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Interim
Australian/New Zealand Standard™

Household electrical appliances—Measurement of standby power

Standards Australia

STANDARDS NEW ZEALAND
Paerewa Aotearoa

This Interim Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-015, Quality and Performance of Household Electrical Appliances. It was approved on behalf of the Council of Standards Australia on 21 August 2003 and on behalf of the Council of Standards New Zealand on 9 September 2003. It was published on 19 September 2003.

The following are represented on Committee EL-015:

Australian Certification Bodies
Australian Consumers Association
Australian Electrical and Electronic Manufacturers Association
Australian Retailers Association
Business New Zealand
Consumer Electronics Suppliers Association, Australia
Department of Industrial Relations, Qld
Electrical Compliance Testing Association
Energy Efficiency and Conservation Authority of New Zealand
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Australian/New Zealand Standard™

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PREFACE

This Interim Australian/New Zealand Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-015, Quality and Performance of Household Electrical Appliances.

This Interim Standard is based on IEC TC59 Committee Draft, IEC 59/325/CD, *Household electrical appliances—Measurement of standby power*. It incorporates some of the comments received from national committees on that draft. It is expected that the IEC will publish this draft without substantial change as IEC 62301 in 2004.

The objective of this Interim Standard is to provide a method of test to determine the power consumption of a range of appliances and equipment in standby mode (generally where the product is not performing its main function). This Interim Standard defines 'standby' mode as the lowest power consumption when connected to the mains. The test method is also applicable to other low power modes where the mode is steady state or providing a background or secondary function (e.g. monitoring or display). An Appendix provides some guidance on the expected modes that would be found for various appliance configurations and designs based on their circuitry and layout, but the Interim Standard does not define these modes.

In November 2002, Australia became the first IEA country to publish a standby power strategy. The 10-year plan identifies a range of actions to address standby power across a large number of products. The Ministerial Council of Energy endorsed the 10 year plan, which has as a foundation, the use of the testing method contained herein developed by the IEC TC59 Committee. This Interim Standard has been published to give industry and testing laboratories the maximum time to become familiar with the likely international test method for standby and provide an extended opportunity to comment on its application.

Standards Australia and Standards New Zealand invite comment on this Interim Standard from persons and organizations concerned with the subject. Committee EL-015 will monitor all comment as it is received. The date of expiry for comment is 2 years after publication. At that time (or earlier) the Interim Standard will be confirmed, withdrawn or revised in the light of public comment received. Within this period it is expected that IEC 62301 will be published as an International Standard and it is expected that this will be subsequently adopted as the Joint Australian/New Zealand Standard.

Attention is drawn to the fact that this document is an Interim Standard only, and is liable to alteration.

The terms 'normative' and 'informative' are used to define the application of the appendix to which they apply. A normative appendix is an integral part of a Standard, whereas an informative appendix is only for information and guidance.

CONTENTS

FOREWORD

The original proposal for a new Standard on standby was prepared by the TC 59 ad-hoc WG on standby. This was submitted as a new work item proposal (document IEC 59/254/NP) in May 2001. This proposal was approved (see IEC 59/270/RVN) in September 2001 (project number IEC 62301) and at its meeting in Florence in October 2001, TC59 approved the creation of Working Group 9 to continue this work to publication. Working Group 9 finalized the committee draft at its meeting in March 2002 and this was issued in July 2002 for public comment (document IEC 59/297/CD). The compilation of comments on the CD was issued as document IEC 59/317/CC in November 2002. At the end, consensus seemed to be reached, but TC 59 decided to submit a second CD instead of a Committee Draft for Voting, because of late concerns announced after the closing date of the first CD and in order to avoid disagreement during the final voting of a CDV. A second Committee Draft (59/325/CD released in March 2003) was prepared on the basis of the comments received on the first CD and subsequent consultation with WG-9 members. This Interim Standard incorporates some of the comments received on the second Committee Draft. A CDV is likely to be issued by WG-9 in the second half of 2003.

At its October 2001 meeting, TC59 agreed that product committees should be primarily responsible for the definition of the relevant low power modes (in addition to standby mode) to which this test procedure is applied. For example, IEC 62087, *Methods of measurement for the power consumption of audio, video and related equipment*, specifies methods and modes for TVs, VCRs and similar equipment.

The methods defined are not intended to be used to measure power consumption of appliances and equipment during normal operation (‘on’ mode), as these are generally covered by product Standards (see Appendix E). This Interim Standard is intended to cover appliances and equipment that fall within the scope of IEC TC59 and AS/NZS EL-015. However, it is acknowledged that, if desired, it can be applied to the relevant low power modes of other similar products.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

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1 SCOPE

This Interim Standard specifies methods of measurement of electrical power consumption in standby mode. It is applicable to mains powered electrical household appliances and to the mains powered parts of appliances that use other fuels such as gas or oil.

This Interim Standard does not specify safety requirements. It does not specify minimum performance requirements nor does it set maximum limits on power or energy consumption.

NOTES:

1 This Interim Standard may be applicable to other low power modes.

2 The measurement of energy consumption and performance of appliances during intended use are generally specified in the relevant product Standards and are not intended to be covered by this Interim Standard.

3 The term 'appliances' in this Interim Standard means household appliances or equipment.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Interim Standard:

AS		
1852.131	International Electrotechnical Vocabulary—Electrical and electronic measurements and measuring instruments Part 131: Electric and magnetic circuits	
IEC		
60050-300 Ed. 1.0 B (2001)	International Electrotechnical Vocabulary—Electrical and electronic measurements and measuring instruments	
60050-311	Part 311:	General terms relating to measurements
60050-312	Part 312:	General terms relating to electrical measurements
60050-313	Part 313:	Types of electrical measuring instruments
60050-314	Part 314:	Specific terms according to the type of instrument
ISO		
Guide	Guide to the Expression of Uncertainty in Measurement	

COOK, R.R. *Assessment of Uncertainties of Measurement*, NATA Australia. 1999. (ISBN 0-909307-46-6)

3 DEFINITIONS

For the purpose of this Interim Standard the following definitions apply. Terms defined in AS 1852.131 and IEC 60050 also apply.

3.1 Standby mode

The lowest power consumption mode which cannot be switched off (influenced) by the user and that may persist for an indefinite time when an appliance is connected to the main electricity supply and used in accordance with the manufacturer's instructions.

NOTE: The standby mode is usually a non-operational mode when compared to the intended use of the appliance's primary function.