BRITISH STANDARD

BS EN 61000-4-6:2007

Incorporating corrigendum no. 1

Electromagnetic compatibility (EMC) —

Part 4-6: Testing and measurement techniques — Immunity to conducted disturbances, induced by radio-frequency fields

The European Standard EN 61000-4-6:2007 has the status of a British Standard

ICS 33.100.20

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BSI British Standards

National foreword

This British Standard is the UK implementation of EN 61000-4-6:2007, incorporating corrigendum August 2007. It is identical to IEC 61000-4-6:2007. It supersedes BS EN 61000-4-6:1996 which is withdrawn.

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 this subcommittee 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.

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Amendments issued since publication

Amd. No.	Date	Comments
17379 Corrigendum No. 1	31 October 2007	In the first paragraph of the EN foreword and in the endorsement notice "IEC 61000-4-6:2006" is replaced by "IEC 61000-4-6:2003"

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 August 2007

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ISBN 978 0 580 60112 5

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61000-4-6

June 2007

ICS 33.100.20

Supersedes EN 61000-4-6:1996 + A1:2001 and EN 61000-4-6:1996/IS1:2004
Incorporating corrigendum August 2007

English version

Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields

(IEC 61000-4-6:2003 + A1:2004 + A2:2006)

Compatibilité électromagnétique (CEM) - Partie 4-6: Techniques d'essai et de mesure - Immunité aux perturbations conduites, induites par les champs radioélectriques (CEI 61000-4-6:2003 + A1:2004 + A2:2006)

Elektromagnetische Verträglichkeit (EMV) - Teil 4-6: Prüf- und Messverfahren - Störfestigkeit gegen leitungsgeführte Störgrößen, induziert durch hochfrequente Felder (IEC 61000-4-6:2003 + A1:2004 + A2:2006)

This European Standard was approved by CENELEC on 2007-06-01. 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.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Ref. No. EN 61000-4-6:2007 E

Foreword

The text of the International Standard IEC 61000-4-6:2003 and its amendments 1:2004 and 2:2006, prepared by SC 77B, High frequency phenomena, of IEC TC 77, Electromagnetic compatibility, was submitted to the formal vote and was approved by CENELEC as EN 61000-4-6 on 2007-06-01 without any modification.

This European Standard supersedes EN 61000-4-6:1996 + A1:2001 and EN 61000-4-6:1996/IS1:2004.

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)	2008-06-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2010-06-01

Annex ZA has been added by CENELEC.

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Endorsement notice

The text of the International Standard IEC 61000-4-6:2003 + A1:2004 + A2:2006 was approved by CENELEC as a European Standard without any modification.

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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 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 or as 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 a second number identifying the subdivision (example : 61000-6-1).

This part is an international standard which gives immunity requirements and test procedure related to conducted disturbances induced by radio-frequency fields.

ELECTROMAGNETIC COMPATIBILITY (EMC) –

Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields

1 Scope and object

This part of IEC 61000-4 relates to the conducted immunity requirements of electrical and electronic equipment to electromagnetic disturbances coming from intended radio-frequency (RF) transmitters in the frequency range 9 kHz up to 80 MHz. Equipment not having at least one conducting cable (such as mains supply, signal line or earth connection) which can couple the equipment to the disturbing RF fields is excluded.

NOTE 1 Test methods are defined in this part for measuring the effect that conducted disturbing signals, induced by electromagnetic radiation, have on the equipment concerned. The simulation and measurement of these conducted disturbances are not adequately exact for the quantitative determination of effects. The test methods defined are structured for the primary objective of establishing adequate repeatability of results at various facilities for quantitative analysis of effects.

The object of this standard is to establish a common reference for evaluating the functional immunity of electrical and electronic equipment when subjected to conducted disturbances induced by radio-frequency fields. The test method documented in this part of IEC 61000 describes a consistent method to assess the immunity of an equipment or system against a defined phenomenon.

NOTE 2 As described in IEC Guide 107, this is a basic EMC publication for use by product committees of the IEC. As also stated in Guide 107, the IEC product committees are responsible for determining whether this immunity test standard should be applied or not, and if applied, they are responsible for determining the appropriate test levels and performance criteria. TC 77 and its sub-committees are prepared to co-operate with product committees in the evaluation of the value of particular immunity tests for their products.

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*

3 Definitions

For the purpose of this part of IEC 61000, the definitions given in IEC 60050(161) as well as the following definitions apply.

3.1
artificial hand
electrical network simulating the impedance of the human body under average operational conditions between a hand-held electrical appliance and earth

[IEV 161-04-27]

NOTE The construction should be in accordance with CISPR 16-1.