

SLOVENSKI STANDARD

SIST EN 61000-3-3:2009

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SIST EN 61000-3-3:1997

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Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection

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Elektromagnetische Verträglichkeit (EMV) -- Teil 3-3: Grenzwerte - Begrenzung von Spannungsänderungen, Spannungsschwankungen und Flicker in öffentlichen Niederspannungs-Versorgungsnetzen für Geräte mit einem Bemessungsstrom ≤ 16 A je Leiter, die keiner Sonderanschlussbedingung unterliegen

Compatibilité électromagnétique (CEM) - Partie 3-3: Limites - Limitation des variations de tension, des fluctuations de tension et du papillotement dans les réseaux publics d'alimentation basse tension, pour les matériels ayant un courant assigné ≤ 16 A par phase et non soumis à un raccordement conditionnel

Ta slovenski standard je istoveten z: EN 61000-3-3:2008

ICS:

33.100.01 Elektromagnetna združljivost Electromagnetic compatibility
na splošno in general

SIST EN 61000-3-3:2009

en,fr,de

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 61000-3-3

September 2008

ICS 33.100.10

Supersedes EN 61000-3-3:1995 + A1:2001 + IS1:2005 + A2:2005

English version

**Electromagnetic compatibility (EMC) -
Part 3-3: Limits -
Limitation of voltage changes, voltage fluctuations and flicker in public
low-voltage supply systems, for equipment with rated current ≤ 16 A
per phase and not subject to conditional connection
(IEC 61000-3-3:2008)**

Compatibilité électromagnétique (CEM) -
Partie 3-3: Limites -
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des fluctuations de tension
et du papillotement dans les réseaux
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assigné ≤ 16 A par phase et non soumis
à un raccordement conditionnel
(CEI 61000-3-3:2008)

Elektromagnetische Verträglichkeit (EMV) -
Teil 3-3: Grenzwerte -
Begrenzung von Spannungsänderungen,
Spannungsschwankungen und Flicker
in öffentlichen Niederspannungs-
Versorgungsnetzen für Geräte
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je Leiter, die keiner
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This European Standard was approved by CENELEC on 2008-09-01. 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, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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/644/FDIS, future edition 2 of IEC 61000-3-3, 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 61000-3-3 on 2008-09-01.

This European Standard supersedes EN 1000-3-3:1995 + corrigendum July 1997 + A1:2001 + IS1:2005 + A2:2005.

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) 2009-06-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2011-09-01

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 2004/108/EC and 1999/5/EC. See Annex ZZ.

Annexes ZA and ZZ have been added by CENELEC.

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Endorsement notice
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The text of the International Standard IEC 61000-3-3:2008 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 When 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 60050-161	1990	International Electrotechnical Vocabulary (IEV) - Chapter 161: Electromagnetic compatibility	-	-
IEC/TR 60725	- ¹⁾	Consideration of reference impedances and public supply network impedances for use in determining disturbance characteristics of electrical equipment having a rated current ≤ 75 A per phase	-	-
IEC 60974-1	- ¹⁾	Arc welding equipment - Part 1: Welding power sources	EN 60974-1	2005 ²⁾
IEC 61000-3-2	2005	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	EN 61000-3-2	2006
IEC 61000-3-11	¹⁾	Electromagnetic compatibility (EMC) - Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤ 75 A and subject to conditional connection	EN 61000-3-11	2000 ²⁾
IEC 61000-4-15	- ¹⁾	Electromagnetic compatibility (EMC) - Part 4-15: Testing and measurement techniques - Flickermeter - Functional and design specifications	EN 61000-4-15	1998 ²⁾

¹⁾ Undated reference.

²⁾ 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 the essential requirements as given in Annex I Article 1(a) of the EC Directive 2004/108/EC and the essential requirements of Article 3.1(b) (emission only) of the EC Directive 1999/5/EC.

