ICS 13.140, 17.140.50 SLOVENSKÁ TECHNICKÁ NORMA Apríl 2026

STN	**Elektroakustika** **Osobné zvukové expozimetre**	**STN** **EN IEC 61252** 35 6875

Electroacoustics - Personal sound exposure meters

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/26

Obsahuje: EN IEC 61252:2025, IEC 61252:2025

Oznámením tejto normy sa od 30.11.2028 ruší
STN EN 61252 (35 6875) z októbra 1998

142148

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN IEC 61252

November 2025

ICS 13.140; 17.140.50

Supersedes EN 61252:1995; EN 61252:1995/A1:2001;
EN 61252:1995/A2:2017

English Version

Electroacoustics - Personal sound exposure meters (IEC 61252:2025)

Électroacoustique - Exposimètres acoustiques individuels (IEC 61252:2025)

Elektroakustik - Anforderungen an Personenschallexposimeter (IEC 61252:2025)

This European Standard was approved by CENELEC on 2025-11-21. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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

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 29/1206/FDIS, future edition 2 of IEC 61252, prepared by TC 29 "Electroacoustics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61252:2025.

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) 2026-11-30
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2028-11-30

This document supersedes EN 61252:1995 and all of its amendments and corrigenda (if any).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 61252:2025 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 standard indicated:

IEC 61094-1	NOTE	Approved as EN 61094-1
IEC 61094-4	NOTE	Approved as EN 61094-4
IEC 61252:1993	NOTE	Approved as EN 61252:1995 (not modified)
ISO 9612	NOTE	Approved as EN ISO 9612

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.cencenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60942	-	Electroacoustics - Sound calibrators	EN IEC 60942	-
IEC 61000-4-3	2020	Electromagnetic compatibility (EMC) - Part 4-3 : Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN IEC 61000-4-3	2020
IEC 61094-6	-	Measurement microphones - Part 6: Electrostatic actuators for determination of frequency response	EN 61094-6	-
IEC 61183	-	Electroacoustics - Random-incidence and diffuse-field calibration of sound level meters	EN 61183	-
IEC 61672	-	Electroacoustics-Sound level meters	-	-
IEC 61672-1	2013	Electroacoustics - Sound level meters - Part 1: Specifications	EN 61672-1	2013
IEC 61672-2	2013	Electroacoustics - Sound level meters - Part 2: Pattern evaluation tests	EN 61672-2	2013
IEC 61672-3	2013	Electroacoustics - Sound level meters - Part 3: Periodic tests	EN 61672-3	2013
IEC 62585	2012	Electroacoustics - Methods to determine corrections to obtain the free-field response of a sound level meter	EN 62585	2012
ISO/IEC Guide 98-3	-	Uncertainty of measurement - Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)	-	-
ISO/IEC Guide 98-4	-	Uncertainty of measurement -- Part 4: Role of measurement uncertainty in conformity assessment	-	-
ISO/IEC Guide 99	-	International vocabulary of metrology_- Basic and general concepts and associated terms (VIM)	-	-

IEC 61252

Edition 2.0 2025-10

INTERNATIONAL STANDARD

Electroacoustics - Personal sound exposure meters

ICS 13.140; 17.140.50 ISBN 978-2-8327-0674-9

IEC Secretariat
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

_____

Electroacoustics - Personal sound exposure meters

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.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at https://patents.iec.ch. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 61252 has been prepared by IEC technical committee 29: Electroacoustics. It is an International Standard.

This second edition cancels and replaces the first edition published in 1993, Amendment 1:2000, and Amendment 2:2017. This edition constitutes a technical revision.

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

a) personal sound exposure meters are required to provide indications of time-averaged sound level and peak sound level;
b) sound exposure is an optional quantity for indication;
c) specifications for physical quantities that do not follow the principle of equal-energy exchange rate have been added;
d) specifications for directional response have been added;

e) specifications for frequency weightings apply to the relative diffuse-field frequency response;

f) determination of conformance to specifications takes account of uncertainties of measurement;

g) detailed requirements for pattern-evaluation tests and periodic testing have been added.

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

Draft	Report on voting
29/1206/FDIS	29/1218/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

The principal application for a personal sound exposure meter is the measurement of sound immission in the vicinity of a person's head, for example for assessment of occupational noise exposure in accordance with International Standards such as ISO 1999 and ISO 9612.

The microphone of a personal sound exposure meter is typically worn on the shoulder, collar, or other location close to the ear. In many practical situations, the sound immission indicated by an instrument worn on a person is likely to be different from that which would be measured in the absence of a person. The influence of the person wearing a personal sound exposure meter should be considered when estimating the sound immission that would have been measured with the person absent.

