SLOVENSKI STANDARD
SIST EN IEC 60118-9:2020

01-januar-2020

Elektroakustika - Slušni pripomočki - 9. del: Metode za merjenje tehničnih lastnosti kostno prevodnih slušnih pripomočkov (IEC 60118-9:2019)

Electroacoustics - Hearing aids - Part 9: Methods of measurement of the performance characteristics of bone conduction hearing aids (IEC 60118-9:2019)

Elektroakustik - Hörgeräte - Teil 9: Verfahren zur Messung der Übertragungseigenschaften von Knochenleitungshörgeräten (IEC 60118-9:2019)

Électroacoustique - Appareils de correction auditive - Partie 9: Méthodes de mesure des caractéristiques fonctionnelles des appareils de correction auditive à conduction osseuse (IEC 60118-9:2019)

Ta slovenski standard je istoveten z: **EN IEC 60118-9:2019**

ICS:

11.180.15	Pripomočki za gluhe osebe in osebe z okvaro sluha	Aids for deaf and hearing impaired people
17.140.50	Elektroakustika	Electroacoustics

SIST EN IEC 60118-9:2020 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60118-9

November 2019

ICS 17.140.50

English Version

Electroacoustics - Hearing aids - Part 9: Methods of measurement of the performance characteristics of bone conduction hearing aids (IEC 60118-9:2019)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 29/1025/FDIS, future edition 2 of IEC 60118-9, prepared by IEC/TC 29 "Electroacoustics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60118-9:2019.

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)	2020-07-21
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2022-10-21

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The text of the International Standard IEC 60118-9:2019 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 60068 (series)	NOTE	Harmonized as EN 60068 (series)
IEC 60263	NOTE	Harmonized as EN IEC 60263[1]

[1] Under preparation. Stage at the time of publication: prEN IEC 60263.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 Where 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.

Publication	Year	Title	EN/HD	Year
IEC 60118-0	-	Electroacoustics - Hearing aids - Part 0: Measurement of the performance characteristics of hearing aids	EN 60118-0	-
IEC 60318-6	-	Electroacoustics - Simulators of human head and ear - Part 6: Mechanical coupler for the measurement on bone vibrators	EN 60318-6	-

IEC 60118-9

Edition 2.0 2019-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

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ELECTROACOUSTICS – HEARING AIDS –

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FOREWORD

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International Standard IEC 60118-9 has been prepared by IEC technical committee 29: Electroacoustics.

This second edition cancels and replaces the first edition published in 1985. This edition constitutes a technical revision.

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

a) includes bone coupled devices measured on a skull simulator;

b) measurement frequency range increased to 8 000 Hz for bone coupled devices.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
29/1025/FDIS	29/1029/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60118 series, published under the general title *Electroacoustics – Hearing aids*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

IEC 60118-0 gives information on methods of measurement for air conduction hearing aids. The majority of hearing aids in use are of this type, but a small percentage use a bone vibrator instead of an earphone. The use of a bone vibrator requires a different method of measuring the output from the hearing aid and also makes it impractical to measure amplification directly in terms of acoustic gain.

Amplification in the case of an air conduction hearing aid is expressed as the difference between the output sound pressure level in an acoustic coupler or ear simulator and the input sound pressure level measured in a specified manner. However, with bone conduction hearing aids, the input is in terms of sound pressure level, but the output will be in terms of mechanical vibration measured as a vibratory force or force level.

By means of information provided in this document, the performance of hearing aids with bone vibrator outputs which do not form an integral part of the hearing aid, for example body-worn, behind-the-ear hearing aids, or bone conduction implant systems with an external bone vibrator, can be measured in a similar manner to aids with air conduction outputs as described in IEC 60118-0.

Where the bone vibrator forms an integral part of the hearing aid, or where it is attached in some fixed manner to the hearing aid, for example a bone coupled (bone anchored) hearing aid, its performance cannot be measured in the same way as for body-worn aids, due to the large dimensions of the mechanical coupler. This document recommends a pressure method of controlling the input sound pressure level to the hearing aid microphone. As an alternative to the pressure method, storage of a test enclosure frequency response correction curve can be used. This method is referred to as the "substitution method".