
Methods of evaluation of the battery life of a battery-powered watch

*Méthodes d'évaluation de l'autonomie de fonctionnement d'une montre
à pile*

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ISO 12819:2009(E)

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 12819 was prepared by Technical Committee ISO/TC 114, *Horology*.

This second edition cancels and replaces the first edition (ISO 12819:1999) and Technical Corrigendum ISO 12819:1999/Cor.1:1999, which have been technically revised.

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Methods of evaluation of the battery life of a battery-powered watch

1 Scope

This International Standard specifies two methods for determining the battery life of a battery-powered watch and specifies the labelling to be used by the manufacturers or the distributors to inform the users.

According to the available information, either the theoretical battery life or the practical battery life must be calculated using the equations given in this International Standard.

2 Normative references

The following referenced documents are indispensable for the application 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.

ISO 6426-2, *Horological vocabulary — Part 2: Technical and commercial definitions*

IEC 60086-3, *Primary batteries — Part 3: Watch batteries*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 6426-2 and the following apply.

3.1

battery life

operating duration of a battery-powered watch, as determined by the characteristics of the battery and the movement

NOTE The battery life starts when the battery is inserted and starts powering the movement of the watch and lasts until the point when the voltage falls below the level required for operation and the watch stops.

3.2

practical battery life

AP

calculation of the battery life, taking in account the self-discharge current of the battery during storage and operation

3.3

theoretical battery life

AT

calculation of the battery life assuming an ideal battery with no self-discharge of current