NSAI Standards

Irish Standard
I.S. EN 61260-3:2016

Electroacoustics - Octave-band and fractional-octave-band filters - Part 3: Periodic tests

I.S. EN 61260-3:2016

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN 61260-3:2016 is the adopted Irish version of the European Document EN 61260-3:2016, Electroacoustics - Octave-band and fractional-octave-band filters - Part 3: Periodic tests

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61260-3

June 2016

ICS 17.140.50

Supersedes EN 61260:1995 (partially)

English Version

Electroacoustics - Octave-band and fractional-octave-band filters - Part 3: Periodic tests (IEC 61260-3:2016)

Electroacoustique - Filtres de bande d'octave et de bande d'une fraction d'octave - Partie 3: Essais périodiques (IEC 61260-3:2016)

Elektroakustik - Bandfilter für Oktaven und Bruchteile von Oktaven - Teil 3: Periodische Einzelprüfung (IEC 61260-3:2016)

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 61260-3:2016 E

European foreword

The text of document 29/846/CDV, future edition 1 of IEC 61260-3, prepared by IEC TC 29, Electroacoustics, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61260-3:2016.

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)	2017-01-27
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2019-04-27

This document supersedes EN 61260:1995.

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Endorsement notice

The text of the International Standard IEC 61260-3:2016 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)
Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When 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 61260-1	2014	Electroacoustics - Octave-band and fractional-octave-band filters -- Part 1: Specifications	EN 61260-1	2014
IEC 61260-2	2016	Electroacoustics - Octave-band and fractional-octave-band filters - Part 2: Pattern-evaluation tests	EN 61260-2	2016
IEC 61672-1	-	Electroacoustics - Sound level meters -- Part 1: Specifications	EN 61672-1	-
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	-	-

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IEC 61260-3

Edition 1.0 2016-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Electroacoustics – Octave-band and fractional-octave-band filters – Part 3: Periodic tests

Électroacoustique – Filtres de bande d'octave et de bande d'une fraction d'octave – Partie 3: Essais périodiques

IEC 61260-3:2016-03(en-fr)

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IEC 61260-3

Edition 1.0 2016-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Electroacoustics – Octave-band and fractional-octave-band filters – Part 3: Periodic tests

Électroacoustique – Filtres de bande d'octave et de bande d'une fraction d'octave – Partie 3: Essais périodiques

INTERNATIONAL
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COMMISSION

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTROACOUSTICS – OCTAVE-BAND AND FRACTIONAL-OCTAVE-BAND FILTERS –

Part 3: Periodic tests

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.
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International Standard IEC 61260-3 has been prepared by IEC technical committee 29: Electroacoustics.

This first edition of IEC 61260-3 (together with IEC 61260-1:2014 and IEC 61260-2:2016), cancels and replaces the first edition of IEC 61260 published in 1995 and its Amendment 1 published in 2001. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to IEC 61260.

a) The single document in the first edition of IEC 61260:1995 is now separated into three parts of IEC 61260 covering: specifications, pattern evaluation tests and periodic tests;
b) IEC 61260:1995 specified three performance categories: class 0, 1 and 2 while the IEC 61260 series specifies requirements for class 1 and 2;
c) In IEC 61260:1995, the design goals for the specification can be based on base-2 or base-10 design. In the IEC 61260 series only base-10 is specified;

d) The reference environmental conditions have been changed from 20 °C/65 % RH to 23 °C/50 % RH;

e) IEC 61260:1995 specified tolerance limits without considering the uncertainty of measurement for verification of the specifications while the IEC 61260 series specifies acceptance limits for the observed values and maximum-permitted uncertainty of measurements for laboratories testing conformance to specifications in the standard.

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

CDV	Report on voting
29/846/CDV	29/882A/RVC

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 the parts of the IEC 61260 series, published under the general title *Electroacoustics – Octave-band and fractional-octave-band filters* can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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.

INTRODUCTION

IEC 61260:1995 and IEC 61260:1995/AMD 1:2001 are now separated into the following three parts of IEC 61260 series:

- Part 1: Specifications
- Part 2: Pattern evaluation tests
- Part 3: Periodic tests

For assessments of conformance to performance specifications, IEC 61260-1 uses different criteria than were used for the IEC 61260:1995 edition.

IEC 61260:1995 did not provide any requirements or recommendations to account for the uncertainty of measurement in assessments of conformance to specifications. This absence of requirements or recommendations to account for uncertainty of measurement created ambiguity in determinations of conformance to specifications for situations where a measured deviation from a design goal was close to the limit of the allowed deviation. If conformance was determined based on whether a measured deviation did or did not exceed the limits, the end-user of the octave-band and fractional-octave-band filters incurred the risk that the true deviation from a design goal exceeded the limits.

To remove this ambiguity, IEC Technical Committee 29, at its meeting in 1996, adopted a policy to account for measurement uncertainty in assessments of conformance in International Standards that it prepares.

This edition of IEC 61260-3 uses an amended criterion for assessing conformance to a specification. Conformance is demonstrated when (a) measured deviations from design goals do not exceed the applicable *acceptance limits* and (b) the uncertainty of measurement does not exceed the corresponding maximum-permitted uncertainty. Acceptance limits are analogous to the tolerance limits allowances for design and manufacturing implied in the IEC 61260:1995.

Actual and maximum-permitted uncertainties of measurement are determined for a coverage probability of 95 %. Unless more specific information is available, the evaluation of the contribution of a specific filter or filter set to a total measurement uncertainty can be based on the acceptance limits and maximum-permitted uncertainties specified in this standard.

ELECTROACOUSTICS – OCTAVE-BAND AND FRACTIONAL-OCTAVE-BAND FILTERS –

Part 3: Periodic tests

1 Scope

1.1 This part of IEC 61260 describes procedures for periodic testing of octave-band and fractional-octave-band filters that were designed to conform to the class 1 or class 2 specifications given in IEC 61260-1:2014. The aim of this standard is to ensure that periodic testing is performed in a consistent manner by all laboratories.

1.2 The purpose of periodic testing is to assure the user that the performance of an octave-band and fractional-octave-band filter conforms to the applicable specifications of IEC 61260-1 for a limited set of key tests and for the environmental conditions under which the tests were performed.

1.3 The extent of the tests in this standard is deliberately restricted to the minimum considered necessary for periodic tests.

1.4 Periodic tests described in this standard apply to filters for which the manufacturer claims conformance to the specifications in IEC 61260-1:2014. Periodic tests in this standard apply to filters for which the model has been, or has not been, pattern approved by an independent testing organization responsible for pattern approvals in accordance with the test procedures of IEC 61260-2.

1.5 Because of the limited extent of the periodic tests, if evidence of pattern approval is not publicly available, no general conclusion about conformance to the specifications of IEC 61260-1 can be made, even if the results of the periodic tests conform to all applicable requirements of this standard.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61260-1:2014, *Electroacoustics – Octave-band and fractional-octave-band filters – Part 1: Specifications*

IEC 61260-2:2016, *Electroacoustics – Octave-band and fractional-octave-band filters – Part 2: Pattern-evaluation tests*

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

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*