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**Elektromagnetna združljivost (EMC) - 4-8. del: Preskusne in merilne tehnike - Preskus odpornosti proti magnetnemu polju omrežne frekvence (IEC 61000-4-8:1993)**

Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test

Elektromagnetische Verträglichkeit (EMV) - Teil 4-8: Prüf- und Meßverfahren - Prüfung der Störfestigkeit gegen Magnetfelder mit energietechnischen Frequenzen  
(standards.iteh.ai)

Compatibilité électromagnétique (CEM) - Partie 4-8: Techniques d'essai et de mesure - Essai d'immunité au champ magnétique à la fréquence du réseau

**Ta slovenski standard je istoveten z: EN 61000-4-8:1993**

**ICS:**

33.100.20      Imunost      Immunity

**SIST EN 61000-4-8:1997      en**

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EUROPEAN STANDARD

EN 61000-4-8

NORME EUROPEENNE

EUROPÄISCHE NORM

September 1993

UDC 621.37.001.365

Descriptors: Electromagnetic compatibility, tests, measuring techniques,  
electromagnetic field

## ENGLISH VERSION

Electromagnetic compatibility (EMC)  
Part 4: Testing and measurement techniques  
Section 8: Power frequency magnetic field immunity  
test - Basic EMC Publication  
(IEC 1000-4-8:1993)

Compatibilité électromagnétique  
(CEM)

Partie 4: Techniques d'essai et  
de mesure

Section 8: Essai d'immunité au  
champ magnétique à la fréquence  
du réseau - Publication  
fondamentale en CEM

(CEI 1000-4-8:1993)

Elektromagnetische  
Verträglichkeit (EMV)

Teil 4: Prüf- und  
Meßverfahren

Hauptabschnitt 8: Prüfung der  
Störfestigkeit gegen  
Magnetfelder mit

energiertechnischen Frequenzen  
EMV-Grundnorm

(IEC 1000-4-8:1993)

SIST EN 61000-4-8:1997

This European Standard was approved by CENELEC on 1992-06-16.  
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  
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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.

CENELEC members are the national electrotechnical committees of Austria, Belgium,  
Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg,  
Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and 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 77B(CO)7, as prepared by Sub-Committee 77B: High frequency phenomena, of IEC Technical Committee 77: Electromagnetic compatibility, was submitted to the IEC-CENELEC parallel vote in September 1991.

The reference document was approved by CENELEC as EN 61000-4-8 on 16 June 1992.

The following dates were fixed:

- latest date of publication of an identical national standard (dop) 1994-06-01
- latest date of withdrawal of conflicting national standards (dow) 1994-06-01

Annexes designated "normative" are part of the body of the standard. Annexes designated "informative" are given only for information. In this standard, annexes A, B and ZA are normative and annexes C and D are informative.

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#### ENDORSEMENT NOTICE

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The text of the International Standard IEC 1000-4-8:1993 was approved by CENELEC as a European Standard without any modification.

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## ANNEX ZA (normative)

OTHER INTERNATIONAL PUBLICATIONS QUOTED IN THIS STANDARD  
WITH THE REFERENCES OF THE RELEVANT EUROPEAN PUBLICATIONS

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

NOTE : When the international publication has been modified by CENELEC common modifications, indicated by (mod), the relevant EN/HD applies.

IEC Publication	Date	Title	EN/HD	Date
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68-1	1988	Environmental testing Part 1: General and guidance	HD 323.1 S2	1988

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NORME  
INTERNATIONALE  
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IEC  
1000-4-8

Première édition  
First edition  
1993-06

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**Compatibilité électromagnétique**

**Partie 4:**

Techniques d'essai et de mesure

Section 8: Essai d'immunité au  
champ magnétique à la fréquence du réseau  
Publication fondamentale en CEM

SIST EN 61000-4-8:1997

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**Electromagnetic compatibility (EMC)**

**Part 4:**

Testing and measurement techniques

Section 8: Power frequency magnetic field  
immunity test  
Basic EMC Publication

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For price, see current catalogue

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTROMAGNETIC COMPATIBILITY (EMC)**  
**Part 4: Testing and measurement techniques**  
**Section 8: Power frequency magnetic field immunity test**  
**Basic EMC Publication**

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a world-wide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international cooperation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters, prepared by technical committees on which all National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 3) They have the form of recommendations for international use published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, the IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national or regional standards. Any divergence between the IEC Standards and the corresponding national or regional standards shall be clearly indicated in the latter.

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International Standard IEC 1000-4-8 has been prepared by sub-committee 77B: High frequency phenomena, of IEC technical committee 77: Electromagnetic compatibility.

It forms section 8 of part 4 of IEC 1000. It has the status of a basic EMC publication in accordance with IEC guide 107.

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

DIS	Report on Voting
77B(CO)7	77B(CO)13

Full information on the voting for the approval of this standard can be found in the Voting Report indicated in the above table.

Annexes A and B form an integral part of this standard.  
Annexes C and D are for information only.

## INTRODUCTION

This standard is part of the IEC 1000 series, 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 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 9: Miscellaneous**

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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 an international standard which gives immunity requirements and test procedures related to "power frequency magnetic field".

## ELECTROMAGNETIC COMPATIBILITY (EMC)

Part 4: Testing and measurement techniques  
Section 8: Power frequency magnetic field immunity test  
Basic EMC Publication

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## 1 Scope

This international standard relates to the immunity requirements of equipment, only under operational conditions, to magnetic disturbances at power frequency related to:

- residential and commercial locations;
- industrial installations and power plants;
- medium voltage and high voltage sub-stations.

The applicability of this standard to equipment installed in different locations is determined by the presence of the phenomenon, as specified in clause 3.

This standard does not consider disturbances due to capacitive or inductive coupling in cables or other parts of the field installation.

Other IEC standards dealing with conducted disturbances cover these aspects.

The object of this standard is to establish a common and reproducible basis for evaluating the performance of electrical and electronic equipment for household, commercial and industrial applications when subjected to magnetic fields at power frequency (*continuous and short duration field*).

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The standard defines:

- recommended test levels;
- test equipment;
- test set-up;
- test procedure.

Other kinds of magnetic fields would be object of standardization:

- fields at other power frequencies (16 2/3 - 20 or 30 - 400 Hz);
- fields of harmonic currents (100 Hz to 2000 Hz);
- fields of higher frequencies (up to 150 kHz, e.g. for mains signalling systems);
- D.C. fields.