
Elektroakustika - Simulatorji človeške glave in ušes - 5. del: 2 cm³-ski spojni element za meritve slušnih pripomočkov in ušesnih slušalk, spojenih z ušesom s pomočjo ušesnih vstavkov (IEC 60318-5:2006)

(istoveten EN 60318-5:2006)

Electroacoustics - Simulators of human head and ear - Part 5: 2 cm³ coupler for the measurement of hearing aids and earphones coupled to the ear by means of ear inserts (IEC 60318-5:2006)

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**Electroacoustics -
Simulators of human head and ear
Part 5: 2 cm³ coupler for the measurement of hearing aids
and earphones coupled to the ear by means of ear inserts
(IEC 60318-5:2006)**

Electroacoustique -
Simulateurs de tête et d'oreille humaines
Partie 5: Coupleur de 2 cm³
pour la mesure des appareils de
correction auditive et des écouteurs
couplés à l'oreille par des embouts
(CEI 60318-5:2006)

Akustik -
Simulatoren des menschlichen Kopfes
und Ohres
Teil 5: 2-ccm-Kuppler zur Messung
von mittels Ohreinsätzen angekoppelten
Hörgeräten und Ohrhörern
(IEC 60318-5:2006)

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CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 29/600/FDIS, future edition 1 of IEC 60318-5, prepared by IEC TC 29, Electroacoustics, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60318-5 on 2006-09-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2007-06-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2009-09-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60318-5:2006 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60118-7	NOTE	Harmonized as EN 60118-7:2005 (not modified).
IEC 61094-1	NOTE	Harmonized as EN 61094-1:1994 (not modified).

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Annex ZA
(normative)

**Normative references to international publications
with their corresponding European publications**

The following referenced documents are indispensable for the application 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61094-4	- ¹⁾	Measurement microphones Part 4: Specifications for working standard microphones	EN 61094-4	1995 ²⁾
ISO 389-2	- ¹⁾	Acoustics - Reference zero for the calibration of audiometric equipment Part 2: Reference equivalent threshold sound pressure levels for pure tones and insert earphones	EN ISO 389-2	1996 ²⁾
BIPM/IEC/ISO/ IUPAC/OIML	1995	Guide to the expression of uncertainty in measurement (GUM)	-	-

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¹⁾ Undated reference.
²⁾ Valid edition at date of issue.

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Électroacoustique –
Simulateurs de tête et d'oreille humaines –

Partie 5:

Coupleur de 2 cm³ pour la mesure des appareils
de correction auditive et des écouteurs couplés
à l'oreille par des embouts

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SIST EN 60318-5:2007
Electroacoustics –
Simulators of human head and ear –

Part 5:

2 cm³ coupler for the measurement of hearing
aids and earphones coupled to the ear by means
of ear inserts

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Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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**ELECTROACOUSTICS –
SIMULATORS OF HUMAN HEAD AND EAR –**
Part 5: 2 cm³ coupler for the measurement of hearing aids and earphones coupled to the ear by means of ear inserts

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60318-5 has been prepared by IEC technical committee 29: Electroacoustics.

This first edition of IEC 60318-5 cancels and replaces IEC 60126:1973.

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

FDIS	Report on voting
29/600/FDIS	29/606/RVD

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 of the IEC 60318 series, published under the general title *Electroacoustics – Simulators of human head and ear*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result 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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ELECTROACOUSTICS – SIMULATORS OF HUMAN HEAD AND EAR –

Part 5: 2 cm³ coupler for the measurement of hearing aids and earphones coupled to the ear by means of ear inserts

1 Scope

This part of IEC 60318 describes an acoustic coupler for loading an earphone or hearing aid with a specified acoustic impedance when determining its physical performance characteristics, in the frequency range 125 Hz to 8 kHz. It is suitable for air conduction hearing aids and earphones, coupled to the ear by means of ear inserts e.g. ear moulds or similar devices.

The sound pressure developed by an earphone is not, in general, the same in the coupler as in a person's ear. However, it can be used as a simple and ready means for the exchange of specifications and of physical data on hearing aids and for the calibration of specified insert earphones used in audiometry.

2 Normative references

The following referenced documents are indispensable for the application 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.

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

ISO 389-2, *Acoustics – Reference zero for the calibration of audiometric equipment – Part 2: Reference equivalent threshold sound pressure levels for pure tones and insert earphones*

BIPM/IEC/ISO/IUPAC/IUPAP/OIML:1995, *Guide to the expression of uncertainty in measurement (GUM)*

3 Terms and definitions

For the purposes of this part of IEC 60318, the following terms and definitions apply:

3.1

acoustic coupler

cavity of predetermined shape and volume which is used for the calibration of an earphone in conjunction with a microphone to measure the sound pressure developed within the cavity

3.2

effective volume

equivalent volume of air of the acoustical compliance of the coupler formed by the cavity and the microphone at a frequency of 250 Hz