

Desktop and notebook computers - Measurement of energy consumption (IEC 62623:2012)

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NATIONAL FOREWORD

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ICS 35.160

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**Desktop and notebook computers -
Measurement of energy consumption
(IEC 62623:2012)**

Ordinateurs de bureau et ordinateurs
portables -
Mesure de la consommation d'énergie
(CEI 62623:2012)

Desktop- und Notebook-Computer –
Messung des Energieverbrauchs
(IEC 62623:2012)

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CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 108/490/FDIS, future edition 1 of IEC 62623, prepared by IEC/TC 108 "Safety of electronic equipment within the field of audio/video, information technology and communication technology" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62623:2013.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2013-09-04
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-12-04

This standard is based on ECMA-383.

In this standard, the following print types or formats are used:

- requirements proper and normative annexes: in roman type;
- notes/explanatory matter: in smaller roman type;
- terms that are defined in 3.1: **bold**.

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

| | | |
|-----------|------|-------------------------|
| IEC 62075 | NOTE | Harmonized as EN 62075. |
| IEC 62301 | NOTE | Harmonized as EN 62301. |

Annex ZA
(normative)

**Normative references to international publications
with their corresponding European publications**

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

| <u>Publication</u> | <u>Year</u> | <u>Title</u> | <u>EN/HD</u> | <u>Year</u> |
|--------------------|-------------|---|--------------|-------------|
| ECMA-389 | - | Procedure for the Registration of Categories for ECMA-383 2nd edition | - | - |

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INTRODUCTION

This standard is based on ECMA-383 and complements the guidance given in IEC 62075. It includes the definitions of energy saving modes and generic energy saving guidance for designers of desktop and notebook computers, by defining a methodology on how to measure the energy consumption of a product whilst providing categorisation criteria that enable energy consumption comparisons of similar products.

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DESKTOP AND NOTEBOOK COMPUTERS – MEASUREMENT OF ENERGY CONSUMPTION

1 Scope

This International Standard covers personal computing products. It applies to desktop and notebook computers as defined in 4.1 that are marketed as final products and that are hereafter referred to as the equipment under test (EUT) or product.

This standard specifies:

- a test procedure to enable the measurement of the power and/or energy consumption in each of the EUT's power modes;
- formulas for calculating the **typical energy consumption (TEC)** for a given period (normally annual);
- a majority profile that should be used with this standard which enables conversion of average power into energy within the **TEC** formulas;
- a system of categorisation enabling like for like comparisons of energy consumption between EUTs;
- a pre-defined format for the presentation of results.

This standard does not set any pass/fail criteria for the EUTs. Users of the test results should define such criteria.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ECMA-389, *Procedure for the Registration of Categories for ECMA-383 2nd edition*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1.1

active workload

simulated amount of productive or operative activity that the EUT performs as represented in the P_{work} (see 4.2.10) and T_{work} (see 3.1.13.6) attributes of the **TEC** equation (see 5.6)

3.1.2

category

grouping of EUT configurations

3.1.3

duty cycle

divisions of time the EUT spends in each of its individual power modes