ELEKTROMAGNETILINE ÜHILDUVUS. OSA 3-2: PIIRVÄÄRTUSED. VOOLUHARMOONILISTE EMISSIOONI LUBATAVAD PIIRVÄÄRTUSED (SEADMETEL SISENDVOOLUGA KUNI 16 A FAASI KOHTA)

Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤16 A per phase) (IEC 61000-3-2:2018 + IEC 61000-3-2:2018/A1:2020)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN IEC 61000-3-2:2019 +A1:2021 sisaldab Euroopa standardi EN IEC 61000-3-2:2019 ja selle muudatuse A1:2021 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 61000-3-2 :2019+A1:2021 consists of the English text of the European standard EN IEC 61000-3-2:2019 and its amendment A1:2021.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas. Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 01.03.2019, muudatus A1 09.04.2021.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation. Date of Availability of the European standard is 01.03.2019, for A1 09.04.2021.
Muudatusega A1 lisatud või muudetud teksti algus ja lõpp on tekstis tähistatud sümbolitega [A1] [A1].	The start and finish of text introduced or altered by amendment A1 is indicated in the text by tags [A1] [A1].
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 33.100.10

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61000-3-2 + A1

March 2019, April 2021

ICS 33.100.10

Supersedes EN 61000-3-2:2014

English Version

Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤16 A per phase) (IEC 61000-3-2:2018 + IEC 61000-3-2:2018/A1:2020)

Compatibilité électromagnétique (CEM) - Partie 3-2: Limites - Limites pour les émissions de courant harmonique (courant appelé par les appareils ≤ 16 A par phase) (IEC 61000-3-2:2018 + IEC 61000-3-2:2018/A1:2020)

Elektromagnetische Verträglichkeit (EMV) - Teil 3-2: Grenzwerte - Grenzwerte für Oberschwingungsströme (Geräte-Eingangsstrom ≤ 16 A je Leiter) (IEC 61000-3-2:2018 + IEC 61000-3-2:2018/A1:2020)

This European Standard was approved by CENELEC on 2018-03-02. Amendment A1 was approved by CENELEC on 2020-08-18. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard and its amendment the status of a national standard without any alteration.

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Comité Européen de Normalisation Electrotechnique
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Ref. No. EN IEC 61000-3-2:2019 E + EN IEC 61000-3-2:2019/A1:2021 E

European foreword

The text of document 77A/986/FDIS, future edition 5 of IEC 61000-3-2, prepared by SC 77A "EMC - Low frequency phenomena" of IEC/TC 77 "Electromagnetic compatibility" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61000-3-2:2019.

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) 2019-09-01
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-03-01

This document supersedes EN 61000-3-2:2014.

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The text of the International Standard IEC 61000-3-2:2018 was approved by CENELEC as a European Standard without any modification.

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IEC 60107-1:1997	NOTE	Harmonized as EN 60107-1:1997 (not modified).
IEC 60268-1:1985/A1:1988	NOTE	Harmonized as HD 483.1 S2:1989 (not modified).
IEC 60335-2-2	NOTE	Harmonized as EN 60335-2-2.
IEC 60335-2-14	NOTE	Harmonized as EN 60335-2-14.
IEC 60335-2-79	NOTE	Harmonized as EN 60335-2-79.
IEC 60335-2-17	NOTE	Harmonized as EN 60335-2-17.
IEC 60974-1	NOTE	Harmonized as EN 60974-1.
IEC 60974-6	NOTE	Harmonized as EN 60974-6.
IEC 61000-2-2	NOTE	Harmonized as EN 61000-2-2.
IEC 61000-3-12	NOTE	Harmonized as EN 61000-3-12.
IEC 62756-1	NOTE	Harmonized as EN 62756-1.

A1 Amendment A1 European foreword

The text of document 77A/1077/FDIS, future IEC 61000-3-2/A1, prepared by SC 77A "EMC - Low frequency phenomena" of IEC/TC 77 "Electromagnetic compatibility" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61000-3-2:2019/A1:2021.

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- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2021-10-09
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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61000-2-2	NOTE	Harmonized as EN 61000-2-2
IEC 61000-3-12	NOTE	Harmonized as EN 61000-3-12

A1

IEC 61000-3-2

Edition 5.1 2020-07
CONSOLIDATED VERSION

INTERNATIONAL STANDARD

colour inside

Electromagnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current ≤16 A per phase)

IEC 61000-3-2:2018-01+AMD1:2020-07 CSV(en)

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IEC 61000-3-2

Edition 5.1 2020-07
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colour inside

Electromagnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current ≤16 A per phase)

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ICS 33.100.10

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ELECTROMAGNETIC COMPATIBILITY (EMC) –

Part 3-2: Limits – Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)

FOREWORD

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International Standard IEC 61000-3-2 has been prepared by sub-committee 77A: EMC – Low frequency phenomena, of IEC technical committee 77: Electromagnetic compatibility.

It forms part 3-2 of the IEC 61000 series. It has the status of a product family standard.

This fifth edition cancels and replaces the fourth edition published in 2014. This edition constitutes a technical revision.