The most common physical quantities for characterisation of sound immission are time-averaged sound levels and peak sound levels. For this reason, this document requires a personal sound exposure meter to provide indications of these sound levels.

Other quantities which are sometimes measured include sound exposure and sound exposure levels. Therefore, this document optionally allows a personal sound exposure meter to indicate these quantities.

Sound exposure is a physical measure that accounts for both the sound pressure and its duration, at a given location, through the time integral of the square of the instantaneous frequency-weighted sound pressure. A doubling (or halving) of the integration time of a constant sound level yields a doubling (or halving) of sound exposure. Similarly, an increase (or decrease) of 3 dB in a constant input sound level for a constant integration time yields a doubling (or halving) of the sound exposure. The same operating principle ("equal-energy exchange rate") underlies the measurement of sound exposure level.

The term "dose" is sometimes used to refer to a percentage of a predetermined criterion for exposure to noise in terms of a specified upper limit (often a legal limit) of a specified physical quantity. The physical quantity and the value of the limit vary between jurisdictions, and some jurisdictions specify quantities that are not based on the principle of equal-energy exchange. Therefore, this document allows a personal sound exposure meter to indicate these quantities and distinguishes between equal-energy-based and non-equal-energy-based quantities.

This document specifies performance requirements for personal sound exposure meters of one performance class. The specifications generally correspond to those for a class 2 integrating-averaging sound level meter as given in IEC 61672-1:2013 for an A-weighted sound pressure level range at least from 67 dB to 137 dB and a nominal frequency range from 20 Hz to 8 kHz. The design goals and the acceptance limits for deviations from the design goals are representative of the performance of practical instruments. Personal sound exposure meters are unlikely to be suitable for measurement of sound levels outside these ranges.

The title of this document has been changed with respect to IEC 61252:1993 because this document includes requirements for pattern-evaluation tests and periodic testing in addition to performance specifications.

The purpose of pattern evaluation is to determine whether a model of personal sound exposure meter conforms to all the performance specifications given in this document.

The purpose of periodic testing is to assure the user that the individual personal sound exposure meter conforms to the applicable performance specifications for a limited set of key tests and for the environmental conditions under which the tests are performed. The extent of the periodic tests is deliberately restricted to the minimum considered necessary. Because of the limited extent of the periodic tests, evidence of pattern approval is necessary to state that the individual personal sound exposure meter conforms to the complete set of specifications of this document.

The aim is to ensure that pattern evaluation and periodic testing are performed in a consistent manner by all laboratories.

1 Scope

This document specifies

– performance specifications for personal sound exposure meters,
– details of the tests necessary to verify conformance to all mandatory specifications for the purpose of pattern evaluation, and
– procedures for periodic testing of a personal sound exposure meter.

Personal sound exposure meters conforming to the requirements of this document have a specified frequency response for sound incident on the microphone from all directions.

This document is applicable to instruments that are designed to be worn on a person in a configuration specified by the manufacturer for the measurement of sound immission resulting from steady, intermittent, fluctuating, irregular, or impulsive sounds. For reproducibility of results, specifications and tests for the response to sound waves apply without an operator present in the sound field.

Pattern evaluation tests and periodic tests described in this document apply to personal sound exposure meters for which the manufacturer claims conformance to the specifications given in this document.

2 Normative references

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.

IEC 60942, *Electroacoustics - Sound calibrators*

IEC 61000-4-3:2020, *Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test*

IEC 61094-6, *Measurement microphones - Part 6: Electrostatic actuators for determination of frequency response*

IEC 61183, *Electroacoustics - Random-incidence and diffuse-field calibration of sound level meters*

IEC 61672 (all parts), *Electroacoustics - Sound level meters*

IEC 61672-1:2013, *Electroacoustics - Sound level meters - Part 1: Specifications*

IEC 61672-2:2013, *Electroacoustics - Sound level meters - Part 2: Pattern evaluation tests*

IEC 61672-3:2013, *Electroacoustics - Sound level meters - Part 3: Periodic tests*

IEC 62585:2012, *Electroacoustics - Methods to determine corrections to obtain the free-field response of a sound level meter*

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

ISO/IEC Guide 98-4, *Uncertainty of measurement - Part 4: Role of measurement uncertainty in conformity assessment*

ISO/IEC Guide 99, *International vocabulary of metrology - Basic and general concepts and associated terms (VIM)*