

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Electroacoustics – Measurement microphones –  
Part 5: Methods for pressure calibration of working standard microphones  
by comparison**

**Électroacoustique – Microphones de mesure –  
Partie 5: Méthodes pour l'étalonnage en pression par comparaison des  
microphones étalons de travail**



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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- withdrawn,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