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

a) an update of the emission limits for lighting equipment with a rated power ≤ 25 W to take into account new types of lighting equipment;
b) the addition of a threshold of 5 W under which no emission limits apply to all lighting equipment;

c) the modification of the requirements applying to the dimmers when operating non-incandescent lamps;

d) the addition of test conditions for digital load side transmission control devices;

e) the removal of the use of reference lamps and reference ballasts for the tests of lighting equipment;

f) the simplification and clarification of the terminology used for lighting equipment;

g) the classification of professional luminaires for stage lighting and studios under Class A;

h) a clarification about the classification of emergency lighting equipment;

i) a clarification for lighting equipment including one control module with an active input power ≤ 2 W;

j) an update of the test conditions for television receivers;

k) an update of the test conditions for induction hobs, taking also into account the other types of cooking appliances;

l) for consistency with IEC 61000-3-12, a change of the scope of IEC 61000-3-2 from equipment with an input current ≤ 16 A to equipment with a rated input current ≤ 16 A.

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

FDIS	Report on voting
77A/986/FDIS	77A/990/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 IEC 61000 series, published under the general title, *Electromagnetic compatibility (EMC)*, can be found on the IEC website.

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.

A1 AMENDMENT A1 FOREWORD

This amendment has been prepared by subcommittee 77A: EMC – Low frequency phenomena, of IEC technical committee 77: Electromagnetic compatibility.

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

FDIS	Report on voting
77A/1077/FDIS	77A/1084/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. A1

INTRODUCTION

IEC 61000 is published in separate parts, according to the following structure:

Part 1: General

General considerations (introduction, fundamental principles)

Definitions, terminology

Part 2: Environment

Description of the environment

Classification of the environment

Compatibility levels

Part 3: Limits

Emission limits

Immunity limits (in so far as they do not fall under the responsibility of the product committees)

Part 4: Testing and measurement techniques

Measurement techniques

Testing techniques

Part 5: Installation and mitigation guidelines

Installation guidelines

Mitigation methods and devices

Part 6: Generic standards

Part 9: Miscellaneous

Each part is further subdivided into several parts, published either as international standards or as technical specifications or technical reports, some of which have already been published as sections. Others will be published with the part number followed by a dash and a second number identifying the subdivision (example: IEC 61000-6-1).

ELECTROMAGNETIC COMPATIBILITY (EMC) –

Part 3-2: Limits – Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)

Scope

This part of IEC 61000 deals with the limitation of harmonic currents injected into the public supply system.

It specifies limits of harmonic components of the input current which can be produced by equipment tested under specified conditions.

This part of IEC 61000 is applicable to electrical and electronic equipment having a rated input current up to and including 16 A per phase, and intended to be connected to public low-voltage distribution systems.

〚A1〛 Arc welding equipment, which is not professional equipment, with a rated input current up to and including 16 A per phase, is included in the scope of this document. All other arc welding equipment is excluded from the scope of this document; however, the harmonics emission can be evaluated using IEC 61000-3-12 and relevant installation restrictions. 〚/A1〛

The tests according to this document are type tests.

For systems with nominal voltages less than but not equal to 220 V (line-to-neutral), the limits have not yet been considered.

NOTE The words apparatus, appliance, device and equipment are used throughout this document. They have the same meaning for the purposes of this document.

Normative references

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.

〚A1〛 IEC 60050-161:1990, *International Electrotechnical Vocabulary (IEV) – Part 161: Electromagnetic compatibility* (available at www.electropedia.org)

IEC 60107-1:1997, Methods *of measurement on receivers for television broadcast transmissions – Part 1: General considerations – Measurements at radio and video frequencies*

IEC 60155:1993, *Glow-starters for fluorescent lamps*

IEC 60268-1:1985*, Sound system equipment – Part 1: General*
IEC 60268-1:1985/AMD1:1988
IEC 60268-1:1985/AMD2:1988

IEC 60268-3:2018, *Sound system equipment – Part 3: Amplifiers*

IEC 60335-2-2:2019, *Household and similar electrical appliances – Safety – Part 2-2: Particular requirements for vacuum cleaners and water-suction cleaning appliances*

IEC 60335-2-14:2016, *Household and similar electrical appliances – Safety – Part 2-14: Particular requirements for kitchen machines*

IEC 60335-2-24:2010, Household *and similar electrical appliances – Safety – Part 2-24: Particular requirements for refrigerating appl iances, ice-cream appliances and ice makers*
IEC 60335-2-24:2010/AMD1:2012
IEC 60335-2-24:2010/AMD2:2017

IEC 60335-2-79:2016, Household *and similar electrical appliances – Safety – Part 2-79: Particular requirements for high pressure cleaners and steam cleaners*

IEC 60598-2-17:2012, *Luminaires – Part 2-17: Particular requirements – Luminaires for stage lighting, television and film studios (outdoor and indoor)*
IEC 60598-2-17:2012/AMD1:2015

IEC 60974-1:2017, *Arc welding equipment – Part 1: Welding power sources*

IEC 61000-4-7:2002, *Electromagnetic compatibility (EMC) – Part 4-7: Testing and measurement techniques – General guide on harmonics and interharmonics measurements and instrumentation, for power supply systems and equipment connected thereto*
IEC 61000-4-7:2002/AMD1:2008

IEC 62756-1:2015, *Digital load side transmission lighting control (DLT) – Part 1: Basic requirements* 〈A1〉

Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1
portable tool
electrical tool which is hand-held during normal operation and used for a short time (a few minutes) only

Note 1 to entry: Hand-held means that no part of the tool, except the power cord, rests on the floor during normal operation.

3.2
〈A1〉 **lamp**
light source provided with at least one cap

Note 1 to entry: For products that have the same physical characteristics as lamps for general lighting but that are built to emit optical radiation mainly in the IR or UV spectrum, the term IR lamp or UV lamp is often used.

[SOURCE: IEC 60050-845:2020, 845-27-008, modified – existing notes 2 and 3 have been removed, the term “electric” has been removed from the term and the definition] 〈A1〉