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Part 1: Safety-related test methods

Robotique — Application de l'ISO 13482 —

Partie 1: Méthodes d'essai liées à la sécurité

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 299, *Robotics*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

This document describes test methods used to verify safety criteria of personal care robots. This document is intended to facilitate ISO 13482, which summarizes the safety requirements of personal care robots. This document describes test methods which are guidelines to verify compliance to the requirements of ISO 13482. Together with the other verification and validation methods described in ISO 13482, they are selectively applicable according to the robot design and usage.

At the time of publication, the test methods described in this document have not been implemented or evaluated broadly. Due to a lack of test facilities worldwide able to conduct such tests, it has not been possible to conduct formal round robin tests. Users of this document are therefore advised to apply the tests with care.

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Robotics — Application of ISO 13482 —

Part 1:
Safety-related test methods

1 Scope

This document describes methods that can be used to test personal care robots in terms of safety requirements defined in ISO 13482. The target robots of this document are identical to those of ISO 13482.

The manufacturer determines the required tests and appropriate testing parameters based on a risk assessment of the robot's design and usage. This risk assessment can determine that tests and test parameters other than those contained in this document are acceptable.

Not all test methods are applicable to all robot types. Test methods labelled "universal" are applicable to all personal care robots. For other tests, the heading states for which robot types the test can be applied (e.g. "for wearable robot" or "for mobile robot").

Some test methods can be replaced by using other applicable standards, even if they are not listed in this document.

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.

ISO 13482:2014, *Robots and robotic devices — Safety requirements for personal care robots*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 13482:2014 and the following apply.

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
autonomy
ability to perform intended tasks based on current state and sensing, without human intervention

[SOURCE: ISO 8373:2012, 2.2]

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