Compliance with this standard provides one means of conformity with the specified essential requirements of the Directives 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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IEC 61000-3-3

Edition 2.0 2008-06

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Electromagnetic compatibility (EMC) –
Part 3-3: Limits – Limitation of voltage changes, voltage fluctuations and flicker
in public low-voltage supply systems, for equipment with rated current ≤ 16 A
per phase and not subject to conditional connection**

<https://standards.iteh.ai/catalog/standards/sist/ad361079-8a1d-43f8-b71e-61000-3-3-2009>

**Compatibilité électromagnétique (CEM) –
Partie 3-3: Limites – Limitation des variations de tension, des fluctuations de
tension et du papillotement dans les réseaux publics d'alimentation basse
tension, pour les matériels ayant un courant assigné ≤ 16 A par phase et non
soumis à un raccordement conditionnel**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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ELECTROTECHNIQUE
INTERNATIONALE

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTROMAGNETIC COMPATIBILITY (EMC) –**Part 3-3: Limits – Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection**

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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- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

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

This second edition IEC 61000-3-3 cancels and replaces the first edition published in 1994, amendment 1 (2001) and amendment 2 (2005). This edition constitutes a revised edition.

The document 77A/644/FDIS, circulated to the National Committees as amendment 3, led to the publication of the new edition.

The text of this standard is based on the first edition, its amendment 1, amendment 2 and on the following documents:

FDIS	Report on voting
77A/644/FDIS	77A/650/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 amendment and the base 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 product committees)

Part 4: Testing and measurement techniques

Measurement techniques
Testing techniques

Part 5: Installation and mitigation guidelines

Installation guidelines

Mitigation methods and devices [SIST EN 61000-3-3:2009
https://standards.iteh.ai/catalog/standards/sist/ad361079-8a1d-43f8-b71e-835d7e775054/sist-en-61000-3-3-2009](https://standards.iteh.ai/catalog/standards/sist/ad361079-8a1d-43f8-b71e-835d7e775054/sist-en-61000-3-3-2009)

Part 9: Miscellaneous

Each part is further subdivided into sections which are to be published either as International Standards or as Technical Reports.

These standards and reports will be published in chronological order and numbered accordingly.

This part is a Product Family Standard.

The limits in this standard relate to the voltage changes experienced by consumers connected at the interface between the public supply low-voltage network and the equipment user's installation. Consequently, if the actual impedance of the supply at the supply terminals of equipment connected within the equipment user's installation exceeds the test impedance, it is possible that supply disturbance exceeding the limits may occur.

ELECTROMAGNETIC COMPATIBILITY (EMC) –

Part 3-3: Limits – Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection

1 Scope

This part of IEC 61000 is concerned with the limitation of voltage fluctuations and flicker impressed on the public low-voltage system.

It specifies limits of voltage changes which may be produced by an equipment tested under specified conditions and gives guidance on methods of assessment.

This part of IEC 61000 is applicable to electrical and electronic equipment having an input current equal to or less than 16 A per phase, intended to be connected to public low-voltage distribution systems of between 220 V and 250 V line to neutral at 50 Hz, and not subject to conditional connection.

Equipment which does not comply with the limits of this part of IEC 61000 when tested with the reference impedance Z_{ref} of 6 Ω , and which therefore cannot be declared compliant with this part, may be retested or evaluated to show conformity with IEC 61000-3-11. Part 3-11 is applicable to equipment with rated input current ≤ 75 A per phase and subject to conditional connection.

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The tests according to this part are type tests. Particular test conditions are given in annex A and the test circuit is shown in Figure 1.

NOTE The limits in this part of IEC 61000 are based mainly on the subjective severity of flicker imposed on the light from 230 V/60 W coiled-coil filament lamps by fluctuations of the supply voltage. For systems with nominal voltage less than 220 V line to neutral and/or frequency of 60 Hz, the limits and reference circuit values are under consideration.

2 Normative references

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.

IEC 60050(161):1990, *International Electrotechnical Vocabulary (IEV) – Chapter 161: Electromagnetic compatibility*

IEC/TR 60725, *Consideration of reference impedances and public supply impedances for use in determining disturbance characteristics of electrical equipment having a rated current ≤ 75 A per phase*

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

IEC 61000-3-2:2005, *Electromagnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)*