SLOVENSKI STANDARD
SIST EN 60318-1:2010

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Nadomeġļa:
SIST EN 60318-1:2002

Elektroakustika - Simulatorji ļ loveġke glave in uġesa - 1. del: Simulator uġesa za kalibriranje naduġesnih in obuġesnih sluġalk (IEC 60318-1:2009)

Electroacoustics - Simulators of human head and ear - Part 1: Ear simulator for the calibration of supra-aural and circumaural earphones (IEC 60318-1:2009)

Akustik - Simulatoren des menschlichen Kopfes und Ohres - Teil 1: Ohrsimulator zur Kalibrierung von supra-auralen und circumauralen Kopfhörern (IEC 60318-1:2009)

Electroacoustique - Simulateurs de tête et d'oreille humaines - Partie 1: Simulateur d'oreille pour la mesure des écouteurs supra-auraux et circumauraux (CEI 60318-1:2009)

Ta slovenski standard je istoveten z: **EN 60318-1:2009**

ICS:

13.140	Vpliv hrupa na ljudi	Noise with respect to human beings
17.140.50	Elektroakustika	Electroacoustics

SIST EN 60318-1:2010 **en,fr**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60318-1

December 2009

ICS 17.140.50

Supersedes EN 60318-1:1998, EN 60318-2:1998

English version

Electroacoustics - Simulators of human head and ear - Part 1: Ear simulator for the measurement of supra-aural and circumaural earphones
(IEC 60318-1:2009)

Electroacoustique -
Simulateurs de tête et d'oreille humaines -
Partie 1: Simulateur d'oreille
pour la mesure des écouteurs
supra-auraux et circumauraux
(CEI 60318-1:2009)

Akustik -
Simulatoren des menschlichen Kopfes
und Ohres -
Teil 1: Ohrsimulator zur Kalibrierung
von supra-auralen und circumauralen
Kopfhörern
(IEC 60318-1:2009)

This European Standard was approved by CENELEC on 2009-11-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 29/683/FDIS, future edition 2 of IEC 60318-1, prepared by IEC TC 29, Electroacoustics, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60318-1 on 2009-11-01.

This European Standard supersedes EN 60318-1:1998 and EN 60318-2:1998.

This European Standard includes the following significant technical changes with respect to EN 60318-1:1998:

– an extension of the frequency range to 16 kHz;

– a revised specification for the acoustical transfer impedance, including tolerances;

– a method for measuring the acoustical transfer impedance;

– expanded measurement uncertainties.

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)	2010-08-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2012-11-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60318-1:2009 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 61094-1	NOTE Harmonized as EN 61094-1:2000 (not modified).
IEC 61094-2	NOTE Harmonized as EN 61094-2:2009 (not modified).
IEC 61094-6	NOTE Harmonized as EN 61094-6:2005 (not modified).
ISO 389-1	NOTE Harmonized as EN ISO 389-1:2000 (not modified).
ISO 389-5	NOTE Harmonized as EN ISO 389-5:2005 (not modified).
ISO 389-8	NOTE Harmonized as EN ISO 389-8:2004 (not modified).

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.

Publication	Year	Title	EN/HD	Year
IEC 61094-4	-[1)]	Measurement microphones - Part 4: Specifications for working standard microphones	EN 61094-4	1995 [2)]
ISO/IEC Guide 98-3	-[1)]	Uncertainty of measurement - Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)	-	-

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

IEC 60318-1

Edition 2.0 2009-08

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Electroacoustics – Simulators of human head and ear –
Part 1: Ear simulator for the measurement of supra-aural and circumaural earphones

Electroacoustique – Simulateurs de tête et d'oreille humaines –
Partie 1: Simulateur d'oreille pour la mesure des écouteurs supra-auraux et circumauraux

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTROACOUSTICS – SIMULATORS OF HUMAN HEAD AND EAR –

Part 1: Ear simulator for the measurement of supra-aural and circumaural earphones

FOREWORD

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International Standard IEC 60318-1 has been prepared by IEC technical committee 29: Electroacoustics.

This second edition cancels and replaces the first edition published in 1998 as well as replacing IEC 60318-2, published in1998. It constitutes a technical revision.

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

- an extension of the frequency range to 16 kHz;
- a revised specification for the acoustical transfer impedance, including tolerances;
- a method for measuring the acoustical transfer impedance;
- expanded measurement uncertainties.

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

FDIS	Report on voting
29/683/FDIS	29/698/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 IEC 60318 series, 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.

ELECTROACOUSTICS – SIMULATORS OF HUMAN HEAD AND EAR –

Part 1: Ear simulator for the measurement of supra-aural and circumaural earphones

1 Scope

This part of IEC 60318 specifies an ear simulator for the measurement of supra-aural and circumaural earphones (used for example in audiometry and telephonometry) applied to the ear without acoustical leakage, in the frequency range from 20 Hz to 10 kHz. The same device can be used as an acoustic coupler at additional frequencies up to 16 kHz.

NOTE 1 This device has alternative configurations for supra-aural earphones and different types of circumaural earphones. In practice, the alternative configurations can be realised through the use of adapters where necessary.

NOTE 2 Repeatability for supra-aural and circumaural earphones may get significantly worse above 10 kHz.

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/IEC Guide 98-3, *Uncertainty of measurement – Part 3: Guide to the expression of uncertainty in measurement (GUM: 1995)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
ear simulator
device for measuring the acoustic output of sound sources where the sound pressure is measured by a calibrated microphone coupled to the source so that the overall acoustic impedance of the device approximates that of the normal human ear at a given location and in a given frequency band

3.2
acoustic coupler
device for measuring the acoustic output of sound sources where the sound pressure is measured by a calibrated microphone coupled to the source by a cavity of predetermined shape and volume which does not necessarily approximate the acoustical impedance of the normal human ear

3.3
supra-aural earphone
earphone applied externally to the outer ear and intended to rest on the pinna