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NSAI Standards

Irish Standard
I.S. EN 61094-8:2012

Electroacoustics - Measurement microphones -- Part 8: Methods for free-field calibration of working standard microphones by comparison (IEC 61094-8:2012 (EQV))

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I.S. EN 61094-8:2012

Incorporating amendments/corrigenda issued since publication:
EN 61094-8:2012/AC:2013

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Corrigendum to EN 61094-8:2012

English version

On the title page, replace the titles of EN 61094-8:2012 with:

- "Measurement microphones – Part 8: Methods for determining the free-field sensitivity of working standard microphones by comparison"

- "Microphones de mesure – Partie 8: Méthodes pour la détermination de l'efficacité en champ libre par comparaison des microphones étalons de travail"

- "Messmikrofone — Teil 8: Verfahren zur Ermittlung des Freifeld-Übertragungskoeffizienten von Gebrauchs-Normalmikrofonen nach der Vergleichsmethode"

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61094-8

November 2012

ICS 17.140.50

English version

Electroacoustics - Measurement microphones - Part 8: Methods for free-field calibration of working standard microphones by comparison

(IEC 61094-8:2012)

Electroacoustique - Microphones de mesure - Partie 8: Méthodes pour l'étalonnage en champ libre par comparaison des microphones étalons de travail (CEI 61094-8:2012)

Elektroakustik - Messmikrofone - Teil 8: Verfahren zur Ermittlung des Freifeld-Übertragungskoeffizienten von Gebrauchs-Normalmikrofonen nach der Vergleichsmethode (IEC 61094-8:2012)

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CENELEC

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

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Ref. No. EN 61094-8:2012 E

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Foreword

The text of document 29/752/CDV, future edition 1 of IEC 61094-8, prepared by IEC/TC 29 "IEC TC 29, Electroacoustics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61094-8:2012.

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)	2013-07-24
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2015-10-24

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Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 61094-1	-	Measurement microphones - Part 1: Specifications for laboratory standard microphones	EN 61094-1	-
IEC 61094-2	-	Electroacoustics - Measurement microphones - Part 2: Primary method for the pressure calibration of laboratory standard microphones by the reciprocity technique	EN 61094-2	-
IEC 61094-3	-	Measurement microphones - Part 3: Primary method for free-field calibration of laboratory standard microphones by the reciprocity technique	EN 61094-3	-
IEC 61094-4	-	Measurement microphones - Part 4: Specifications for working standard microphones	EN 61094-4	-
IEC 61094-5	-	Measurement microphones - Part 5: Methods for pressure calibration of working standard microphones by comparison	EN 61094-5	-
IEC 61094-6	-	Measurement microphones - Part 6: Electrostatic actuators for determination of frequency response	EN 61094-6	-
IEC/TS 61094-7	-	Measurement microphones - Part 7: Values for the difference between free-field and pressure sensitivity levels of laboratory standard microphones	-	-
ISO/IEC Guide 98-3	-	Uncertainty of measurement - Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)	-	-
ISO 26101	-	Acoustics - Test methods for the qualification of free-field environments	-	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MEASUREMENT MICROPHONES –

Part 8: Methods for determining the free-field sensitivity of working standard microphones by comparison

FOREWORD

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International Standard IEC 61094-8 has been prepared by IEC technical committee 29: Electroacoustics.

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

CDV	Report on voting
29/752/CDV	29/759/RVC

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.

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A list of all the parts in the IEC 61094 series, published under the general title *Measurement microphones* can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site 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.

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MEASUREMENT MICROPHONES –

Part 8: Methods for determining the free-field sensitivity of working standard microphones by comparison

1 Scope

This part of the IEC 61094 series is applicable to working standard microphones meeting the requirements of IEC 61094-4. It describes methods of determining the free-field sensitivity by comparison with a laboratory standard microphone or working standard microphone (where applicable) that has been calibrated according to either:

– IEC 61094-3,
– IEC 61094-2 or IEC 61094-5, and where factors given in IEC/TS 61094-7 have been applied,
– IEC 61094-6,
– this part of IEC 61094.

Methods performed in an acoustical environment that is a good approximation to an ideal free-field (e.g. a high quality free-field chamber), and methods that use post processing of results to minimise the effect of imperfections in the acoustical environment, to simulate free-field conditions, are both covered by this part of IEC 61094. Comparison methods based on the principles described in IEC 61094-3 are also possible but beyond the scope of this part of IEC 61094.

NOTE 1 This part of IEC 61094 is also applicable to laboratory standard microphones meeting the requirements of IEC 61094-1, noting that these microphones also meet the electroacoustic specifications for working standard microphones.

NOTE 2 This part of IEC 61094 is also applicable to combinations of microphone and preamplifier where the determined sensitivity is referred to the unloaded output voltage of the preamplifier.

NOTE 3 Other devices, for example, sound level meters can be calibrated using the principles of this part of IEC 61094, but are not within the scope of this standard.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61094-1, *Measurement microphones – Part 1: Specifications for laboratory standard microphones*

IEC 61094-2, *Electroacoustics – Measurement microphones – Part 2: Primary method for pressure calibration of laboratory standard microphones by the reciprocity technique*

IEC 61094-3, *Measurement microphones – Part 3: Primary method for free-field calibration of laboratory standard microphones by the reciprocity technique*

IEC 61094-4, *Measurement microphones – Part 4: Specifications for working standard microphones*

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