

BUREAU OF INDIAN STANDARDS
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मसौदा भारतीय मानक
विद्युतध्यानिकी — श्रवण सहायक यंत्र
भाग 0 श्रवण सहायक यंत्र की कार्यकारिता
लक्षणों का मापन
(पहला पुनरीक्षण)

Draft Indian Standard
Electroacoustics Hearing Aids-
Part 0: Measurement of the Performance Characteristics of
Hearing Aids
(First Revision)

ICS: 17.140.50

NATIONAL FOREWORD

(Formal clauses will be added later)

This Draft Indian Standard (Part 0) (First Revision) which is identical with IEC 60118-0: 2022 Electroacoustic — Hearing aids — Part 0: Measurement of the performance characteristics of hearing aids' issued by International Electrotechnical Commission (IEC) will be adopted by the Bureau of Indian Standards on the recommendation of the Audio, Video and Multimedia Systems and Equipment Sectional Committee, LITD 07 and approval of the Electronics and Information Technology Division.

This standard (Part 0) was first published in 2018 and was Identical with IEC 60118-0 : 2015 Electroacoustic — Hearing aids — Part 0: Measurement of the performance characteristics of hearing aids'. The First Revision of this standard aligns this Indian Standard with IEC 60118-0: 2022.

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

- a) the default use of an acoustic coupler according to IEC 60318-5,
- b) addition of the optional use of an occluded ear simulator according to IEC 60318-4,
- c) addition of the optional use of an acoustic coupler according to IEC 60318-8 (new standard based on IEC TS 62886) when information about the response above 8 kHz is needed, or the optional use of the acoustic coupler according to IEC 60318-8 for deep insert hearing aids,
- d) the addition of measurements of the performance of hearing aids for production, supply and delivery quality assurance purposes,
- e) corrected and updated measurement configuration and methods, adding the use of a sequential measurement as preferred configuration,
- f) updated and expanded measurement procedures for the non-acoustic inputs of the hearing aid.

The text of IEC Standard may be approved as suitable for publication as an Indian Standard without deviations. Certain conventions are however not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appears referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their places, are listed below along with their degree of equivalence for editions indicated. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:

International Standards	Corresponding Indian Standard	Degree of Equivalence
IEC 60118-12, Hearing aids – Part 12: Dimensions of electrical connector systems	IS 3720: 2023 IEC 60118-12:1996 Hearing aids - Dimensions of electrical connector systems (Second Revision) [Doc. No. LITD 07 (22801) (Under Development)]	Identical
IEC 60318-5, Electroacoustics – Simulators of human head and ear – Part 5: 2 cm ³ coupler for the measurement of hearing aids and earphones coupled to the ear by means of ear inserts	IS/IEC 60318-5 : 2006 Electroacoustics Simulators of Human Head and Ear Part 5 2 cm ³ Coupler for the Measurement of Hearing Aids and Earphones Coupled to the Ear by Means of Ear Inserts	Identical
IEC 60268-2, Sound system equipment – Part 2: Explanation of general terms and calculation methods	IS 15596-2: 2005 IEC 60268-2: 1987 Sound system equipment: Part 2 explanation of general terms and calculation methods	Identical
IEC 60263, Scales and sizes for plotting frequency characteristics and polar diagrams	IS 8159 : 1993 IEC 60263: 1982 Scales and sizes for plotting frequency characteristics and polar diagrams (First Revision)	Identical
ISO 3, Preferred numbers – Series of preferred numbers	IS 1076 (Part 1) : 1985 ISO 3:1973 Preferred numbers - Part 1 series of preferred numbers (Second Revision)	Identical

The technical committee has reviewed the provisions of following International Standards referred in this adopted standard and has decided that they are acceptable for use in conjunction with this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document applies, including any corrigenda and amendment:

International Standards	Title
IEC 60318-4:2010	Electroacoustics – Simulators of human head and ear – Part 4: Occluded ear simulator for the measurement of earphones coupled to the ear by means of ear inserts
IEC 60318-8	Electroacoustics – Simulators of human head and ear – Part 8: Acoustic coupler for high-frequency measurements of hearing aids and earphones coupled to the ear by means of ear inserts
IEC 61094-4	Measurement microphones – Part 4: Specifications for working standard microphones

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2:2022 'Rules for rounding off numerical values (*Second Revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Scope of IEC 60118-0: 2022

“This part of IEC 60118 gives recommendations for the measurement of the performance characteristics of air conduction hearing aids measured with an acoustic coupler or occluded ear simulator.

This document is applicable to the measurement and evaluation of the electroacoustical characteristics of hearing aids, for example for type testing and manufacturer data sheets.

This document is also applicable for the measurement of the performance characteristics of hearing aids for production, supply and delivery quality-assurance purposes.

The measurement results obtained by the methods specified in this document will express the performance under conditions of the measurement and can deviate substantially from the performance of the hearing aid under actual conditions of use.

This document primarily uses an acoustic coupler according to IEC 60318-5 which is only intended for loading a hearing aid with specified acoustic impedance and is not intended to reproduce the sound pressure in a person's ear. For measurements reflecting the output level in the normal human ear the occluded ear simulator according to IEC 60318-4 can be used. For extended high-frequency measurements and for deep insert hearing aids, the acoustic coupler according to IEC 60318-8 can be used.

This document also covers measurement of hearing aids with non-acoustic inputs, such as wireless, inductive or electrical input.

This document does not cover the measurement of hearing aids for simulated in situ working conditions, for which IEC 60118-8 can be applied.

This document does not cover the measurement of hearing aids under typical user settings and using a speech-like signal, for which IEC 60118-15 can be applied.”

Note: - The Technical content of this document has not been enclosed as these are identical with the corresponding IEC Standard. For details please refer to IEC 60118-0: 2022 or kindly contact.

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Doc No. : LITD 07 (24465)WC

Draft IS/IEC 60118-0: 2022

December 2023

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