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AS/NZS 61000.4.15:2005

Australian/New Zealand Standard™

Electromagnetic compatibility (EMC)

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

STANDARDS Australia

STANDARDS NEW ZEALAND Paerewa Aotearoa

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The following are represented on Committee EL-034:

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Bureau of Steel Manufacturers of Australia
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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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Electromagnetic compatibility (EMC)

Part 4.15: Testing and measurement techniques—Flickermeter—Function 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 4376:1996, *Flickermeter—Functional and design specifications* and AS/NZS 4377:1996, *Flickermeter—Evaluation of flicker severity.*

The objective of this Standard is to provide basic information for the design and the instrumentation of an analogue or digital flicker measuring apparatus.

This Standard is identical with, and has been reproduced from IEC 61000-4-15, Ed. 1.1 (2003), *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 15: Flickermeter—Functional and design specifications*.

This Standard is Part 4.15 of a series, which currently consists of the following:

AS/NZS	
61000	Electromagnetic compatibility (EMC)
61000.1.1	Part 1.1: General—Application and interpretation of fundamental definitions and terms
61000.2.2	Part 2.2: Environment—Compatibility levels for low-frequency conducted disturbances and signalling in public low-voltage power supply systems
61000.2.3	Part 2.3: Environment—Description of the environment—Radiated and non-network-frequency-related conducted phenomena
61000.2.5	Part 2.5: Environment—Classification of electromagnetic environments
61000.2.12	Part 2.12: Environment—Compatibility levels for low-frequency conducted disturbances and signalling in public medium-voltage power supply systems
61000.3.2	Part 3.2: Limits—Limits for harmonic current emissions (equipment input current less than or equal to 16 A per phase)
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 less than or equal to 16 A per phase and not subject to conditional connection
61000.3.5	Part 3.5: Limits—Limitation of voltage fluctuations and flicker in low-voltage power supply systems for equipment with rated current greater than 16 A
61000.3.6	Part 3.6: Limits—Assessment of emission limits for distorting loads in MV and HV power systems
61000.3.7	Part 3.7: Limits—Assessment of emission limits for fluctuating loads in MV and HV power systems
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 75A and subject to conditional connection
61000.4.1	Part 4.1: Testing and measurement techniques—Overview of immunity tests
61000.4.2	Part 4.2: Testing and measurement techniques—Electrostatic discharge immunity test
61000.4.3	Part 4.3: Testing and measurement techniques—Radiated radio-frequency electromagnetic field immunity test
61000.4.5	Part 4.5: Testing and measurement techniques—Surge immunity test
61000.4.6	Part 4.6: Testing and measurement techniques—Immunity to conducted disturbances, induced by radio-frequency fields

61000.4.7	Part 4.7:	Testing and measurement techniques—General guide on harmonics and interharmonics measurements and instrumentation, for power supply systems and equipment connected thereto
61000.4.8	Part 4.8:	Testing and measurement techniques—Power frequency magnetic field immunity test
61000.4.11	Part 4.11:	Testing and measurement techniques—Voltage dips, short interruptions and voltage variations immunity tests
61000.4.15	Part 4.15:	Testing and measurement techniques—Flickermeter—Functional and design specifications(this Standard)
61000.4.16	Part 4.16:	Testing and measurement techniques—Test for immunity to conducted common mode disturbances in the frequency range 0 Hz to 150 kHz
61000.6.2	Part 6.2:	Generic standards—Immunity for industrial environments

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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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Australian/New Zealand Standard

Electromagnetic compatibility (EMC)

1 Scope and object

This section of IEC 61000-4 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.

This section is based partly on work by the “Disturbances” Working Group of the International Union for Electroheat (UIE), partly on work of the IEEE, and partly on work within IEC itself. The flickermeter specifications in this section relate only to measurements of 230 V, 50 Hz inputs and 120 V, 60 Hz inputs; specifications for other voltages and other frequencies are under consideration.

The object of this section 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.

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 60068-2-1:1990, *Environmental testing – Part 2: Tests – Tests A: Cold*~~

AS 60068.2.1, *Environmental testing* – Part 2: *Tests – Tests A: Cold* (identical to IEC 60068-2-1:1990)

~~IEC 60068-2-2:1974, *Environmental testing – Part 2: Tests – Tests B: Dry heat*~~

AS 60068.2.2, *Environmental testing* – Part 2: *Tests – Tests B: Dry heat* (identical to IEC 60068-2-2:1974)

IEC 60068-2-3:1969, *Environmental testing* – Part 2: *Tests – Test Ca: Damp heat, steady state*

~~IEC 60068-2-14:1984, *Environmental testing – Part 2: Tests – Test N: Change of temperature*~~

AS 60068.2.14, *Environmental testing* – Part 2: *Tests – Test N: Change of temperature* (identical to IEC 60068-2-14:1984)