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Australian/New Zealand Standard™

Electromagnetic compatibility (EMC)

Part 4.15: Testing and measurement techniques—Flickermeter—Functional and design specifications

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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Bureau of Steel Manufacturers of Australia
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Electromagnetic compatibility (EMC)

Part 4.15: Testing and measurement techniques—Flickermeter—Functional and design specifications

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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 61000.4.15:2005, *Electromagnetic compatibility (EMC)*—Part 4.15: *Testing and measurement techniques—Flickermeter—Function and design specifications*.

The objective of this Standard is to provide basic information for the design and the instrumentation of an analogue or digital flicker measuring apparatus. It does not give tolerance limit values of flicker severity.

This Standard is identical with, and has been reproduced from IEC 61000-4-15, Ed.2.0 (2010), *Electromagnetic compatibility (EMC)*—Part 4.15: *Testing and measurement techniques—Flickermeter—Functional and design specifications* and incorporates its Corrigendum 1 (2012).

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.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard		*Australian/New Zealand Standard*	
IEC		AS	
60068	Environmental testing	60068	Environmental testing
		AS/NZS	
61000	Electromagnetic compatibility (EMC)	61000	Electromagnetic compatibility (EMC)
61000-3-3	Part 3-3: Limits—Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection	61000.3.3	Part 3.3: Limits—Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection
61000-3-11	Part 3-11: Limits—Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems—Equipment with rated current ≤ 75 A and subject to conditional connection	61000.3.11	Part 3.11: Limits—Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems—Equipment with rated current less than or equal to 75 A and subject to conditional connection
61010	Safety requirements for electrical equipment for measurement, control, and laboratory use	61010	Safety requirements for electrical equipment for measurement, control and laboratory use
61010-1	Part 1: General requirements	61010.1	Part 1: General requirements

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.

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FOREWORD

This second edition cancels and replaces the first edition published in 1997 and its Amendment 1 (2003) and constitutes a technical revision. This new edition, in particular, adds or clarifies the definition of several directly measured parameters, so that diverging interpretations are avoided.

The contents of the corrigendum of March 2012 have been included in this copy.

AUSTRALIAN/NEW ZEALAND STANDARD

Electromagnetic compatibility (EMC)

Part 4.15:
Testing and measurement techniques—Flickermeter—Functional and design specifications

1 Scope and object

This part of IEC 61000 gives a functional and design specification for flicker measuring apparatus intended to indicate the correct flicker perception level for all practical voltage fluctuation waveforms. Information is presented to enable such an instrument to be constructed. A method is given for the evaluation of flicker severity on the basis of the output of flickermeters complying with this standard.

The flickermeter specifications in this part of IEC 61000 relate only to measurements of 120 V and 230 V, 50 Hz and 60 Hz inputs. Characteristics of some incandescent lamps for other voltages are sufficiently similar to the values in Table 1 and Table 2, that the use of a correction factor can be applied for those other voltages. Some of these correction factors are provided in the Annex B. Detailed specifications for voltages and frequencies other than those given above, remain under consideration.

The object of this part of IEC 61000 is to provide basic information for the design and the instrumentation of an analogue or digital flicker measuring apparatus. It does not give tolerance limit values of flicker severity.

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 60068 (all parts), *Environmental testing*

IEC 61000-3-3, *Electromagnetic compatibility (EMC) – Part 3-3: Limits – Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤16 A per phase and not subject to conditional connection*

IEC 61000-3-11, *Electromagnetic compatibility (EMC) – Part 3-11: Limits – Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems – Equipment with rated current ≤75 A and subject to conditional connection*

IEC 61010-1, *Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements*

IEC 61326-1, *Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1: General requirements*

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