

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



BASIC EMC PUBLICATION  
PUBLICATION FONDAMENTALE EN CEM

**Electromagnetic compatibility (EMC) –  
Part 6-4: Generic standards – Emission standard for industrial environments**

**Compatibilité électromagnétique (CEM) –  
Partie 6-4: Normes génériques – Norme sur l'émission pour les environnements  
industriels**



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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTROMAGNETIC COMPATIBILITY (EMC) –****Part 6-4: Generic standards –  
Emission standard for industrial environments**

## FOREWORD

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International Standard IEC 61000-6-4 has been prepared by CISPR subcommittee H: Limits for the protection of radio services.

This third edition cancels and replaces the second edition published in 2006 and Amendment 1:2010 This edition constitutes a technical revision.

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

- a) possible future requirements on DC ports;
- b) possible future radiated polarity specific emission limits within a FAR;
- c) the definition of which average detector is used for emission measurements at frequencies above 1GHz and that results using a peak detector are acceptable for all measurements;
- d) the definition of different EUT test arrangements.

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

FDIS	Report on voting
CIS/H/339A/FDIS	CIS/H/350/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

It forms Part 6-4 of the IEC 61000 series of standards. It has the status of a basic EMC publication in accordance with IEC Guide 107.

A list of all parts in the CISPR 61000 series, published under the general title *Electromagnetic compatibility*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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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 (insofar 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 technical reports/specifications, 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 6-4: Generic standards –**

### **Emission standard for industrial environments**

## **1 Scope**

This part of IEC 61000 for emission requirements applies to electrical and electronic equipment intended for use within the environment existing at industrial (see 3.1.12) locations.

This document does not apply to equipment that fall within the scope of IEC 61000-6-3.

The environments encompassed by this document cover both indoor and outdoor locations.

Emission requirements in the frequency range 9 kHz to 400 GHz are covered in this document and have been selected to provide an adequate level of protection of radio reception in the defined electromagnetic environment. No measurement needs to be performed at frequencies where no requirement is specified. These requirements are considered essential to provide an adequate level of protection to radio services.

Not all disturbance phenomena have been included for testing purposes but only those considered relevant for the equipment intended to operate within the environments included within this document.

Requirements are specified for each port considered.

This generic EMC emission standard is to be used where no applicable product or product-family EMC emission standard is available.

NOTE 1 Safety considerations are not covered by this document.

NOTE 2 In special cases, situations will arise where the levels specified in this document will not offer adequate protection; for example where a sensitive receiver is used in close proximity to an equipment. In these instances, special mitigation measures may have to be employed.

NOTE 3 Disturbances generated in fault conditions of equipment are not covered by this document.

## **2 Normative references**

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 – Chapter 161: Electromagnetic compatibility*

IEC 61000-4-20:2010, *Electromagnetic compatibility (EMC) – Part 4-20: Testing and measurement techniques – Emission and immunity testing in transverse electromagnetic (TEM) waveguide*

CISPR 11:2015, *Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement*  
CISPR 11:2015/AMD1:2016