AS/NZS 61000.4.30:2007
IEC 61000-4-30, Ed. 1.0 (2003)
and Corrigendum 1:2006

AS/NZS 61000.4.30:2007

Australian/New Zealand Standard™

Electromagnetic compatibility (EMC)

Part 4.30: Testing and measurement techniques— Power quality measurement methods

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 5 June 2007 and on behalf of the Council of Standards New Zealand on 27 April 2007.
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The following are represented on Committee EL-034:

Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Australian Energy Market Commission
Australian Information Industry Association
Bureau of Steel Manufacturers of Australia
Consumers Federation of Australia
Electrical Regulatory Authorities Council
Electricity Engineers Association (New Zealand)
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We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

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Australian/New Zealand Standard™

Electromagnetic compatibility (EMC)

Part 4.30: Testing and measurement techniques—
Power quality measurement methods

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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 define the methods for measurement and interpretation of results for power quality parameters in 50/60 Hz a.c. power supply systems. The power quality parameters are power frequency, magnitude of the supply voltage, flicker, supply voltage dips and swells, voltage interruptions, transient voltages, supply voltage unbalance, voltage and current harmonics and interharmonics, mains signalling on the supply voltage and rapid voltage changes.

This Standard is identical with, and has been reproduced from IEC 61000-4-30, Ed. 1.0 (2003), *Electromagnetic compatibility (EMC) – Part 4-30: Testing and measurement techniques—Power quality measurement methods*, including its Corrigendum 1(2006).

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 ‘IEC 61000-4-30’ should read ‘AS/NZS 61000.4.30’.

(c) A full point should be substituted for a comma when referring to a decimal marker.

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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1 Scope

This part of IEC 61000-4 defines the methods for measurement and interpretation of results for power quality parameters in 50/60 Hz a.c. power supply systems.

Measurement methods are described for each relevant type of parameter in terms that will make it possible to obtain reliable, repeatable and comparable results regardless of the compliant instrument being used and regardless of its environmental conditions. This standard addresses measurement methods for *in situ* measurements.

Measurement of parameters covered by this standard is limited to those phenomena that can be conducted in a power system. These include the voltage and/or current parameters, as appropriate.

The power quality parameters considered in this standard are power frequency, magnitude of the supply voltage, flicker, supply voltage dips and swells, voltage interruptions, transient voltages, supply voltage unbalance, voltage and current harmonics and interharmonics, mains signalling on the supply voltage and rapid voltage changes. Depending on the purpose of the measurement, all or a subset of the phenomena on this list may be measured.

This standard is a performance specification, not a design specification. The uncertainty tests in the ranges of influence quantities in this standard determine the performance requirements.

This standard gives measurement methods but does not set thresholds.

The effects of transducers being inserted between the power system and the instrument are acknowledged but not addressed in detail in this standard. Precautions on installing monitors on live circuits are addressed.

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