IEC 61000-4-36

Edition 2.0 2020-03

INTERNATIONAL STANDARD

colour inside

BASIC EMC PUBLICATION

Electromagnetic compatibility (EMC) – Part 4-36: Testing and measurement techniques – IEMI immunity test methods for equipment and systems

IEC 61000-4-36:2020-03(en)

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CONTENTS

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ELECTROMAGNETIC COMPATIBILITY (EMC) –

Part 4-36: Testing and measurement techniques – IEMI immunity test methods for equipment and systems

FOREWORD

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International Standard IEC 61000-4-36 has been prepared by subcommittee 77C: High power transient phenomena, of IEC technical committee 77: Electromagnetic compatibility.

It forms part 4-36 of IEC 61000. 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 2014. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) addition of a hyperband and mesoband radiated transients immunity test method in Annex H;
b) addition of a calibration method of sensors for radiated hyperband and mesoband transient fields and measurement uncertainty in Annex I.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
77C/295/FDIS	77C/299/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 in the IEC 61000 series, published 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 website 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- withdrawn,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.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

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: IEC 61000-6-1).

ELECTROMAGNETIC COMPATIBILITY (EMC) –

Part 4-36: Testing and measurement techniques – IEMI immunity test methods for equipment and systems

1 Scope

This part of IEC 61000 provides methods to determine test levels for the assessment of the immunity of equipment and systems to intentional electromagnetic interference (IEMI) sources. It introduces the general IEMI problem, IEMI source parameters, derivation of test limits and summarises practical test methods.

2 Normative references

There are no normative references in this document.

3 Terms, definitions and abbreviated terms

For the purposes of this document, the following terms, definitions and abbreviated terms apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1 Terms and definitions

3.1.1
attenuation
reduction in magnitude (as a result of absorption and/or scattering) of an electric or magnetic field or a current or voltage, usually expressed in decibels

[SOURCE: IEC 61000-2-13:2005 [3][1], 3.1]

3.1.2
bandratio
ratio of the high and low frequencies between which there is 90 % of the energy

Note 1 to entry: If the spectrum has a large DC content, the lower limit is nominally defined as 1 Hz (see IEC 61000-2-13 [3] for further details).

[SOURCE: IEC 61000-2-13:2005 [3], 3.2, modified – The second part of the definition has been made into a note.]

3.1.3
bandratio decades
bandratio expressed in decades as: bandratio decades = log10(bandratio)

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1 Numbers in square brackets refer to the Bibliography.