.ai/catalog/standards/sist/7-91161-50/en-55016-1-3-2007-a2-2020)

Part 1-3: Radio disturbance and immunity measuring apparatus – Ancillary equipment – Disturbance power

<https://standards.iteh.ai/catalog/standards/sist/7-91161-50/en-55016-1-3-2007-a2-2020>

**Spécifications des méthodes et des appareils de mesure des perturbations radioélectriques et de l'immunité aux perturbations radioélectriques –
Partie 1-3: Appareils de mesure des perturbations radioélectriques et de l'immunité aux perturbations radioélectriques – Matériels auxiliaires –
Puissance perturbatrice**

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FOREWORD

This amendment has been prepared by subcommittee CISPR A: Radio-interference measurements and statistical methods, of IEC technical committee CISPR: International special committee on radio interference.

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

FDIS	Report on voting
CIS/A/1305/FDIS	CIS/A/1314/RVD

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 amendment and the base 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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[SIST EN 55016-1-3:2007/A2:2020](https://standards.iteh.ai/catalog/standards/sist/a7a91fd0-59ce-47ff-b672-a67f97756be8/sist-en-55016-1-3-2007-a2-2020)

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2 Normative references

Add to the existing list the following new reference:

CISPR TR 16-4-1:2009, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-1: Uncertainties, statistics and limit modelling – Uncertainties in standardized EMC tests*

Delete the existing reference to CISPR 16-4-2 from the list.

B.2.4 Measurement uncertainty of the absorbing clamp calibration

Replace the existing text of this subclause, modified by Amendment 1, by the following new text:

The measurement instrumentation uncertainty of the calibration process is to be documented in the issued calibration report.

For the original calibration method, the guidance in 7.2 of CISPR TR 16-4-1:2009 shall be followed when determining the measurement instrumentation uncertainty of this calibration process. The expanded uncertainty shall be calculated in accordance with CISPR TR 16-4-1:2009, Table E.1 for the frequency range 30 MHz to 300 MHz and CISPR TR 16-4-1:2009, Table E.2 for the frequency range 300 MHz to 1 000 MHz.

The absorbing clamp shall meet the minimum requirement of the decoupling factors DF and DR, as described in 4.2.4.

For the jig calibration method, the measurement instrumentation uncertainty of the calibration process is to be based on the following uncertainty estimate:

Table B.1 – Uncertainty budget for the absorbing clamp jig calibration method in the frequency range 30 MHz to 1 000 MHz

Source of uncertainty (Uncertainty factors / influence quantities)	Uncertainty value (± dB)	Probability distribution	Divisor	Standard uncertainty (± dB)
Measuring instrument accuracy ¹⁾	0,1	Rectangular	1,73	0,06
Uncertainty of JTF ²⁾	1,7	Rectangular	1,73	0,98
Mismatch receiver - absorbing clamp ³⁾	0,15	U-shaped	1,41	0,11
Distance between the clamp reference point (CRP) and the jig ⁴⁾	0,15	Rectangular	1,73	0,09
Influence of measurement cable connection ⁵⁾	0,1	Rectangular	1,73	0,06
Influence of different measurement environments ⁶⁾	0,2	Rectangular	1,73	0,12
Repeatability of calibration process ⁷⁾	0,2	Normal	1	0,2
Combined standard uncertainty				1,02
Expanded uncertainty ($k=2$)				2,04
NOTE The rationale are given in the text after this table.				

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Uncertainty values shown in Table B.1 are examples only, derived from requirements in CISPR 16-1-3, and do not constitute a requirement.

Rationale for the estimates of uncertainty factors or influence quantities specific to the absorbing clamp jig calibration method:

1) Measuring instrument accuracy

The network analyzer is to be calibrated before the absorbing clamp calibration using a calibration kit to reduce the systematic errors. A requirement for the linearity of the network analyzer is included in B.2.2.2.

2) Uncertainty of JTF

The correlation of the actual clamp factor CF_{act} to the clamp factor of the original calibration method CF_{orig} is to be performed using Equation (11) in order to provide a useful clamp factor to the test house. This correlation is accomplished through the use of a JTF. The uncertainty of the JTF is expected to be available from the jig manufacturer.

3) Mismatch receiver - absorbing clamp

The mismatch of the cable connecting the receiver input to the absorbing clamp via a 6 dB attenuator is to be determined.

4) Distance between the clamp reference point (CRP) and the jig

The distance of the CRP to the jig is specified as 30 mm. If this distance is between 25 mm and 35 mm, the deviation is less than 0,15 dB.

5) Influence at the measurement cable connection

A secondary absorption device is to be used on the receiver cable and be positioned per Figure B.4. This setup significantly reduces the influence of the receiver cable orientation relative to the absorbing clamp under calibration.