



BSI Standards Publication

Electroacoustics — Measurement microphones

Part 5: Methods for pressure calibration
of working standard microphones by
comparison

National foreword

This British Standard is the UK implementation of EN 61094-5:2016. It is identical to IEC 61094-5:2016. It supersedes BS EN 61094-5:2002 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EPL/29, Electroacoustics.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

**Electroacoustics - Measurement microphones - Part 5: Methods
for pressure calibration of working standard microphones by
comparison
(IEC 61094-5:2016)**

Électroacoustique - Microphones de mesure - Partie 5:
Méthodes pour l'étalonnage en pression par comparaison
des microphones étalons de travail
(IEC 61094-5:2016)

Messmikrofone - Teil 5: Verfahren zur Druckkammer-
Kalibrierung von Gebrauchs-Normalmikrofonen nach der
Vergleichsmethode
(IEC 61094-5:2016)

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

European foreword

The text of document 29/870/CDV, future edition 2 of IEC 61094-5, prepared by IEC TC 29, Electroacoustics, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61094-5:2016.

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) 2017-04-04
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-07-04

This document supersedes EN 61095-5:2001.

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

Endorsement notice

The text of the International Standard IEC 61094-5:2016 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 61094-2:2009

NOTE Harmonized as EN 61094-2:2009.

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 1 When 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>
IEC 61094-1	-	Measurement microphones -- Part 1: Specifications for laboratory standard microphones	EN 61094-1	-
IEC 61094-4	-	Measurement microphones -- Part 4: Specifications for working standard microphones	EN 61094-4	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTROACOUSTICS – MEASUREMENT MICROPHONES –**Part 5: Methods for pressure calibration of working
standard microphones by comparison**

FOREWORD

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International Standard IEC 61094-5 has been prepared by IEC technical committee 29: Electroacoustics.

This edition cancels and replaces the first edition published in 2001. This edition constitutes a technical revision.

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

- a) details of additional components of uncertainty;
- b) revised corrections for type WS3 microphones;
- c) provision for the calibration of microphones in driven shield configuration.

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

CDV	Report on voting
29/870/CDV	29/887A/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.

A list of all parts in the IEC 61904 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 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.

ELECTROACOUSTICS – MEASUREMENT MICROPHONES –

Part 5: Methods for pressure calibration of working standard microphones by comparison

1 Scope

This part of IEC 61094-5 is applicable to working standard microphones with removable protection grids meeting the requirements of IEC 61094-4 and to laboratory standard microphones meeting the requirements of IEC 61094-1.

This part of IEC 61094 describes methods of determining the pressure sensitivity by comparison with either a laboratory standard microphone or another working standard microphone with known sensitivity in the respective frequency range.

Alternative comparison methods based on the principles described in IEC 61094-2 are possible but beyond the scope of this part of IEC 61094.

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61094-1 and the following apply.

3.1

reference microphone

laboratory standard microphone or working standard microphone with known pressure sensitivity

3.2

test microphone

laboratory standard microphone or working standard microphone to be calibrated by comparison with a reference microphone

3.3

monitor microphone

microphone used to measure changes in sound pressure