

INTERNATIONAL STANDARD

NORME INTERNATIONALE



Performance evaluation methods of mobile household robots

Méthodes d'évaluation de l'aptitude à la fonction des robots mobiles à usage domestique



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INTERNATIONAL
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CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references.....	7
3 Terms and definitions	7
4 General conditions for testing	8
4.1 Conditions prior to testing.....	8
4.2 Operating and environmental conditions	8
4.2.1 General	8
4.2.2 Operating conditions	8
4.2.3 Atmospheric conditions	8
4.2.4 Lighting conditions	9
4.3 Test equipment and materials.....	9
4.4 Number of samples	9
4.5 Preparation of battery.....	9
4.6 Operation of the mobile household robot.....	9
4.7 Tolerance of dimensions	9
5 Units	10
6 Pose measurements	10
6.1 General.....	10
6.2 Test bed	10
6.2.1 General	10
6.2.2 Test mode.....	11
6.3 Test method.....	11
7 Capability of homing function	12
7.1 General.....	12
7.2 Test bed	12
7.3 Test method.....	13
8 Operation time per single charge	14
8.1 General.....	14
8.2 Test bed	14
8.3 Test method	15
9 Managing a single step	15
9.1 General.....	15
9.2 Test bed	16
9.3 Test method (autonomous modes).....	16
9.4 Test method (manual modes)	17
10 Obstacle avoidance	17
10.1 General.....	17
10.2 Test bed	17
10.3 Test method.....	18
11 Cable traversing behaviour	19
11.1 General.....	19
11.2 Test bed	19
11.2.1 General	19
11.2.2 Circles mark setting	20

11.2.3 Cable.....	20
11.3 Test method.....	21
Annex A (normative)	23
A.1 General.....	23
A.2 Door specification	26
Bibliography	27
Figure 1 – Pose measurements configuration	12
Figure 2 – Capability of homing function configuration	13
Figure 3 – Operation time per single charge configuration.....	14
Figure 4 – Managing a single step configuration	16
Figure 5 – Starting position for managing a single step test	17
Figure 6 – Obstacle avoidance configuration	18
Figure 7 – Starting position for obstacle avoidance test	18
Figure 8 – Wire fastening configuration	20
Figure 9 – Floor circle marks schematic diagram	20
Figure 10 – Floor circle marks schematic diagram with robot	21
Figure 11 – Top view of cable traversing behaviour Configuration	21
Figure 12 – Side view of cable traversing behaviour Configuration	22
Figure A.1 – Details of obstacles around table.....	23
Figure A.2 – Illustration of metal transition installation	25
Figure A.3 – Illustration of wood transition Installation	25
Figure A.4 – Detail view of checker board and transitions	26
Figure A.5 – Illustration of four-panel door	26
Table 1 – Tolerance of linear dimension (from ISO 2768-1).....	10
Table 2 – Tolerance of external radius and chamfer heights (from ISO 2768-1)	10
Table A.1 – Dimensions of furniture and obstacles	24

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PERFORMANCE EVALUATION METHODS OF MOBILE HOUSEHOLD ROBOTS

FOREWORD

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International Standard IEC 62849 has been prepared by IEC technical committee 59: Performance of household and similar electrical appliances.

The text of this standard is based on the following documents:

FDIS	Report on voting
59/655/FDIS	59/656/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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INTRODUCTION

This standard will cover the generic performance test methods for mobile household robots within one document. However this current version is applicable for indoor floor supported wheeled or wheel-track robots with focus on mobility and power consumption related performance. As the needs for manipulation related performance grows, it will be added into this generic performance standard.

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PERFORMANCE EVALUATION METHODS OF MOBILE HOUSEHOLD ROBOTS

1 Scope

This International Standard applies to mobile household robots and provides performance testing and evaluation methods for common features of various mobile household robots.

This standard is neither concerned with safety nor with performance requirements.

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 TS 62885-1, *Surface cleaning appliances – Part 1: General requirements on test material and test equipment*

IEC 62929:2014, *Cleaning robots for household use – Dry cleaning: Methods of measuring performance*

ISO 554, *Standard atmospheres for conditioning and/or testing – Specifications*

ISO 2768-1:1989, *General tolerances – Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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

3.1 household robot

actuated mechanism with a degree of autonomy, operating within the household and similar environment, to perform intended tasks

Note 1 to entry: Operating includes travel and/or robot body movement.

3.2 mobile household robot

household robot able to travel under its own control

3.3 capability of homing function

capability of a mobile household robot to return to the charge station(s) for charging or after completion of the work task or called by user