

Irish Standard I.S. EN 61260-2:2016&A1:2017

Electroacoustics - Octave-band and fractional-octave-band filters - Part 2: Pattern-evaluation tests

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#### I.S. EN 61260-2:2016&A1:2017

Incorporating amendments/corrigenda/National Annexes issued since publication:

EN 61260-2:2016/A1:2017

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S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

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*This document is based on:* EN 61260-2:2016

*Published:* 2016-06-10

*This document was published* under the authority of the NSAI and comes into effect on:

2017-07-25

ICS number:

NOTE: If blank see CEN/CENELEC cover page

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## **National Foreword**

I.S. EN 61260-2:2016&A1:2017 is the adopted Irish version of the European Document EN 61260-2:2016, Electroacoustics - Octave-band and fractional-octave-band filters - Part 2: Pattern-evaluation tests

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# EUROPEAN STANDARD

# EN 61260-2:2016/A1

# NORME EUROPÉENNE

# **EUROPÄISCHE NORM**

July 2017

ICS 17.140.50

**English Version** 

# Electroacoustics -Octave-band and fractional-octave-band filters -Part 2: Pattern-evaluation tests (IEC 61260-2:2016/A1:2017)

Electroacoustique - Filtres de bande d'octave et de bande d'une fraction d'octave - Partie 2: Essais d'évaluation d'un modèle (IEC 61260-2:2016/A1:2017) Elektroakustik - Bandfilter für Oktaven und Bruchteile von Oktaven - Teil 2: Baumusterprüfung (IEC 61260-2:2016/A1:2017)

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### EN 61260-2:2016/A1:2017

## European foreword

The text of document 29/912/CDV, future IEC 61260-2:2016/A1, prepared by IEC/TC 29 "Electroacoustics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61260-2:2016/A1:2017.

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)	2018-02-12
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# Annex ZA

## (normative)

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Publication	Year	Title	<u>EN/HD</u>	Year
In Annex ZA of EN 6	1260-2:	2016, add the following new referenc	e:	
IEC 61000-4-20	2010	Electromagnetic compatibility (EMC) - Part 4-20: Testing and measurement techniques - Emission and immunity testing in transverse electromagnetic (TEM) waveguides	EN 61000-4-20	2010

# **EUROPEAN STANDARD**

# EN 61260-2

# NORME EUROPÉENNE

# EUROPÄISCHE NORM

June 2016

ICS 17.140.50

Supersedes EN 61260:1995 (partially)

**English Version** 

# Electroacoustics - Octave-band and fractional-octave-band filters - Part 2: Pattern-evaluation tests (IEC 61260-2:2016)

Electroacoustique - Filtres de bande d'octave et de bande d'une fraction d'octave - Partie 2: Essais d'évaluation d'un modèle (IEC 61260-2:2016) Elektroakustik - Bandfilter für Oktaven und Bruchteile von Oktaven - Teil 2: Baumusterprüfung (IEC 61260-2:2016)

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

EN 61260-2:2016

# **European foreword**

The text of document 29/845/CDV, future edition 1 of IEC 61260-2, prepared by IEC TC 29, Electroacoustics, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61260-2:2016.

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

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## (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.

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Publication IEC 61000-4-2	<u>Year</u> 2008	<u>Title</u> Electromagnetic compatibility (EMC) Part 4-2: Testing and measurement techniques -		<u>Year</u> 2009
IEC 61000-4-3	2006	Electrostatic discharge immunity test Electromagnetic compatibility (EMC) Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic		2006
IEC 61000-4-6	2013	field immunity test Electromagnetic compatibility (EMC) Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio frequency fields		2014
IEC 61000-6-1	-	induced by radio-frequency fields Electromagnetic compatibility (EMC) Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments	EN 61000-6-1	-
IEC 61000-6-2	2005	Electromagnetic compatibility (EMC) Part 6-2: Generic standards - Immunity for industrial environments	EN 61000-6-2	2005
- IEC 61000-6-3	-	Electromagnetic compatibility (EMC) Part 6-3: Generic standards - Emission standard for residential, commercial and light- industrial environments	+ corrigendum Sep. EN 61000-6-3	2005 -
IEC 61260-1	2014	Electroacoustics - Octave-band and fractional-octave-band filters Part 1: Specifications	EN 61260-1	2014
IEC 61672-1	-	Electroacoustics - Sound level meters Par 1: Specifications	tEN 61672-1	-
ISO/IEC Guide 98-3	<b>i</b> -	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)		-
CISPR 16-1-1	-	Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-1: Radio disturbance and immunity	5	-
CISPR 16-1-2	-	measuring apparatus - Measuring appartus Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-2: Radio disturbance and immunity measuring apparatus - Coupling devices for conducted disturbance measurements		-

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		- Part 2-1: Methods of measurement of disturbances and immunity - Conducted disturbance measurements	0	
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CISPR 22	-	disturbances and immunity - Radiated disturbance measurements Information technology equipment - Radio disturbance characteristics - Limits and	EN 55022	-
		methods of measurement		



# IEC 61260-2

Edition 1.0 2016-03

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

Electroacoustics – Octave-band and fractional-octave-band filters – Part 2: Pattern-evaluation tests

Électroacoustique – Filtres de bande d'octave et de bande d'une fraction d'octave – Partie 2: Essais d'évaluation d'un modèle





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# IEC 61260-2

Edition 1.0 2016-03

# INTERNATIONAL STANDARD

NORME INTERNATIONALE

Electroacoustics – Octave-band and fractional-octave-band filters – Part 2: Pattern-evaluation tests

Électroacoustique – Filtres de bande d'octave et de bande d'une fraction d'octave – Partie 2: Essais d'évaluation d'un modèle

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ICS 17.140.50

ISBN 978-2-8322-3245-3

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### INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

### Part 2: Pattern-evaluation tests

### FOREWORD

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This first edition of IEC 61260-2 (together with IEC 61260-1:2014 and IEC 61260-3:2016), 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 the IEC 61260 series 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.

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- 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. 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	
29/845/CDV	29/881A/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,
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- replaced by a revised edition, or
- amended.

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## 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 61260-2 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.

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

## Part 2: Pattern-evaluation tests

### 1 Scope

**1.1** This part of IEC 61260 provides details of the tests necessary to verify conformance to all mandatory specifications given in IEC 61260-1:2014 for octave-band and fractional-octave-band filters.

**1.2** Tests and test methods are applicable to class 1 and class 2 bandpass filters. The aim is to ensure that all testing laboratories use consistent methods to perform pattern-evaluation tests.

### 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 61000-4-2:2008, *Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test* 

IEC 61000-4-3:2006, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test* 

IEC 61000-4-6:2013, Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields

IEC 61000-6-1, *Electromagnetic compatibility (EMC) – Part 6-1: Generic standards – Immunity for residential, commercial and light-industrial environments* 

IEC 61000-6-2:2005, Electromagnetic compatibility (EMC) – Part 6-2: Generic standards – Immunity for industrial environments

IEC 61000-6-3, *Electromagnetic compatibility (EMC) – Part 6-3: Generic standards – Emission standard for residential, commercial and light-industrial environments* 

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

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

CISPR 16-1-1, Specification for radio disturbance and immunity measuring apparatus and methods – Part 1-1: Radio disturbance and immunity measuring apparatus – Measuring apparatus



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