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Wearable electronic devices and technologies - Part 402-2: Performance Measurement of Fitness Wearables - Step Counting

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EN IEC 63203-402-2

March 2024

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English Version

Wearable electronic devices and technologies - Part 402-2: Performance measurement of fitness wearables - Step counting (IEC 63203-402-2:2024)

Technologies et dispositifs électroniques prêts-à-porter - Partie 402-2: Mesure des performances des dispositifs prêts-à-porter d'activité physique - Podomètres (IEC 63203-402-2:2024)

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Europäisches Komitee für Elektrotechnische Normung

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The text of document 124/249/FDIS, future edition 1 of IEC 63203-402-2, prepared by IEC/TC 124 "Wearable electronic devices and technologies" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 63203-402-2:2024.

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IEC 63203-402-2

Edition 1.0 2024-01

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Wearable electronic devices and technologies – Part 402-2: Performance measurement of fitness wearables – Step counting

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WEARABLE ELECTRONIC DEVICES AND TECHNOLOGIES –

Part 402-2: Performance measurement of fitness wearables – Step counting

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

Draft	Report on voting
124/249/FDIS	124/262/RVD

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.

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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/publications.

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INTRODUCTION

The step counting feature is a common functionality in wearable devices. The accurate measurement and reporting of the step count is an important factor in the acceptance by consumers of that step count. Data from wearable devices may be useful in helping to improve the health and well-being of consumers that use wearable devices. The usability of the data to improve health outcomes is dependent on the reliability of the data to facilitate their acceptance by consumers and health improvement.

This document defines and provides standard test methods for evaluating the performance and reliability of step counting in wearable devices. The benefit of using this document is that it provides a method to compare the step counting function of a wearable device against the actual step count, which can provide manufacturers with a method to improve the step count functionality of their devices.

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WEARABLE ELECTRONIC DEVICES AND TECHNOLOGIES –

Part 402-2: Performance measurement of fitness wearables – Step counting

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1 Scope

This part of IEC 63203 specifies test methods for measuring and evaluating the performance, reliability, and accuracy of the step counting feature in any wearable device that can count steps (e.g. activity and fitness trackers, smart bands, smart shoes, and smart insoles).

These standard test methods exclude the evaluation of data associated with travel distance or calorie consumption.

2 Normative references

There are no normative references in this document.

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

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

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

- IEC Electropedia: available at https://www.electropedia.org/
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3.1.1
body mass index
BMI
value derived from the mass (weight in kilograms) and height (in metres) of an individual, defined as the body mass divided by the square of the body length, expressed in units of kg/m^2, calculated by the following formula:

$$\text{BMI} = m/l^2$$

where

m is the mass in kg;

l is the length in m

[SOURCE: ISO 20342-1:2022, 3.7]

3.1.2
investigator
qualified person responsible for testing at a testing site