

Electromagnetic compatibility (EMC) —

Part 4-1: Testing and measurement techniques — Overview of IEC 61000-4 series

The European Standard EN 61000-4-1:2007 has the status of a
British Standard

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National foreword

This British Standard was published by BSI. It is the UK implementation of EN 61000-4-1:2007. It is identical with IEC 61000-4-1:2006. It supersedes BS EN 61000-4-1:2001, which will be withdrawn on 1 February 2010.

The UK participation in its preparation was entrusted by Technical Committee GEL/210, EMC — Policy committee, to Subcommittee GEL/210/12, EMC — Basic and generic standards.

A list of organizations represented on GEL/210/12 can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 March 2007

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Amendments issued since publication

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**Electromagnetic compatibility (EMC) -
Part 4-1: Testing and measurement techniques -
Overview of IEC 61000-4 series
(IEC 61000-4-1:2006)**

Compatibilité électromagnétique (CEM) -
Partie 4-1: Techniques d'essai
et de mesure -
Vue d'ensemble de la série CEI 61000-4
(CEI 61000-4-1:2006)

Elektromagnetische Verträglichkeit
(EMV) -
Teil 4-1: Prüf- und Messverfahren -
Übersicht über die Reihe IEC 61000-4
(IEC 61000-4-1:2006)

This European Standard was approved by CENELEC on 2007-02-01. 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, 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

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Foreword

The text of document 77/319/FDIS, future edition 3 of IEC 61000-4-1, prepared by IEC TC 77, Electromagnetic compatibility, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61000-4-1 on 2007-02-01.

This European Standard supersedes EN 61000-4-1:2000.

Changes introduced in EN 61000-4-1:2007 are for the purpose of updating the text to include reference to the latest publications of the EN 61000-4 series.

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) | 2007-11-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2010-02-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61000-4-1:2006 was approved by CENELEC as a European Standard without any modification.

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INTRODUCTION

The IEC 61000 series is published in several parts 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 test levels (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, 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 completed by a second number identifying the subdivision (example: 61000-6-1).

ELECTROMAGNETIC COMPATIBILITY (EMC) –

Part 4-1: Testing and measurement techniques – Overview of IEC 61000-4 series

1 Scope and object

This part of IEC 61000 covers testing and measuring techniques for electric and electronic equipment (apparatus and systems) in its electromagnetic environment.

The object of this part is to give applicability assistance to the technical committees of IEC or other bodies, users and manufacturers of electrical and electronic equipment on EMC standards within the IEC 61000-4 series on testing and measurement techniques and to provide general recommendations concerning the choice of relevant tests.

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

IEC 61000-1-1, *Electromagnetic Compatibility (EMC) – Part 1-1: General – Application and interpretation of fundamental definitions and terms*

IEC 61000-2-5, *Electromagnetic Compatibility (EMC) – Part 2: Environment – Classification of electromagnetic environments*

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

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/TS 61000-3-4, *Electromagnetic compatibility (EMC) – Part 3-4: Limits – Limitation of emission of harmonic currents in low-voltage power supply systems for equipment with rated current greater than 16 A*

IEC/TR 61000-3-5, *Electromagnetic compatibility (EMC) – Part 3-5: Limits – Limitation of voltage fluctuations and flicker in low-voltage power supply systems for equipment with rated current greater than 16 A*

IEC 61000-3-6, *Electromagnetic compatibility (EMC) – Part 3: Limits – Section 6: Assessment of emission limits for distorting loads in MV and HV power systems*