



SLOVENSKI STANDARD

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SIST EN 61000-4-15:2001/A1:2003

**Elektromagnetna združljivost (EMC) - 4-15. del: Preskusne in merilne tehnike -
Flikermeter - Specifikacije funkcij in zasnove (IEC 61000-4-15:2010 (EQV))**

Electromagnetic compatibility (EMC) - Part 4-15: Testing and measurement techniques -
Flickermeter - Functional and design specifications

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Compatibilité électromagnétique (CEM) - Partie 4-15: Techniques d'essai et de mesure -
Flickermètre - Spécifications fonctionnelles et de conception

Ta slovenski standard je istoveten z: EN 61000-4-15:2011

ICS:

33.100.01	Elektromagnetna združljivost na splošno	Electromagnetic compatibility in general
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EUROPEAN STANDARD
NORME EUROPÉENNE
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EN 61000-4-15

June 2011

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Supersedes EN 61000-4-15:1998 + A1:2003

English version

**Electromagnetic compatibility (EMC) -
Part 4-15: Testing and measurement techniques -
Flickermeter -
Functional and design specifications
(IEC 61000-4-15:2010)**

Compatibilité électromagnétique (CEM) -
Partie 4-15: Techniques d'essai et de
mesure -
Flickermètre -
Spécifications fonctionnelles et de
conception
(CEI 61000-4-15:2010)

Elektromagnetische Verträglichkeit (EMV)
-
Teil 4-15: Prüf- und Messverfahren -
Flickermeter -
Funktionsbeschreibung und
Auslegungsspezifikation
(IEC 61000-4-15:2010)

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This European Standard was approved by CENELEC on 2011-01-02. 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, Croatia, 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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 77A/722/FDIS, future edition 2 of IEC 61000-4-15, 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 61000-4-15 on 2011-01-02.

This European Standard supersedes EN 61000-4-15:1998 + A1:2003.

EN 61000-4-15:2011, in particular, adds or clarifies the definition of several directly measured parameters, so that diverging interpretations are avoided.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

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) 2011-10-02
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2014-01-02

Annex ZA has been added by CENELEC.

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Endorsement notice

The text of the International Standard ~~IEC 61000-4-15:2010~~ was approved by CENELEC as a European Standard without any modification. <https://standards.iteh.ai/catalog/standards/sist/21d04787-eeb8-43c5-85ce-45569e67da1/sist-en-61000-4-15-2011>

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 61000-4-30 NOTE Harmonized as EN 61000-4-30.

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 60068	Series	Environmental testing	EN 60068	Series
IEC 61000-3-3	-	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	EN 61000-3-3	-
IEC 61000-3-11	-	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	-
IEC 61010-1	-	Safety requirements for electrical equipment for measurement, control and laboratory use - Part 1: General requirements	EN 61010-1	-
IEC 61326-1	-	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements	EN 61326-1	-

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NORME INTERNATIONALE

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PUBLICATION FONDAMENTALE EN CEM

**Electromagnetic compatibility (EMC) –
Part 4-15: Testing and measurement techniques – Flickermeter – Functional
and design specifications**

**Compatibilité électromagnétique (CEM) –
Partie 4-15: Techniques d'essai et de mesure – Flickermètre – Spécifications
fonctionnelles et de conception**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTROMAGNETIC COMPATIBILITY (EMC) –**Part 4-15: Testing and measurement techniques –
Flickermeter – Functional and design specifications**

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 61000-4-15 has been prepared by subcommittee 77A: Low frequency phenomena, of IEC technical committee 77: Electromagnetic compatibility.

IEC 61000-4-15 is based on work by the “Disturbances” Working Group of the International Union for Electroheat (UIE), on work of the IEEE, and on work within IEC itself.

It forms part 4-15 of the IEC 61000 series. It has the status of a basic EMC publication in accordance with IEC Guide 107.

This second edition cancels and replaces the first edition published in 1997 and its Amendment 1 (2003) and constitutes a technical revision. This new edition, in particular, adds or clarifies the definition of several directly measured parameters, so that diverging interpretations are avoided.

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

FDIS	Report on voting
77A/722/FDIS	77A/730/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 of the IEC 61000 series, 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 61000-4 is a part of the IEC 61000 series, according to the following structure:

- Part 1: General
 - General consideration (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, as technical specifications or technical reports, some of which have already been published as sections. Others are and will be published with the part number followed by a dash and completed by a second number identifying the subdivision (example: IEC 61000-6-1).

ELECTROMAGNETIC COMPATIBILITY (EMC) –

Part 4-15: Testing and measurement techniques – Flickermeter – Functional and design specifications

1 Scope and object

This part of IEC 61000 gives a functional and design specification for flicker measuring apparatus intended to indicate the correct flicker perception level for all practical voltage fluctuation waveforms. Information is presented to enable such an instrument to be constructed. A method is given for the evaluation of flicker severity on the basis of the output of flickermeters complying with this standard.

The flickermeter specifications in this part of IEC 61000 relate only to measurements of 120 V and 230 V, 50 Hz and 60 Hz inputs. Characteristics of some incandescent lamps for other voltages are sufficiently similar to the values in Table 1 and Table 2, that the use of a correction factor can be applied for those other voltages. Some of these correction factors are provided in the Annex B. Detailed specifications for voltages and frequencies other than those given above, remain under consideration.

The object of this part of IEC 61000 is to provide basic information for the design and the instrumentation of an analogue or digital flicker measuring apparatus. It does not give tolerance limit values of flicker severity.

2 Normative references

[SIST EN 61000-4-15:2011](https://standards.iteh.ai/catalog/standards/sist/21d04787-eeb8-43c5-85ce-45569e67da1/sist-en-61000-4-15-2011)

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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 60068 (all parts), *Environmental testing*

IEC 61000-3-3, *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 61000-3-11, *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*

IEC 61010-1, *Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements*

IEC 61326-1, *Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1: General requirements*