IEC 62301

Edition 2.0 2011-01

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Household electrical appliances – Measurement of standby power

Appareils électrodomestiques – Mesure de la consommation en veille

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IEC 62301:2011

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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HOUSEHOLD ELECTRICAL APPLIANCES – MEASUREMENT OF STANDBY POWER

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 62301 has been prepared by IEC technical committee 59: Performance of household and similar electrical appliances.

This second edition cancels and replaces the first edition published in 2005 and constitutes a technical revision. The main changes from the previous edition are as follows:

– greater detail in set-up procedures and introduction of stability requirements for all measurement methods to ensure that results are as representative as possible;
– refinement of measurement uncertainty requirements for power measuring instruments, especially for more difficult loads with high crest factor and/or low power factor;
– updated guidance on product configuration, instrumentation and calculation of measurement uncertainty;
– inclusion of definitions for low power modes as requested by TC59 and use of these new definitions and more rigorous terminology throughout the standard;
– inclusion of specific test conditions where power consumption is affected by ambient illumination.

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The text of this standard is based on the following documents:

FDIS	Report on voting
59/555/FDIS	59/561/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

Words in **bold** in the text are defined in Clause 3 Terms and definitions.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

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INTRODUCTION

The methods defined in this standard are intended to cover **low power modes**. They are not intended to be used to measure power consumption of products during **active mode** (also called “on **mode**“), as these are generally covered by IEC or other product standards (see Bibliography for some examples), although the measuring techniques, measurement uncertainty determination and test equipment specifications could be adapted for such measurements with careful review.

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HOUSEHOLD ELECTRICAL APPLIANCES – MEASUREMENT OF STANDBY POWER

1 Scope

This International Standard specifies methods of measurement of electrical power consumption in **standby mode(s)** and other **low power modes** (**off mode** and **network mode**), as applicable. It is applicable to electrical products with a rated input voltage or voltage range that lies wholly or partly in the range 100 V a.c. to 250 V a.c. for single phase products and 130 V a.c. to 480 V a.c. for other products.

The objective of this standard is to provide a method of test to determine the power consumption of a range of products in relevant **low power modes** (see 3.4), generally where the product is not in **active mode** (i.e. not performing a primary **function**).

NOTE 1 The measurement of energy consumption and performance of products during intended use are generally specified in the relevant product standards and are not covered by this standard.

NOTE 2 The term “products” in this standard means energy using products such as household appliances or other equipment within the scope of TC 59. However, the measurement methodology could be applied to other products.

NOTE 3 Where this International standard is referenced by performance standards or procedures, these should define and name the relevant **low power modes** (see 3.4) to which this test procedure is applied.

NOTE 4 The inclusion of DC powered products within the scope of this standard is under consideration.

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

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 60050-131, *International Electrotechnical Vocabulary (IEV) – Part 131: Circuit theory*

IEC 60050-300, *International Electrotechnical Vocabulary (IEV) – Electrical and electronic measurements and measuring instruments – Part 311: General terms relating to measurements – Part 312: General terms relating to electrical measurements – Part 313: Types of electrical measuring instruments – Part 314: Specific terms according to the type of instrument*

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