

Australian/New Zealand Standard™

**Electromagnetic compatibility (EMC)**

**Part 4.14: Testing and measurement  
techniques—Voltage fluctuation  
immunity test**



#### **AS/NZS 61000.4.14:2007**

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-034, Power Quality. It was approved on behalf of the Council of Standards Australia on 28 June 2007 and on behalf of the Council of Standards New Zealand on 22 June 2007.

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The following are represented on Committee EL-034:

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Australian Electrical and Electronic Manufacturers Association  
Australian Energy Market Commission  
Australian Information Industry Association  
Bureau of Steel Manufacturers of Australia  
Consumers Federation of Australia  
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## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-034, Power Quality.

The objective of this Standard is to provide manufacturers and suppliers of electricity and users of electrical equipment intended for connection to an electrical network with a common reference for evaluating the immunity of electrical and electronic equipment when subjected to positive and negative low amplitude voltage fluctuations and methods for ascertaining compliance to them in order to maintain electromagnetic compatibility within the electrical network.

This Standard is identical with, and has been reproduced from IEC 61000-4-14, Ed. 1.1 (2002), *Electromagnetic compatibility (EMC) – Part 4-14: Voltage fluctuation immunity test*.

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- (a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
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The terms 'normative' and 'informative' are used to define the application of the annex to which they apply. A normative annex is an integral part of a standard, whereas an informative annex is only for information and guidance.

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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).

## STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

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**Australian/New Zealand Standard****Electromagnetic compatibility (EMC)****Part 4.14: Testing and measurement techniques—Voltage fluctuation immunity test**

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**1 Scope**

This part of IEC 61000 is a basic electromagnetic compatibility (EMC) publication. It considers immunity tests for electrical and/or electronic equipment in their electromagnetic environment. Only conducted phenomena are considered, including immunity tests for equipment connected to public and industrial power supply networks.

This part aims to establish a reference for evaluating the immunity of electric and electronic equipment when subjected to positive and negative low amplitude voltage fluctuations.

The voltage fluctuations considered by this standard do not include flicker, which is a physiological phenomenon due to lighting luminance fluctuations.

This standard applies to electrical and/or electronic equipment that have a rated input current up to 16 A per phase. It does not apply to electrical and/or electronic equipment connected to d.c. or a.c. 400 Hz distribution networks. Tests concerning these networks will be covered by other IEC standards.

The immunity test levels required for a specific electromagnetic environment, together with the performance criteria, are indicated in the product, product family or generic standards as applicable. However, most product groups do not have a history of being susceptible to voltage fluctuations. Consequently, testing for these phenomena is often not required.

**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.

References to international standards that are struck through in this clause are replaced by references to Australian or Australian/New Zealand Standards that are listed immediately thereafter and identified by shading. Any Australian or Australian/New Zealand Standard that is identical to the International Standard it replaces is identified as such.

IEC 60050(161):1990, *International Electrotechnical Vocabulary (IEV) – Chapter 161: Electromagnetic compatibility*

~~IEC 60068-1:1988, *Environmental testing – Part 1: General and guidance*~~

AS 60068.1, *Environmental testing, Part 1: General and guidance* (identical to IEC 60068-1)

IEC 61000-2-4:1994, *Electromagnetic compatibility (EMC) – Part 2: Environment – Section 4: Compatibility levels in industrial plants for low-frequency conducted disturbances*