

Australian/New Zealand Standard™

**Electromagnetic compatibility (EMC)**

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

## **AS/NZS 61000.4.8:2002**

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee TE-003, Electromagnetic Interference. It was approved on behalf of the Council of Standards Australia on 23 August 2002 and on behalf of the Council of Standards New Zealand on 20 August 2002. It was published on 1 November 2002.

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## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee TE-003, Electromagnetic Interference.

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 61000-4-8:2001, *Electromagnetic compatibility (EMC), Part 4-8: Testing and measurement techniques—Power frequency magnetic field immunity test* (consolidated version).

The consolidated version of IEC 61000-4-8 is based on the first edition published in 1993 (documents 77B(CO)7 and 77B(CO)13) and its Amendment 1:2000 (documents 77B/291+293/FDIS and 77B/298+300/RVD).

The international committee has decided that the contents of the base publication and its amendment will remain unchanged until 2002. At this date, the publication will be—

- (a) reconfirmed; or
- (b) withdrawn; or
- (c) replaced by a revised edition; or
- (d) amended.

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.

In this Standard, the following print types are used:

- requirements proper: in arial type;
- *test specifications: in italic type;*
- explanatory matter: in smaller arial type.

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

- (a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
- (b) In the source text ‘this standard’ should read ‘this Australian/New Zealand Standard’.
- (c) A full point should be substituted for a comma when referring to a decimal marker.

## CONTENTS

	<i>Page</i>
Clause	
1 Scope.....	1
2 Normative references .....	2
3 General .....	2
4 Definitions .....	2
5 Test levels.....	3
6 Test equipment.....	4
6.1 Test generator .....	4
6.2 Induction coil .....	5
6.3 Test and auxiliary instrumentation.....	7
7 Test set-up .....	7
7.1 Ground (reference) plane.....	7
7.2 Equipment under test.....	8
7.3 Test generator .....	8
7.4 Induction coil .....	8
8 Test procedure .....	9
8.1 Laboratory reference conditions.....	9
8.2 Carrying out the test .....	9
9 Evaluation of test results .....	10
10 Test report.....	11
Annexes	
Annex A (normative) Induction coil calibration method .....	15
Annex B (normative) Characteristics of the induction coils .....	16
Annex C (informative) Selection of the test levels .....	22
Annex D (informative) Information on power frequency magnetic field strength .....	24
Figures	
Figure 1 Example of application of the test field by the immersion method.....	11
Figure 2 Schematic circuit of the test generator for power frequency magnetic field .....	12
Figure 3 Example of test set-up for table-top equipment .....	12
Figure 4 Example of test set-up for floor-standing equipment .....	13
Figure 5 Example of investigation of susceptibility to magnetic field by the proximity method .....	13
Figure 6 Illustration of Helmholtz coils .....	14
Figure B.1 Characteristics of the field generated by a square induction coil (1 m side) in its plane.....	17
Figure B.2 3 dB area of the field generated by a square induction coil (1 m side) in its plane.....	18

	Page
Figure B.3 3 dB area of the field generated by a square induction coil (1 m side) in the mean orthogonal plane (component orthogonal to the plane of the coil) .....	18
Figure B.4 3 dB area of the field generated by two square induction coils (1 m side) 0,6 m spaced, in the mean orthogonal plane (component orthogonal to the plane of the coils) .....	19
Figure B.5 3 dB area of the field generated by two square induction coils (1 m side) 0,8 m spaced, in the mean orthogonal plane (component orthogonal to the plane of the coils) .....	19
Figure B.6 3 dB area of the field generated by a rectangular induction coil (1 m x 2,6 m) in its plane .....	20
Figure B.7 3 dB area of the field generated by a rectangular induction coil (1 m x 2,6 m) in its plane (ground plane as a side of the induction coil) .....	20
Figure B.8 3 dB area of the field generated by a rectangular induction coil (1 m x 2,6 m) with ground plane, in the mean orthogonal plane (component orthogonal to the plane of the coil).....	21
 Tables	
Table 1 Test levels for continuous field .....	3
Table 2 Test levels for short duration: 1 s to 3 s .....	4
Table D.1 Values of the maximum magnetic field produced by household appliances (results of the measurements of 100 different devices of 25 basic types) .....	24
Table D.2 Values of the magnetic field generated by a 400 kV line .....	24
Table D.3 Values of the magnetic field in high voltage sub-station areas .....	25
Table D.4 Values of the magnetic field in power plants .....	25

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**Australian/New Zealand Standard****Electromagnetic compatibility (EMC)****Part 4.8: Testing and measurement techniques—Power frequency magnetic field immunity test**

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**1 Scope**

This international standard relates to 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;
- 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 3.

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.

Other kinds of magnetic fields would be object of standardization:

- fields at other power frequencies (16 2/3 – 20 or 30 – 400 Hz);
- fields of harmonic currents (100 Hz to 2 000 Hz);
- fields of higher frequencies (up to 150 kHz, e.g. for mains signalling systems);
- D.C. fields.