BS EN IEC 62623:2022

BSI Standards Publication

Desktop and notebook computers — Measurement of energy consumption

National foreword

This British Standard is the UK implementation of EN IEC 62623:2022. It is identical to IEC 62623:2022. It supersedes BS EN 62623:2013, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EPL/100, Audio-visual equipment.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Desktop and notebook computers - Measurement of energy consumption (IEC 62623:2022)

Ordinateurs de bureau et ordinateurs portables - Mesure de la consommation d'énergie (IEC 62623:2022)

Desktop- und Notebook-Computer - Messung des Energieverbrauchs (IEC 62623:2022)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 100/3583/CDV, future edition 2 of IEC 62623, prepared by IEC/TC 100 "Audio, video and multimedia systems and equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62623:2022.

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) 2023-03-01
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2025-06-01

This document supersedes EN 62623:2013 and all of its amendments and corrigenda (if any).

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Endorsement notice

The text of the International Standard IEC 62623:2022 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 62075 NOTE Harmonized as EN 62075

CONTENTS

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DESKTOP AND NOTEBOOK COMPUTERS – MEASUREMENT OF ENERGY CONSUMPTION

FOREWORD

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IEC 62623 has been prepared by technical area 19: Environmental and energy aspects for multimedia systems and equipment, of IEC technical committee 100: Audio, video and multimedia systems and equipment. It is an International Standard.

This second edition cancels and replaces the first edition published in 2012. This edition constitutes a technical revision.

The first edition of this standard was originally based on ECMA-383.

This edition includes the following significant technical changes with respect to the previous edition:

a) Additions to terms & definitions and modification to short & long idle descriptions.
b) Test setup modifications for notebooks where battery pack cannot be removed for testing.
c) Categorisation procedure based on ECMA-389 removed.
d) Replace majority profile with new duty cycle study including new duty cycle attributes for desktop and notebook in a residential and enterprise application.
e) Removal of any reference and test methodology to ENERGY STAR V5.

The text of this International Standard is based on the following documents:

Draft	Report on voting
100/3583/CDV	100/3669/RVC

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

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**.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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

IMPORTANT – The "colour inside" logo on the cover page of this document indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

This document provides 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 key categorisation attributes that enable energy consumption comparisons of similar products.

This document is originally based on ECMA-383 and complements the guidance given in IEC 62075.

DESKTOP AND NOTEBOOK COMPUTERS – MEASUREMENT OF ENERGY CONSUMPTION

1 Scope

This document 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 document 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 to be used with this document which enables conversion of average power into energy within the **TEC** formulas;

– a pre-defined format for the presentation of results.

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

2 Normative references

There are no normative references in this document.

3 Terms, definitions and abbreviations

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1 Terms and definitions

3.1.1
active workload
simulated amount of productive or operative activity that the EUT performs as represented in the P_{work} (see 4.2.12) and $\boldsymbol{T}_{\textbf{work}}$ (see 3.1.11.6) attributes of the **TEC** equation (see 5.6)

3.1.2
category
classification within a product type that is based on product features and installed components

3.1.3
duty cycle
divisions of time the EUT spends in each of its individual power modes

Note 1 to entry: A duty cycle is expressed as a percentage totalling 1.