



BSI Standards Publication

Specification for radio disturbance and immunity measuring apparatus and methods

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

National foreword

This British Standard is the UK implementation of EN 55016-2-1:2014+A1:2017. It is identical to CISPR 16-2-1:2014, incorporating amendment 1:2017. It supersedes BS EN 55016-2-1:2014, which will be withdrawn on 4 August 2020.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to CISPR text carry the number of the CISPR amendment. For example, text altered by CISPR amendment A1 is indicated by A1 A1.

The UK participation in its preparation was entrusted to Technical Committee GEL/210/11, EMC - Standards Committee.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Date	Text affected
31 May 2018	Implementation of CISPR amendment 1:2017 with CENELEC endorsement A1:2017

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
16-2-1:2014)**

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 conduits (CISPR 16-2-1:2014)

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 16-2-1:2014)

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CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

European foreword

The text of document CISPR/A/1053/FDIS, future edition 3 of CISPR 16-2-1, prepared by SC A "Radio-interference measurements and statistical methods" of IEC/TC CISPR "International special committee on radio interference" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 55016-2-1:2014.

The following dates are fixed:

- latest date by which the document has to be implemented at (dop) 2015-01-11
national level by publication of an identical national standard
or by endorsement
- latest date by which the national standards conflicting with the (dow) 2017-04-02
document have to be withdrawn

This document supersedes EN 55016-2-1:2009.

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

CISPR 11:2003 + A1:2004 NOTE Harmonized as EN 55011:2007¹⁾ (modified).

CISPR 16-1-4:2010 NOTE Harmonized as EN 55016-1-4:2010 (not modified).

CISPR 16-2-3:2010 NOTE Harmonized as EN 55016-2-3:2010 (not modified).

IEC 60364-4 Series NOTE Harmonized as HD 60364-4 Series (modified).

IEC 61000-4-6:2008 NOTE Harmonized as EN 61000-4-6:2009 (modified).

IEC 61010-1:2001 NOTE Harmonized as EN 61010-1:2001 (modified).

Foreword to amendment A1

The text of document CISPR/A/1168/CDV, future CISPR 16-2-1:2014/A1, prepared by SC CISPR A "Radio-interference measurements and statistical methods" of IEC/TC CISPR "International special committee on radio interference" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 55016-2-1:2014/A1:2017.

The following dates are fixed:

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national level by publication of an identical national standard
or by endorsement
- latest date by which the national standards conflicting with the (dow) 2020-08-04
document have to be withdrawn

1) Superseded by EN 55011:2009 (CISPR 11:2009, mod.).

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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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
CISPR 14-1	—	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission	EN 55014-1	—
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
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	EN 55016-1-2	2014
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	EN 55016-4-2	—
IEC 60050	Series	International Electrotechnical Vocabulary	—	—

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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 16-2-1 has been prepared by CISPR subcommittee A: Radio-interference measurements and statistical methods.

This third edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition: Methods of measurement using a new type of ancillary equipment – the CDNE – are added.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of CISPR 16 series 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 the base publication and its amendment 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.

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

A1 This part of CISPR 16 is designated a basic standard that 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. The CDNE extends the frequency range of conducted disturbance measurements to 300 Hz. **A1**

NOTE In accordance with IEC Guide 107, CISPR 16 is a basic EMC standard 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 sub-committees 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, *Electromagnetic compatibility — Requirements for household appliances, electric tools and similar apparatus — Part 1: Emission*

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*

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 16-4-2, *Specification for radio disturbance and immunity measuring apparatus and methods — Part 4-2: Uncertainties, statistics and limit modelling — Uncertainty in EMC measurements*

IEC 60050 (all parts), *International Electrotechnical Vocabulary (available at <<http://www.electropedia.org>>)*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-161, as well as the following apply.

3.1.1

ancillary equipment

transducers (e.g. current and voltage probes and artificial networks) connected to a measuring receiver or (test) signal generator and used in the disturbance signal transfer between the EUT and the measuring or test equipment