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**Nosljive elektronske naprave in tehnologije - 406-1. del: Preskusna metoda za merjenje površinske temperature zapestno nošenih elektronskih naprav pri dotiku s človeško kožo (IEC 63203-406-1:2021)**

Wearable electronic devices and technologies - Part 406-1: Test method for measuring surface temperature of wrist worn wearable electronic devices while in contact with human skin (IEC 63203-406-1:2021)

Tragbare elektronische Geräte und Technologien – Teil 406-1: Prüfverfahren zur Messung der Oberflächenkontakttemperatur von am Handgelenk getragenen elektronischen Geräten (IEC 63203-406-1:2021)

Technologies et dispositifs électroniques prêts-à-porter - Partie 406-1 : Méthode d'essai pour le mesurage de la température de surface des dispositifs électroniques prêts-à-porter placés au poignet au contact de la peau humaine (IEC 63203-406-1:2021)

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**EN IEC 63203-406-1:2022 (E)****European foreword**

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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) 2022-10-20
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## Annex ZA (normative)

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

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62368-1	2018	Audio/video, information and communication technology equipment - Part 1: Safety requirements	EN IEC 62368-1	2020
-	-	-	AC	2020–05
-	-	-	A11	2020

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IEC 63203-406-1

Edition 1.0 2021-12

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

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**iTeh STANDARD**

**Wearable electronic devices and technologies –  
Part 406-1: Test method for measuring surface temperature of wrist-worn  
wearable electronic devices while in contact with human skin**

**Technologies et dispositifs électroniques prêts-à-porter –  
Partie 406-1: Méthode d'essai pour le mesurage de la température de surface  
des dispositifs électroniques prêts-à-porter placés au poignet au contact de la  
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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## WEARABLE ELECTRONIC DEVICES AND TECHNOLOGIES –

**Part 406-1: Test method for measuring surface temperature of wrist-worn wearable electronic devices while in contact with human skin**

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IEC 63203-406-1 has been prepared by technical committee 124: Wearable electronic devices and technologies. It is an International Standard.

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

Draft	Report on voting
124/161/FDIS	124/168/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.

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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

A list of all parts in the IEC 63203 series, published under the general title *Wearable electronic devices and technologies*, can be found on the IEC website.

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](http://webstore.iec.ch) in the data related to the specific document. At this date, the document will be

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- withdrawn,
- replaced by a revised edition, or
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## WEARABLE ELECTRONIC DEVICES AND TECHNOLOGIES –

### Part 406-1: Test method for measuring surface temperature of wrist-worn wearable electronic devices while in contact with human skin

#### 1 Scope

This part of IEC 63203 defines the terms, definitions, symbols, configurations, and test methods to be used to specify the standard measurement conditions and methods for determining the contact-surface temperature of wrist-worn wearable electronic devices intended to be worn directly on a human wrist and that can be worn continuously during use. The conditions of the test do not consider perfusion and results are therefore considered conservatively. The temperature increase is induced by the thermal energy of wearable electronic devices during operation. This document gives the general procedure for the test method applicable to various wrist-worn wearable electronic devices for use by ordinary persons which in the context of this document is a healthy human adult.

#### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 62368-1:2018, *Audio/video, information and communication technology equipment – Part 1: Safety requirements*

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#### 3 Terms and definitions

For the purpose of this document, the following terms and definitions apply:

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

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

##### 3.1

##### **ambient temperature**

average temperature of air or another medium in the vicinity of a wearable electronic device

Note 1 to entry: During the measurement of the ambient temperature the measuring instrument/probe should be shielded from draughts and radiant heating.

[SOURCE: IEC 60050-816:2004, 826-10-03, modified – In the definition, "the equipment" has been replaced with "a wearable electronic device".]