

Measurement microphones —

Part 1: Specifications for laboratory standard microphones

The European Standard EN 61094-1:2000 has the status of a
British Standard

ICS 17.140.50; 33.160.50

National foreword

This British Standard is the official English language version of EN 61094-1:2000. It is identical with IEC 61094-1:2000. It supersedes BS EN 61094-1:1995 which is withdrawn.

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Summary of pages

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Partie 1: Spécifications des microphones
étalons de laboratoire
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Messmikrofone
Teil 1: Anforderungen an Laboratoriums-
Normalmikrofone
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European Committee for Electrotechnical Standardization
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Foreword

The text of document 29/452/FDIS, future edition 2 of IEC 61094-1, prepared by IEC TC 29, Electroacoustics, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61094-1 on 2000-09-01.

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The following dates were fixed:

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- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2003-09-01

Endorsement notice

The text of the International Standard IEC 61094-1:2000 was approved by CENELEC as a European Standard without any modification.

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MEASUREMENT MICROPHONES –

Part 1: Specifications for laboratory standard microphones

1 Scope

This part of IEC 61094 specifies mechanical dimensions and certain electroacoustic characteristics for condenser microphones used as laboratory standards for the realization of the unit of sound pressure and for sound pressure measurements of the highest attainable accuracy. The specifications are intended to ensure that primary calibration by the reciprocity method can be readily carried out.

This part also establishes a system for classifying laboratory standard condenser microphones into a number of types according to their dimensions and properties in order to facilitate the specification of calibration methods, the conducting of inter-laboratory comparisons involving the calibration of the same microphones in different laboratories, and the interchangeability of microphones in a given calibration system.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61094. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However parties to agreements based on this part of IEC 61094 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

IEC 60050(801):1994, *International Electrotechnical Vocabulary (IEV) – Chapter 801: Acoustics and electroacoustics*

ASME B1.1:1989, *Unified inch screw threads (UN and UNR thread form)*¹

3 Terms and definitions

For the purposes of this part of IEC 61094, the following definitions apply.

Remark – The underlined symbols are complex quantities.

3.1

condenser microphones

microphone that operates by variation of electrical capacitance

[IEV 801-26-13].

NOTE Only condenser microphones operating by a virtually constant charge obtained from an external polarizing voltage applied from a source of suitably high internal resistance are considered.

¹ (American Society of Mechanical Engineers) Reference is given to ASME B1.1 in the absence of an equivalent international standard.