

INTERNATIONAL STANDARD

NORME INTERNATIONALE



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

**Compatibilité électromagnétique (CEM) –
Partie 3-2: Limites – Limites pour les émissions de courant harmonique
(courant appelé par les appareils ≤ 16 A par phase)**



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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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current ≤ 16 A per phase)**

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Partie 3-2: Limites – Limites pour les émissions de courant harmonique (courant
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CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references	7
3 Terms and definitions	8
4 General	11
5 Classification of equipment.....	12
5.1 General.....	12
5.2 Description of lighting equipment	12
6 General requirements	13
6.1 General.....	13
6.2 Control methods	13
6.3 Harmonic current measurement	14
6.3.1 Test configuration.....	14
6.3.2 Measurement procedure	15
6.3.3 General requirements	15
6.3.4 Test observation period	17
6.4 Equipment in a rack or case.....	17
7 Harmonic current limits.....	17
7.1 General.....	17
7.2 Limits for Class A equipment.....	18
7.3 Limits for Class B equipment.....	19
7.4 Limits for Class C equipment	19
7.4.1 General	19
7.4.2 Rated power > 25 W	19
7.4.3 Rated power ≥ 5 W and ≤ 25 W	20
7.5 Limits for Class D equipment	21
Annex A (normative) Measurement circuit and supply source.....	23
A.1 Test circuit.....	23
A.2 Supply source	23
Annex B (normative) Type test conditions	26
B.1 General.....	26
B.2 Test conditions for television receivers (TV).....	26
B.2.1 General requirements	26
B.2.2 Measurement conditions	26
B.2.3 Test report.....	27
B.3 Test conditions for audio amplifiers.....	27
B.3.1 Conditions	27
B.3.2 Input signals and loads	27
B.4 Test conditions for video-cassette recorders	28
B.5 Test conditions for lighting equipment	28
B.5.1 General conditions.....	28
B.5.2 Lamps	28
B.5.3 Luminaires.....	28
B.5.4 Lighting control gear	28

B.5.5	DLT control devices	29
B.6	Test conditions for independent phase control dimmers for lighting equipment	29
B.7	Test conditions for vacuum cleaners	29
B.8	Test conditions for washing machines	29
B.9	Test conditions for microwave ovens	30
B.10	Test conditions for information technology equipment (ITE)	30
B.10.1	General conditions	30
B.10.2	Optional conditions for measuring emissions of IT equipment with external power supplies or battery chargers	31
B.11	Test conditions for cooking appliances	31
B.11.1	Induction hobs and hotplates	31
B.11.2	Hobs and hotplates other than induction cooking appliances	32
B.12	Test conditions for air conditioners	32
B.13	Test conditions for kitchen machines as defined in IEC 60335-2-14	32
B.14	Test conditions for arc welding equipment which is not professional equipment	32
B.15	Test conditions for high pressure cleaners which are not professional equipment	33
B.16	Test conditions for refrigerators and freezers	33
B.16.1	General	33
B.16.2	Refrigerators and freezers with VSD	33
B.16.3	Refrigerators and freezers without VSD	34
Bibliography		35
Figure 1	– Flowchart for determining conformity	18
Figure 2	– Illustration of the relative phase angle and current parameters described in 7.4.3	20
Figure A.1	– Measurement circuit for single-phase equipment	24
Figure A.2	– Measurement circuit for three-phase equipment	25
Table 1	– Limits for Class A equipment	21
Table 2	– Limits for Class C equipment ^a	21
Table 3	– Limits for Class D equipment	22
Table 4	– Test observation period	22
Table B.1	– Conventional load for arc welding equipment tests	33

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

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 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.

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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 levels

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)

1 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.

Arc welding equipment which is not professional equipment, with a rated input current up to and including 16 A per phase, is included in this document. Arc welding equipment intended for professional use, as specified in IEC 60974-1, is excluded from this document and can be subject to installation restrictions as indicated in IEC 61000-3-12.

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.

2 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.

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

IEC 60155, *Glow-starters for fluorescent lamps*

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

IEC 60335-2-24:2010, *Household and similar electrical appliances – Safety – Part 2-24: Particular requirements for refrigerating appliances, ice-cream appliances and ice makers*

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