

Svenska Elektriska Kommissionen, SEK

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Elektromagnetisk kompatibilitet (EMC) – Del 3-12: Gränsvärden – Gränser för övertoner förorsakade av apparater med matningsström större än 16 A men högst 75 A per fas

*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*

Som svensk standard gäller europastandarden EN 61000-3-12:2005. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61000-3-12:2005.

Nationellt förord

Europastandarden EN 61000-3-12:2005

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 61000-3-12, First edition, 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**

utarbetad inom International Electrotechnical Commission, IEC.

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

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Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

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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**
EC 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)

This European Standard was approved by CENELEC on 2005-02-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

CENELECEuropean 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.

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.

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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

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.