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Elektromagnetisk kompatibilitet (EMC) – Del 4-4: Mät- och provningsmetoder – Provning av immunitet mot snabba transienter och pulsskurar

*Electromagnetic compatibility (EMC) –
Part 4-4: Testing and measurement techniques –
Electrical fast transient/burst immunity test*

Som svensk standard gäller europastandarden EN 61000-4-4:2012. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61000-4-4:2012.

Nationellt förord

Europastandarden EN 61000-4-4:2012

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 61000-4-4, Third edition, 2012 - Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 61000-4-4, utgåva 2, 2005 och SS-EN 61000-4-4/A1, utgåva 1, 2010, gäller ej fr o m 2015-06-04.

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Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

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Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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English version

**Electromagnetic compatibility (EMC) -
Part 4-4: Testing and measurement techniques -
Electrical fast transient/burst immunity test
(IEC 61000-4-4:2012)**

Compatibilité électromagnétique (CEM) -
Partie 4-4: Techniques d'essai
et de mesure -
Essai d'immunité aux transitoires
électriques rapides en salves
(CEI 61000-4-4:2012)

Elektromagnetische Verträglichkeit (EMV) -
Teil 4-4: Prüf- und Messverfahren -
Prüfung der Störfestigkeit gegen schnelle
transiente elektrische Störgrößen/Burst
(IEC 61000-4-4:2012)

This European Standard was approved by CENELEC on 2012-06-04. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey 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 77B/670/FDIS, future edition 3 of IEC 61000-4-4, prepared by SC 77B "High frequency phenomena" of IEC/TC 77 "Electromagnetic compatibility" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61000-4-4:2012.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2013-05-09
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-06-04

This document supersedes EN 61000-4-4:2004 + A1:2010.

EN 61000-4-4:2012 includes the following significant technical changes with respect to EN 61000-4-4:2004 + A1:2010:

This edition improves and clarifies simulator specifications, test criteria and test setups.

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

Endorsement notice

The text of the International Standard IEC 61000-4-4:2012 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61000-4-2:2008	NOTE	Harmonised as EN 61000-4-2:2009 (not modified).
IEC 61000-4-4:2004	NOTE	Harmonised as EN 61000-4-4:2004 (not modified).
IEC 61000-4-4:2004/A1:2010	NOTE	Harmonised as EN 61000-4-4:2004/A1:2010 (not modified).
IEC 61000-4-5:2005	NOTE	Harmonised as EN 61000-4-5:2006 (not modified).

Annex ZA
(normative)

**Normative references to international publications
with their corresponding European publications**

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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	-	-

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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 are published with the part number followed by a dash and a second number identifying the subdivision (example: IEC 61000-6-1).

This part is an international standard which gives immunity requirements and test procedures related to electrical fast transients/bursts.

ELECTROMAGNETIC COMPATIBILITY (EMC) –

Part 4-4: Testing and measurement techniques – Electrical fast transient/burst immunity test

1 Scope

This part of IEC 61000 relates to the immunity of electrical and electronic equipment to repetitive electrical fast transients. It gives immunity requirements and test procedures related to electrical fast transients/bursts. It additionally defines ranges of test levels and establishes test procedures.

The object of this standard is to establish a common and reproducible reference in order to evaluate the immunity of electrical and electronic equipment when subjected to electrical fast transient/bursts on supply, signal, control and earth ports. 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 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 is applied or not, and if applied, they are responsible for determining the appropriate test levels and performance criteria.¹

The standard defines:

- test voltage waveform;
- range of test levels;
- test equipment;
- calibration and verification procedures of test equipment;
- test setups;
- test procedure.

The standard gives specifications for laboratory and in situ tests.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 – Chapter 161: Electromagnetic compatibility*

¹ TC 77 and its subcommittees are prepared to co-operate with product committees in the evaluation of the value of particular immunity tests for their products.