AS/NZS 61000.4.8:2012
IEC 61000-4-8, Ed.2.0 (2009)

AS/NZS 61000.4.8:2012

Australian/New Zealand Standard™

Electromagnetic compatibility (EMC)

Part 4.8: Testing and measurement techniques—Power frequency magnetic field immunity test

STANDARDS Australia

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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 4 May 2012 and on behalf of the Council of Standards New Zealand on 26 April 2012.
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This Standard was issued in draft form for comment as DR AS/NZS 61000.4.8.

Australian/New Zealand Standard™

Electromagnetic compatibility (EMC)

Part 4.8: Testing and measurement techniques—Power frequency magnetic field immunity test

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-034, Power Quality, to supersede AS/NZS 61000.4.8:2002, *Electromagnetic compatibility (EMC)—Part 4.8: Testing and measurement techniques—Power frequency magnetic field immunity test*.

The objective of this Standard is to determine the immunity requirements of equipment, only under operational conditions, to magnetic disturbances at power frequency related to residential and commercial locations, industrial installations and power plants, and medium voltage and high voltage sub-stations.

This Standard is identical with, and has been reproduced from IEC 61000-4-8, Ed.2.0 (2009), *Electromagnetic compatibility (EMC)*—Part 4-8: *Testing and measurement techniques—Power frequency magnetic field immunity test*.

As this Standard is reproduced from an International Standard, the following applies:

(a) Its number appears on the cover and title page while the International Standard number appears only on the cover.

(b) In the source text 'this part of IEC 61000' should read 'this part of AS/NZS 61000'.

(c) A full point substitutes for a comma when referring to a decimal marker.

None of the normative references in the source document have been adopted as Australian or Australian/New Zealand Standards.

The terms 'normative' and 'informative' have been used in this Standard 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.

CONTENTS

Page

FOREWORD

This edition includes the following significant technical changes with respect to the previous edition: the scope is extended in order to cover 60 Hz. Characteristics, performance and verification of the test generator and related inductive coils are revised. Modifications are also introduced in the test set-up (GRP) and test procedure.

AUSTRALIAN/NEW ZEALAND STANDARD

Electromagnetic compatibility (EMC)

Part 4.8:
Testing and measurement techniques—Power frequency magnetic field immunity test

1 Scope

This part of IEC 61000 relates to the immunity requirements of equipment, only under operational conditions, to magnetic disturbances at power frequencies 50 Hz and 60 Hz related to:

– residential and commercial locations;
– industrial installations and power plants;
– medium voltage and high voltage sub-stations.

The applicability of this standard to equipment installed in different locations is determined by the presence of the phenomenon, as specified in Clause 4. This standard does not consider disturbances due to capacitive or inductive coupling in cables or other parts of the field installation.

Other IEC standards dealing with conducted disturbances cover these aspects.

The object of this standard is to establish a common and reproducible basis for evaluating the performance of electrical and electronic equipment for household, commercial and industrial applications when subjected to magnetic fields at power frequency *(continuous and short duration field)*.

The standard defines:

– recommended test levels;
– test equipment;
– test set-up;
– test procedure.

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 Terms and definitions

For the purposes of this document the following terms and definitions apply to the restricted field of magnetic disturbances as well as the terms and definitions from IEC 60050(161) [IEV].

3.1
current distortion factor
ratio of the root-mean square value of the harmonics content of an alternating current to the root-mean square value of the fundamental current