

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

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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**

**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**



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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).

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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*

#### 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>
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##### 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".]