AS/NZS 61047:2001
IEC 61047:1991

Australian/New Zealand Standard™

Auxiliaries for lamps—D.C. or a.c. supplied electronic step-down convertors for filament lamps—Performance requirements

[IEC title: D.C. or a.c. supplied electronic step-down convertors for filament lamps—Performance requirements]

Standards Australia

STANDARDS NEW ZEALAND

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-041, Lamps and Related Equipment. It was approved on behalf of the Council of Standards Australia on 13 July 2001 and on behalf of the Council of Standards New Zealand on 8 May 2001. It was published on 4 September 2001.

The following interests are represented on Committee EL-041:

Association of Consulting Engineers Australia
Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Electrical Compliance Testing Association of Australia
Electrical Regulatory Authorities Council (Australia)
Energy Efficiency and Conservation Authority of New Zealand
Illuminating Engineering Society of Australia and 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 International or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR99299.

Australian/New Zealand Standard™

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-041, Lamps and Related Equipment.

The objective of this Standard is to provide the lighting industry with performance requirements for electronic step-down convertors for use on d.c. supplies up to 250 V or a.c. supplies up to 1 000 V at 50 or 60 Hz with operating frequencies deviating from the supply frequency, associated with tungsten halogen lamps (as specified in IEC 60357) and other filament lamps.

This Standard is identical with and has been reproduced from IEC 61047:1991, *D.C. or a.c. supplied electronic step-down convertors for filament lamps—Performance requirements*, including IEC Amendment 1:1996 and Amendment 2:2001. Both the amendments are integrated in this Standard. The clauses affected by Amendment 1 and Amendment 2 are identified with a numbered marginal bar beside the affected clause. IEC has decided that the contents of its base publication and its amendments will remain unchanged until January 2004 and will be reviewed thereafter. EL-041 accordingly will review this AS/NZS 61047 subject to the decisions of IEC 61047.

A reference to an International Standard identified in the Normative References Clause by strikethrough (~~example~~) is replaced by a reference to the Australian or Australian/New Zealand Standard(s) listed immediately thereafter and identified by shading (example). Where the struck-through referenced document and the referenced Australian or Australian/New Zealand Standard are identical, this is indicated in parenthesis after the title of the latter.

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 International Standard’ should read ‘this Australian/New Zealand Standard’.

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

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.

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.

Attention is drawn to Electromagnetic Compatibility (EMC) schemes introduced in their respective countries by the Australian Communications Authority (ACA) and the Ministry of Economic Development, New Zealand (MED) to manage the use and performance of devices that either intentionally or unintentionally emit electromagnetic energy in the radiofrequency spectrum. Mandated Standards form an integral part of the EMC compliance schemes. Electrical lighting products fall within the scope of AS/NZS 4051, *Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment*. AS/NZS 4051 has been reproduced from IEC/CISPR 15 (same title) but contains some changes to limits to protect local radio services.

Information on EMC compliance for lighting equipment is to be found on the Internet at http://www.aca.gov.au/standards/emc/emc.htm and for NZ at http://www.med.govt.nz/rsm

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INTRODUCTION

This International Standard covers performance requirements for electronic step-down convertors for d.c. supplies up to 250 V and a.c. supplies up to 1 000 V at 50 Hz or 60 Hz, operating with controlled voltage filament lamps at frequencies deviating from the supply frequency.

Attention is drawn to the fact that operating frequencies below 20 kHz may cause audio noise.

NOTE - Regarding radio interference, CISPR requirements have to be observed in some countries.

In order to obtain satisfactory performance of filament lamps and electronic convertors, it is necessary that certain features of their designs be properly coordinated.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard

Auxiliaries for lamps—D.C. or a.c. supplied electronic step-down convertors for filament lamps—Performance requirements

1 Scope and normative references

1.1 Scope

This International Standard specifies performance requirements for electronic step-down convertors for use on d.c. supplies up to 250 V and a.c. supplies up to 1 000 V at 50 Hz or 60 Hz with operating frequencies deviating from the supply frequency, associated with tungsten halogen lamps as specified in IEC 60357 and other filament lamps.

NOTES

1 The tests in this standard are type tests. Requirements for testing individual convertors during production are not included.

2 Requirements for convertors which Incorporate means for varying the lamp power are under consideration.

3 It may be expected that convertors complying with this standard will ensure satisfactory operation between 92% and 106% of rated supply voltage of filament lamps with rated lives greater than 200 hours and rated voltage less than 50 V.

This standard is to be read in conjunction with ~~IEC 61046~~ AS/NZS 61046.

1.2 Normative references

The following standards contain provisions which, through reference in the text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

References to International Standards that are struck through in this Clause are replaced by references to equivalent 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 appropriately identified.

IEC 60357: 1982, *Tungsten halogen lamps (non-vehicle). Amendment No. 1 (1984), Amendment No. 2 (1985), Amendment No. 3 (1987), Amendment No. 4 (1989)*

IEC 60410: 1973. *Sampling plans and procedures for Inspection by attributes*

~~IEC 60555-2: 1982, *Disturbances In supply systems caused by household appliances and similar electrical equipment. Part 2. Harmonics*~~ (Superseded by IEC 61000-3-2 (1995).)