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INTERNATIONAL STANDARD



**Primary batteries –
Part 3: Watch batteries**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

PRIMARY BATTERIES –

Part 3: Watch batteries

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60086-3 has been prepared by IEC technical committee 35: Primary cells and batteries, and ISO technical committee 114: Horology.

This fifth edition cancels and replaces the fourth edition published in 2016. This edition constitutes a technical revision.

This publication is published as a double logo standard.

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

- a) reformatted Table 1 and Table 2. The reformatted tables are now divided by system. Dimensional tolerances were changed when appropriate. Cell sizes were removed or added based on the size prevalence in the market place;
- b) in Table 3 the minimum values of I_1 were reformatted;
- c) the minimum OCV for the S system in Table 5 was changed to 1,55 V.

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

FDIS	Report on voting
35/1467/FDIS	35/1470/RVD

Full information on the voting for the approval of this International Standard 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.

A list of all parts in the IEC 60086 series, published under the general title *Primary batteries*, 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 "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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IMPORTANT – The 'colour inside' logo on the cover page of this publication 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.

The contents of the corrigendum 1 (2023-06) have been included in this copy.

INTRODUCTION

This part of IEC 60086 provides specific requirements and information for primary watch batteries. This part of IEC 60086 was prepared through joint work between the IEC and ISO to benefit primary battery users, watch designers and battery manufacturers by ensuring the best compatibility between batteries and watches.

This part of IEC 60086 will remain under continual scrutiny to ensure that the publication is kept up to date with the advances in both battery and watch technologies.

NOTE Safety information is available in IEC 60086-4 and IEC 60086-5.

PRIMARY BATTERIES –

Part 3: Watch batteries

1 Scope

This part of IEC 60086 specifies dimensions, designation, methods of tests and requirements for primary batteries for watches. In several cases, a menu of test methods is given. When presenting battery electrical characteristics and/or performance data, the manufacturer specifies which test method was used.

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 60086-1:~~2015~~, *Primary batteries – Part 1: General*

IEC 60086-2:~~2015~~, *Primary batteries – Part 2: Physical and electrical specifications*

IEC 60086-4:~~2014~~, *Primary batteries – Part 4: Safety of lithium batteries*

IEC 60086-5:~~1~~, *Primary batteries – Part 5: Safety of batteries with aqueous electrolyte*

⁴~~—To be published.~~

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Primary batteries –
Part 3: Watch batteries**

**Piles électriques –
Partie 3: Piles pour montres**



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IEC 60086-4, *Primary batteries – Part 4: Safety of lithium batteries*

IEC 60086-5, *Primary batteries – Part 5: Safety of batteries with aqueous electrolyte*

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

PILES ÉLECTRIQUES –

Partie 3: Piles pour montres

AVANT-PROPOS

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La Norme internationale IEC 60086-3 a été établie par le comité d'études 35 de l'IEC: Piles, et par le comité technique 114 de l'ISO: Horlogerie.

Cette cinquième édition annule et remplace la quatrième édition parue en 2016. Cette édition constitue une révision technique.

Elle est publiée comme norme double logo.

La présente édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- a) le Tableau 1 et le Tableau 2 ont été reformatés. Les tableaux reformatés sont désormais divisés par système. Les tolérances dimensionnelles ont été modifiées lorsque cela était approprié. Des tailles d'éléments ont été retirées ou ajoutées en fonction de la prévalence des tailles sur le marché;
- b) dans le Tableau 3, les valeurs minimales de I_1 ont été reformatées;
- c) l'OCV minimale pour le système S dans le Tableau 5 a été modifiée et elle est désormais de 1,55 V.

La présente version bilingue (2021-09) correspond à la version anglaise monolingue publiée en 2021-04.

La version française de cette norme n'a pas été soumise au vote.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous www.iec.ch/members_experts/refdocs. Les principaux types de documents développés par l'IEC sont décrits plus en détail sous www.iec.ch/standardsdev/publications.

Une liste de toutes les parties de la série IEC 60086, publiées sous le titre général *Piles électriques*, se trouve sur le site web de l'IEC.

Le comité a décidé que le contenu du présent document ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous "<http://webstore.iec.ch>" dans les données au document recherché. A cette date, le document sera

- reconfirmé,
- supprimé,
- remplacé par une édition révisée, ou
- amendé.

Le contenu du corrigendum 1 (2023-06) a été pris en considération dans cet exemplaire.

INTRODUCTION

La présente partie de l'IEC 60086 donne les exigences et les informations spécifiques aux piles électriques pour montres. La présente partie de l'IEC 60086 a été établie conjointement par l'IEC et l'ISO à l'intention des utilisateurs de piles électriques, des concepteurs de montres et des fabricants de piles en assurant la meilleure compatibilité possible entre les piles et les montres.

La présente partie de l'IEC 60086 fait l'objet d'un suivi permanent pour en permettre la mise à jour au fur et à mesure des progrès technologiques dans le domaine des piles et des montres.

NOTE Les informations concernant la sécurité sont données dans l'IEC 60086-4 et dans l'IEC 60086-5.

PILES ÉLECTRIQUES –

Partie 3: Piles pour montres

1 Domaine d'application

La présente partie de l'IEC 60086 spécifie les dimensions, la désignation, les méthodes d'essai et les exigences qui s'appliquent aux piles électriques pour montres. Dans certains cas, un choix de méthodes d'essai est proposé. Lorsque le fabricant présente les caractéristiques électriques et/ou les performances de la pile, il précise la méthode d'essai qui a été utilisée.

2 Références normatives

Les documents suivants sont cités dans le texte de sorte qu'ils constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 60086-1, *Piles électriques – Partie 1: Généralités*

IEC 60086-2, *Piles électriques – Partie 2: Spécifications physiques et électriques*

IEC 60086-4, *Piles électriques – Partie 4: Sécurité des piles au lithium*

IEC 60086-5, *Piles électriques – Partie 5: Sécurité des piles à électrolyte aqueux*