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Electroacoustics - Audiometric equipment - Part 3: Test signals of short duration

## ESTI STANDARDI EESSÕNA

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EUROPEAN STANDARD  
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EN IEC 60645-3

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Supersedes EN 60645-3:2007 and all of its amendments  
and corrigenda (if any)

English Version

Electroacoustics - Audiometric equipment - Part 3: Test signals  
of short duration  
(IEC 60645-3:2020)

Électroacoustique - Appareils audiométriques - Partie 3:  
Signaux d'essai de courte durée  
(IEC 60645-3:2020)

Akustik - Audiometer - Teil 3: Kurzzeit-Hörprüfsignale  
(IEC 60645-3:2020)

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

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## European foreword

The text of document 29/1066/FDIS, future edition 3 of IEC 60645-3, prepared by IEC/TC 29 "Electroacoustics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60645-3:2020.

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) 2021-08-03
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-11-03

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

IEC 61672-1	NOTE	Harmonized as EN 61672-1
ISO 8253-2	NOTE	Harmonized as EN ISO 8253-2
IEC 60645-1	NOTE	Harmonized as EN 60645-1
IEC 60645-6	NOTE	Harmonized as EN 60645-6
IEC 60645-7	NOTE	Harmonized as EN 60645-7

## 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](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60318-1	-	Electroacoustics - Simulators of human head and ear - Part 1: Ear simulator for the measurement of supra-aural and circumaural earphones	EN 60318-1	-
IEC 60318-3	-	Electroacoustics - Simulators of human head and ear - Part 3: Acoustic coupler for the calibration of supra-aural earphones used in audiometry	EN 60318-3	-
IEC 60318-4	-	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	EN 60318-4	-
IEC 60318-5	-	Electroacoustics - Simulators of human head and ear - Part 5: 2 cm <sup>3</sup> coupler for the measurement of hearing aids and earphones coupled to the ear by means of ear inserts	EN 60318-5	-
IEC 60318-6	-	Electroacoustics - Simulators of human head and ear - Part 6: Mechanical coupler for the measurement on bone vibrators	EN 60318-6	-
IEC 61260-1	-	Electroacoustics - Octave-band and fractional-octave-band filters - Part 1: Specifications	EN 61260-1	-
ISO 389-6	-	Acoustics - Reference zero for the calibration of audiometric equipment - Part 6: Reference threshold of hearing for test signals of short duration	EN ISO 389-6	-

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



**Electroacoustics – Audiometric equipment –  
Part 3: Test signals of short duration**

**Électroacoustique – Appareils audiométriques –  
Partie 3: Signaux d'essai de courte durée**





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# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



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Part 3: Test signals of short duration**

**Électroacoustique – Appareils audiométriques –  
Partie 3: Signaux d'essai de courte durée**

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## CONTENTS

FOREWORD .....	3
INTRODUCTION .....	5
1    Scope .....	6
2    Normative references .....	6
3    Terms and definitions .....	7
4    Reference signals .....	10
4.1    General .....	10
4.2    Reference click .....	11
4.3    Reference tone-burst .....	11
4.4    Reference broadband chirp .....	12
4.5    Reference octave-band chirps .....	12
5    Calibration and measurement of short-duration signals .....	13
Bibliography .....	14
 Figure 1 – Basic specification of an electrical reference click .....	7
Figure 2 – Illustration of the method of measurement of peak-to-peak equivalent signal levels .....	8
Figure 3 – Temporal characteristics of an electrical reference tone-burst .....	8
Figure 4 – Time domain specification of the electrical reference click .....	11
Figure 5 – Temporal characteristics of the electrical reference broadband chirp .....	12

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**ELECTROACOUSTICS – AUDIOMETRIC EQUIPMENT –****Part 3: Test signals of short duration****FOREWORD**

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International Standard IEC 60645-3 has been prepared by IEC technical committee 29: Electroacoustics.

This third edition cancels and replaces the second edition published in 2007. This edition constitutes a technical revision.

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

- a) new figures of reference signals;
- b) changes in definitions.

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

FDIS	Report on voting
29/1066/FDIS	29/1070/RVD

Full information on the voting for the approval of this document 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.

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## INTRODUCTION

Developments in the field of hearing measurements for diagnostic, hearing conservation and rehabilitation purposes have resulted in the availability of a wide range of audiometric equipment. In addition, it is possible to consider audiometric equipment in terms of a set of functional units that can be specified independently. By specifying these functional units, it is then possible to specify the performance of other audiometric equipment that uses these units. The IEC 60645 series consists of a number of parts. IEC 60645-3 covers the requirements for reference and other test signals of short duration.

Examples of test methods, where such signals are commonly used, are the recording of auditory evoked potentials and evoked otoacoustic emissions. Reference signals are described in order to provide a basis for calibration and as a recommendation for use when there is no specific reason to have an alternative signal. Measurement methods for short duration acoustic and vibratory test signals are described.