Olme- ja bürootarbelised elektri- ja elektroonikaseadmed. Väikese tarbitava võimsuse mõõtmine

Electrical and electronic household and office equipment - Measurement of low power consumption

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 50564:2011 sisaldab Euroopa standardi EN 50564:2011 ingliskeelset teksti.	This Estonian standard EVS-EN 50564:2011 consists of the English text of the European standard EN 50564:2011.
Standard on kinnitatud Eesti Standardikeskuse 31.05.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 31.05.2011 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 13.05.2011.	Date of Availability of the European standard text 13.05.2011.
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English version

Electrical and electronic household and office equipment - Measurement of low power consumption

(IEC 62301:2011, modified)

Appareils électriques et électroniques pour application domestique et équipement de bureau - Mesure de la consommation faible puissance
(CEI 62301:2011, modifiée)

Elektrische und elektronische Hauhalts- und Bürogeräte - Messung niedriger Leistungsaufnahmen
(IEC 62301:2011, modifiziert)

This European Standard was approved by CENELEC on 2011-03-03. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

This European Standard was prepared by Technical Committee CENELEC TC 59X, Performance of household and similar electrical appliances.

A draft amendment covering common modifications towards IEC 62301:2011, prepared by the Technical Committees CENELEC TC 59X, Performance of household and similar electrical appliances and CENELEC TC 108X, Safety of electronic equipment within the fields of audio/video, information technology and communication technology, was submitted to the formal vote.

The combined texts were approved by CENELEC as EN 50564 on 2011-03-03.

This European Standard supersedes EN 62301:2005.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2012-03-03
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2014-03-03

Clauses, subclauses, notes, tables and figures which are additional to those in IEC 62301:2011 are prefixed “Z”.

This European standard was prepared under standardisation mandate M/439. To fulfill the requirements of the mandate the scope of EN 50564 had to be broadened in comparison with IEC 62301:2011 to cover a range of electrical and electronic household and office equipment. This is reflected in the title of EN 50564 in comparison with the title of IEC 62301:2011.

In this European Standard, the common modifications to the International Standard are indicated by a vertical line in the left margin of the text.

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

Introduction

The methods defined in this European Standard are intended to define requirements for the measurement of low power. This standard may be used in support of other, more specific, product standards where it is required to measure power consumption.

The aim of the common modification is to ensure this European Standard is compatible with the objectives of EU legislation for ecodesign and for energy labeling.

Since the **mode** definitions are given in the relevant EU regulation they are not contained in this standard. Additional product specific **mode** definitions might be given in more specific product standards.

Contents

1 Scope

This European Standard specifies methods of measurement of electrical power consumption and the reporting of the results for a range of electrical and electronic household and office equipment, hereafter referred to as products.

This standard

– addresses issues associated with measuring electrical power, in particular low power (in the order of a few Watts or less), consumed by mains powered products,

– describes in detail the requirements for testing single phase products with a rated input voltage in the range of 100 V a.c. to 250 V a.c. but it may, with some adaptations, also be used with three phase products,

– may also be of assistance in determining the energy efficiency of products in conjunction with other, more specific, product standards.

The value of energy consumed will depend on the operating **mode** of the product under test, for instance whether the equipment is in an **off mode**, in a **standby mode** or in an **active mode**. This standard does not specify these **modes** and so it is not possible to use this standard on its own. Instead, it provides a method of measurement with a variety of **modes** which are defined elsewhere.

This standard does not

– specify safety requirements,

– specify minimum performance requirements,

– set maximum limits on power or energy consumption,

– contain limit values or procedures for verifying compliance with regulatory requirements.

NOTE Z1 This standard has been written in particular to support EC Commission Regulation n° 1275/2008 for the measurement of **off mode** and s**tandby mode** power consumption. This standard specifies methods of measurement of electrical power consumption in **standby mode(s)** and other **low power modes** (**off mode**), as applicable.

NOTE Z2 This standard is applicable to electrical products with a rated input voltage of 230 V a.c. for single phase products and 400 V a.c. for three phase products.

NOTE Z3 The measurement of energy consumption and performance of products during intended use are generally specified in more specific product standards and are not covered by this standard.

NOTE Z4 The term “products” in this standard includes household appliances or information technology products, consumer electronics, audio, video and multimedia systems, however the measurement methodology could be applied to other products.

NOTE Z5 Where this standard is referenced by more specific standards or procedures, these should define and name the relevant conditions to which this test procedure is applied.

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*

3 Terms and definitions

For the purposes of this document, the terms and definitions contained in IEC 60050-131 and IEC 60050-300 as well as the following definitions apply.

3.1
function
a predetermined operation undertaken by the energy using product. **Functions** may be controlled by an interaction of the user, of other technical systems, of the system itself, from measurable inputs from the environment and/or time

In this standard, **functions** are grouped into 3 main types:

- user oriented secondary **functions** (see 3.6 - **standby mode**)
- primary **functions** (see 3.8 - **active mode**, which is not the focus of this standard)
- other **functions** (these **functions** do not affect the **mode** classification).

NOTE Accurate recording and documentation of **functions** in the relevant **product mode** is a key element of documentation in this standard (see 6.3). **Function** types are generally classified as primary or secondary (remote, network, sensing and protective).

3.2
mode
a state that has no **function**, one **function** or a combination of **functions** present

NOTE 1 The **low power mode** categories in this standard are intended to provide guidance for the development of specific **mode** definitions for TC59 products by the relevant subcommittees.

NOTE 2 Void.

NOTE 3 See Annex C for examples of how to calculate total energy consumption from power measurements where the duration of each relevant **mode** is known.

3.3
product mode
mode where the **functions** present, if any, and whether these are activated, depend on the particular product configuration

NOTE The issue of devising appropriate names for **product modes** is a matter for the relevant product committees. While a **product mode** name should generally reflect the **functions** that are activated, they need not contain the terms “standby” even where the **product mode** falls within that **mode** category.

3.4
low power mode
a **product mode** that falls into one of the following broad **mode** categories:

- **off mode**(s)
- **standby mode**(s)

NOTE Z1 Refer to relevant legislation or a more specific product standard. This term is not defined in EC Commission Regulation n° 1275/2008.

NOTE 1 **Low power modes** are classified into one of the **mode** categories above (where applicable) on the basis of the **functions** that are present and activated in each relevant **mode**. Where other **functions** are present in a **product mode** (in addition to the ones required for the **mode** categories specified above), these **functions** do not affect the **mode** classification.