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Ultralyd – Impulsekoscannere – Del 1: Teknikker til kalibrering af rumlige målingssystemer og måling af systemrespons fra en punktspredningsfunktion

Ultrasonics – Pulse-echo scanners – Part 1: Techniques
for calibrating spatial measurement systems and
measurement of system point-spread function response

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IDT med: IEC 61391-1:2006/AMD1:2017
IDT med: EN 61391-1:2006/A1:2017

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EUROPÄISCHE NORM

December 2017

ICS 17.140.50

English Version

Ultrasonics - Pulse-echo scanners -
Part 1: Techniques for calibrating spatial measurement systems
and measurement of system point-spread function response
(IEC 61391-1:2006/A1:2017)

Ultrasons - Scanners à impulsion et écho -
Partie 1: Techniques pour l'étalonnage des systèmes de
mesure spatiaux et des mesures de la réponse de la
fonction de dispersion ponctuelle du système
(IEC 61391-1:2006/A1:2017)

Ultraschall - Impuls-Echo-Scanner -
Teil 1: Verfahren für die Kalibrierung von räumlichen
Messsystemen und Messung der Charakteristik der
Punktverwaschungsfunktion des Systems
(IEC 61391-1:2006/A1:2017)

This amendment A1 modifies the European Standard EN 61391-1:2006; it was approved by CENELEC on 2017-08-14. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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The text of document 87/650/FDIS, future IEC 61391-1:2006/A1, prepared by IEC/TC 87 "Ultrasonics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61391-1:2006/A1:2017.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2018-06-01
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-12-01

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

Endorsement notice

The text of the International Standard IEC 61391-1:2006/A1:2017 was approved by CENELEC as a European Standard without any modification.

In the Bibliography of EN 61391-1:2006, the following notes have to be **added** for the standards indicated:

IEC 62563-1:2009	NOTE	Harmonized as EN 62563-1:2010 (not modified).
IEC 61391-2:2010	NOTE	Harmonized as EN 61391-2:2010 (not modified).

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(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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In Annex ZA of EN 61391-1:2006 replace IEC 61102:1991 by the following:

IEC 62127-1	2007	Ultrasonics - Hydrophones - Part 1: Measurement and characterization of medical ultrasonic fields up to 40 MHz	EN 62127-1	2007
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Add to Annex ZA of EN 61391-1:2006 the following new references:

IEC 60050-801	1994	International Electrotechnical Vocabulary - (IEV) - Chapter 801: Acoustics and electroacoustics	-	-
IEC 60050-802	2011	International Electrotechnical Vocabulary - - Part 802: Ultrasonics	-	-

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Edition 1.0 2017-07

INTERNATIONAL STANDARD



AMENDMENT 1

Ultrasonics – Pulse-echo scanners – Part 1: Techniques for calibrating spatial measurement systems and measurement of system point-spread function response



FOREWORD

This amendment has been prepared by IEC technical committee 87: Ultrasonics.

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

FDIS	Report on voting
87/650/FDIS	87/653/RVD

Full information on the voting for the approval of this amendment 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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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.

2 Normative references

Replace:

IEC 61102:1991, *Measurement and characterisation of ultrasonic fields using hydrophones in the frequency range 0,5 MHz to 15 MHz*

with:

IEC 62127-1:2007, *Ultrasonics – Hydrophones – Part 1: Measurement and characterization of medical ultrasonic fields up to 40 MHz*

Insert the following new normative references in proper numerical sequence:

IEC 60050-801:1994, *International Electrotechnical Vocabulary – Chapter 801: Acoustics and electroacoustics*

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IEC 60050-802:2011, *International Electrotechnical Vocabulary – Part 802: Ultrasonics*