
Elektromagnetna združljivost (EMC) – 3-12. del: Mejne vrednosti – Mejne vrednosti za harmonske tokove, ki jih povzročata oprema, priključena na nizkonapetostne napajalne sisteme z naznačenim tokom, večjim od 16 A in ≤ 75 A po liniji (IEC 61000-3-12:2004)

Electromagnetic compatibility (EMC) – Part 3-12: Limits – Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current > 16 A and ≤ 75 A per phase (IEC 61000-3-12:2004)

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English version

Electromagnetic compatibility (EMC)**Part 3-12: Limits -****Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current > 16 A and ≤ 75 A per phase (IEC 61000-3-12:2004)**

Compatibilité électromagnétique (CEM)

Partie 3-12: Limites -

Limites pour les courants harmoniques

produits par les appareils connectés

aux réseaux publics basse tension

ayant un courant appelé > 16 A et ≤ 75 A

par phase

(CEI 61000-3-12:2004)

Elektromagnetische Verträglichkeit (EMV)

Teil 3-12: Grenzwerte -

Grenzwerte für Oberschwingungsströme,

verursacht von Geräten und Einrichtungen

mit einem Eingangsstrom >16 A und

≤ 75 A je Leiter, die zum Anschluss

an öffentliche Niederspannungsnetze

vorgesehen sind

(IEC 61000-3-12:2004)

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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 Central Secretariat has the same status as the official versions.

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CENELEC

European Committee for Electrotechnical Standardization

Comité Européen de Normalisation Electrotechnique

Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 77A/470/FDIS, future edition 1 of IEC 61000-3-12, prepared by SC 77A, Low frequency phenomena, of IEC TC 77, Electromagnetic compatibility, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61000-3-12 on 2005-02-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2005-11-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2008-02-01

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and covers essential requirements of EC Directives 89/336/EEC and 1999/5/EC. See Annex ZZ.

Annexes ZA and ZZ have been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61000-3-12:2004 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 referenced documents are indispensable for the application 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 Where an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60038 (mod)	- ¹⁾	IEC standard voltages ²⁾	HD 472 S1	1989 ³⁾
IEC 60050-161	- ¹⁾	International Electrotechnical Vocabulary (IEV) Chapter 161: Electromagnetic compatibility	-	-
IEC 61000-2-2	- ¹⁾	Electromagnetic compatibility (EMC) Part 2-2: Environment - Compatibility levels for low-frequency conducted disturbances and signalling in public low-voltage power supply systems	EN 61000-2-2	- ³⁾
IEC 61000-2-4	- ¹⁾	Part 2-4: Environment - Compatibility levels in industrial plants for low-frequency conducted disturbances	EN 61000-2-4	- ³⁾
IEC 61000-3-2 (mod)	- ¹⁾	Part 3-2: Limits - Limits for harmonic current emissions (equipment input current up to and including 16 A per phase)	EN 61000-3-2	- ³⁾
IEC 61000-4-7	- ¹⁾	Part 4-7: Testing and measurement techniques - General guide on harmonics and interharmonics measurements and instrumentation, for power supply systems and equipment connected thereto	EN 61000-4-7	- ³⁾

¹⁾ Undated reference.

²⁾ The title of HD 472 S1 is: Nominal voltages for low voltage public electricity supply systems.

³⁾ Valid edition at date of issue.

Annex ZZ
(informative)

Coverage of Essential Requirements of EC Directives

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and within its scope the standard covers only essential requirements as given in Article 4 a) of the EC Directive 89/336/EEC and the corresponding essential requirements of article 3.1(b) of the EC Directive 1999/5/EC.

Compliance with this standard provides one means of conformity with the specified essential requirements of the Directive[s] concerned.

WARNING: Other requirements and other EC Directives may be applicable to the products falling within the scope of this standard.

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NORME
INTERNATIONALE
INTERNATIONAL
STANDARD

CEI
IEC

61000-3-12

Première édition
First edition
2004-11

Compatibilité électromagnétique (CEM) –

Partie 3-12:

Limites – Limites pour les courants harmoniques produits par les appareils connectés aux réseaux publics basse tension ayant un courant appelé >16 A et ≤75 A par phase

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Electromagnetic compatibility (EMC) –

Part 3-12:

Limits – Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16 A and ≤75 A per phase

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International Electrotechnical Commission
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTROMAGNETIC COMPATIBILITY (EMC) –**Part 3-12: Limits – Limits for harmonic currents
produced by equipment connected to public low-voltage systems with
input current >16 A and ≤75 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 61000-3-12 has been prepared by sub-committee 77A: Low frequency phenomena, of IEC technical committee 77: Electromagnetic compatibility.

This first edition replaces IEC 61000-3-4, published in 1998, for equipment with input current ≤75 A per phase. For equipment with input current >75 A per phase, IEC 61000-3-4 remains valid.

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

FDIS	Report on voting
77A/470/FDIS	77A/478/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.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result 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 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

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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: 61000-6-1).

This International Standard is a Product Family Standard.

ELECTROMAGNETIC COMPATIBILITY (EMC) –

Part 3-12: Limits – Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16 A and ≤75 A per phase

1 Scope

This part of IEC 61000 deals with the limitation of harmonic currents injected into the public supply system. The limits given in this International Standard are applicable to electrical and electronic equipment with a rated input current exceeding 16 A and up to and including 75 A per phase, intended to be connected to public low-voltage a.c. distribution systems of the following types:

- nominal voltage up to 240 V, single-phase, two or three wires;
- nominal voltage up to 690 V, three-phase, three or four wires;
- nominal frequency 50 Hz or 60 Hz.

Other distribution systems are excluded. The limits given in this edition apply to equipment when connected to 230/400 V, 50 Hz systems. See also Clause 5.

NOTE The limits for the other systems will be added in a future edition of this standard.

This standard applies to equipment intended to be connected to low-voltage systems interfacing with the public supply at the low-voltage level. It does not apply to equipment intended to be connected only to private low-voltage systems interfacing with the public supply only at the medium- or high-voltage level.

NOTE 1 The scope of this standard is limited to equipment connected to public low voltage systems because emissions from equipment installed in private low voltage systems can be controlled in aggregate at the MV point of common coupling using procedures defined in IEC 61000-3-6 and/or by means of contractual agreements between the distribution network operator and the customer. It is expected that operators of private systems will manage the EMC environment in a manner that ensures compliance with the provisions given in IEC 61000-3-6 and/or the contractual agreements.

NOTE 2 If the equipment is intended to be connected only to private systems, the manufacturer should make this very clear in the product documentation.

NOTE 3 Professional equipment with input current ≤ 16 A per phase and that does not comply with the requirements and limits of standard IEC 61000-3-2 may be permitted to be connected to certain types of low voltage supplies, in the same way as equipment with input current > 16 A per phase and that does not comply with the requirements and limits of the present standard IEC 61000-3-12 (see Annex C).

NOTE 4 The limits in this standard are not applicable to stand-alone harmonic filters.

This standard defines:

- a) requirements and emission limits for equipment;
- b) methods for type tests and simulations.

Tests according to this International Standard are type tests of complete pieces of equipment.

Conformity with this standard can also be determined by validated simulations.