BSI Standards Publication

Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus

Part 1: Emission

bsi.

National foreword

This British Standard is the UK implementation of EN IEC 55014-1:2021. It is identical to CISPR 14-1:2020. It supersedes BS EN 55014-1:2017+A11:2020, which will be withdrawn on 12 October 2023.

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 committee manager.

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Amendments/corrigenda issued since publication

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30 April 2021	Correction to supersession details in national foreword

EUROPEAN STANDARD **EN IEC 55014-1**

EUROPÄISCHE NORM

March 2021

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Supersedes EN 55014-1:2017 and all of its amendments and corrigenda (if any)

English Version

Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission (CISPR 14-1:2020)

Compatibilité électromagnétique - Exigences pour les appareils électrodomestiques, outillages électriques et appareils analogues - Partie 1: Emission (CISPR 14-1:2020)

Elektromagnetische Verträglichkeit - Anforderungen an Haushaltgeräte, Elektrowerkzeuge und ähnliche Elektrogeräte - Teil 1: Störaussendung (CISPR 14-1:2020)

This European Standard was approved by CENELEC on 2020-10-12. 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.

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 European Standard 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.

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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

Ref. No. EN IEC 55014-1:2021 E

European foreword

The text of document CIS/F/796/FDIS, future edition 7 of CISPR 14-1, prepared by CISPR SC F "Interference relating to household appliances tools, lighting equipment and similar apparatus" of CISPR "International special committee on radio interference" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 55014-1:2021.

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) 2021-09-26
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-10-12

This document supersedes EN 55014-1:2017 and all of its amendments and corrigenda (if any).

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.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

Endorsement notice

The text of the International Standard CISPR 14-1:2020 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	NOTE	Harmonized as EN 55011
CISPR 12	NOTE	Harmonized as EN 55012
CISPR 15:2018	NOTE	Harmonized as EN IEC 55015:2019 (not modified)
IEC 60335-2-3:2012	NOTE	Harmonized as EN 60335-2-3:2016 (modified)
IEC 60335-2-3:2012/A1:2015	NOTE	Harmonized as EN 60335-2-3:2016/A1:2020 (not modified)
IEC 61140	NOTE	Harmonized as EN 61140
IEC 61558-2-7	NOTE	Harmonized as EN 61558-2-7

(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.

Publication	Year	Title	EN/HD	Year
CISPR 16-1-1	2015[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	EN 55016-1-2	2014
+ A1	2017		+ A1	2018
CISPR 16-1-3	2004	Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-3: Radio disturbance and immunity measuring apparatus - Ancillary equipment - Disturbance power	EN 55016-1-3	2006
+ A1	2016		+ A1	2016
+ A2	2020		+ A2	2020
CISPR 16-1-4	2019	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	EN IEC 55016-1-4	2019

[1] 4th edition (2015). This 4th edition has been replaced in 2019 by a 5th Edition CISPR 16-1-1:2019, Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-1: Radio disturbance and immunity measuring apparatus – Measuring apparatus.

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	EN 55016-2-1	2014
+ A1	2017		+ A1	2017
CISPR 16-2-2	2010	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-2: Methods of measurement of disturbances and immunity - Measurement of disturbance power	EN 55016-2-2	2011
CISPR 16-2-3	2016	Specification for radio disturbance and immunity measuring apparatus and methods - Part 2-3: Methods of measurement of disturbances and immunity - Radiated disturbance measurements	EN 55016-2-3	2017
+ A1	2019		+ A1	2019
CISPR 16-4-2	2011	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	2011
+ A1	2014		+ A1	2014
+ A2	2018		+ A2	2018
CISPR 32	2015	Electromagnetic compatibility of multimedia equipment - Emission requirements	EN 55032	2015
IEC 60050-161	1990	International Electrotechnical Vocabulary. Chapter 161: Electromagnetic compatibility	-	-
+ A1	1997		-	-
+ A2	1998		-	-
+ A3	2014		-	-
+ A4	2014		-	-
+ A5	2015		-	-
+ A6	1990		-	-
+ A7	2017		-	-
+ A8	2018		-	-
+ A9	2019		-	-
IEC 61000-4-20	2010	Electromagnetic compatibility (EMC) - Part 4-20: Testing and measurement techniques - Emission and immunity testing in transverse electromagnetic (TEM) waveguides	EN 61000-4-20	2010
IEC 61000-4-22	2010	Electromagnetic compatibility (EMC) - Part 4-22: Testing and measurement techniques - Radiated emissions and immunity measurements in fully anechoic rooms (FARs)	EN 61000-4-22	2011

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

INTERNATIONAL SPECIAL COMMITTEE ON RADIO INTERFERENCE

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ELECTROMAGNETIC COMPATIBILITY – REQUIREMENTS FOR HOUSEHOLD APPLIANCES, ELECTRIC TOOLS AND SIMILAR APPARATUS –

Part 1: Emission

FOREWORD

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The International Standard CISPR 14-1 has been prepared by subcommittee CISPR/F: Interference related to household appliances tools, lighting equipment and similar apparatus, of IEC technical committee CISPR.

This seventh edition cancels and replaces the sixth edition published in 2016. This edition constitutes a technical revision.

This edition includes the following significant changes with respect to the previous edition:

– extension of the frequency range for radiated measurements above 1 GHz;
– revision of general test conditions and addition of new specific test conditions (e.g. for robotic equipment);
– introduction of additional requirements for equipment making use of inductive power transfer technology;

– remove from the normative text any compliance requirement based on statistical evaluation;
– revision of clicks analysis, with particular relevance to the determination of the observation time and the application of the upper quartile method for different types of click analysers.

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

FDIS	Report on voting
CIS/F/796/FDIS	CIS/F/799/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 in the CISPR 14 series can be found on the IEC website under the general title *Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus*.

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

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

ELECTROMAGNETIC COMPATIBILITY – REQUIREMENTS FOR HOUSEHOLD APPLIANCES, ELECTRIC TOOLS AND SIMILAR APPARATUS –

Part 1: Emission

1 Scope

This part of CISPR 14 specifies the requirements that apply to the emission of radio-frequency disturbances in the frequency range 9 kHz to 400 GHz from appliances, electric tools and similar apparatus as defined below, whether powered by AC or DC (including a battery).

This document is applicable to the following equipment:

- household appliances or similar equipment;

NOTE 1 Examples are equipment used:

- for typical housekeeping functions in the household environment, which includes the dwelling and its associated buildings, the garden, etc.;
- for typical housekeeping functions in shops, offices, commercial and other similar working environments;
- on farms;
- by clients in hotels and other residential type environments;
- for induction cooking or air-conditioning, either in residential or commercial environments.

- electric tools;

NOTE 2 Examples of electric tools include electric motor-operated or electromagnetically driven hand-held tools, transportable tools, lawn and garden machinery.

- similar apparatus.

NOTE 3 Examples are:

- external power controllers using semiconductor devices;
- motor-driven electro-medical equipment;
- electric/electronic toys;
- personal care and beauty care appliances;
- automatic goods-dispensing machines;
- entertainment machines;
- cine or slide projectors;
- battery chargers and external power supplies for use with products under the scope of this document;
- electric fence energisers.

Also included in the scope of this document are separate parts of the above mentioned equipment such as motors and switching devices (e.g. power or protective relays). However, no emission requirements apply to such separate parts, unless otherwise stated in this document.

Products which incorporate radio transmit/receive functions are included in the scope of this document.

Equipment under the scope of this document making use of IPT is also in the scope.