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STN	**Elektroakustické zariadenia Časť 4: Mikrofóny**	**STN EN IEC 60268-4 36 8305**

Sound system equipment - Part 4: Microphones

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. 02/19

Obsahuje: EN IEC 60268-4:2018, IEC 60268-4:2018

Oznámením tejto normy sa od 17.10.2021 ruší
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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60268-4

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Supersedes EN 60268-4:2014

English Version

Sound system equipment - Part 4: Microphones (IEC 60268-4:2018)

Equipements pour systèmes électroacoustiques - Partie 4: Microphones (IEC 60268-4:2018)

Elektroakustische Geräte - Teil 4: Mikrofone (IEC 60268-4:2018)

This European Standard was approved by CENELEC on 2018-10-17. 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey 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

Ref. No. EN IEC 60268-4:2018 E

European foreword

The text of document 100/2992/CDV, future edition 6 of IEC 60268-4, prepared by IEC/TC 100 "Audio, video and multimedia systems and equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60268-4:2018.

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)	2019-07-17
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2021-10-17

This document supersedes EN 60268-4:2014.

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.

Endorsement notice

The text of the International Standard IEC 60268-4:2018 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 standards indicated:

CISPR 22:2008	NOTE	Harmonized as EN 55022:2010 (modified)
IEC 60065:2014	NOTE	Harmonized as EN 60065:2014 (modified)
IEC 60958-4:2016 (series)	NOTE	Harmonized as EN 60958-4:2016 (series)
IEC 61000-3-2:2014	NOTE	Harmonized as EN 61000-3-2:2014 (not modified)
IEC 61000-3-3:2013	NOTE	Harmonized as EN 61000-3-3:2013 (not modified)
IEC 61606 (series)	NOTE	Harmonized as EN 61606 (series)
IEC 61672-1:2013	NOTE	Harmonized as EN 61672-1:2013 (not modified)

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.

Publication	Year	Title	EN/HD	Year
CISPR 35 (mod)	2016	Electromagnetic compatibility of multimedia equipment - Immunity requirements	EN 55035	2017
IEC 60268-1	1985	Sound system equipment. Part 1: General	HD 483.1 S2	1989
+ A1	1988		-	-
+ A2	1988		-	-
IEC 60268-2	1987	Sound system equipment. Part 2: Explanation of general terms and calculation methods	HD 483.2 S2	1993
+ A1	1991		-	-
IEC 60268-3	2013	Sound system equipment - Part 3: Amplifiers	EN 60268-3	2013
IEC 60268-5	2003	Sound system equipment - Part 5: Loudspeakers	EN 60268-5	2003
+ A1	2007		+ A1	2009
IEC 60268-11	1987	Sound system equipment. Part 11: Application of connectors for the interconnection of sound system components	HD 483.11 S3	1993
+ A1	1989		-	-
+ A2	1991		-	-
IEC 60268-12	1987	Sound system equipment. Part 12: Application of connectors for broadcast and similar use	EN 60268-12	1995
+ A1	1991		-	-
+ A2	1994		+ A2	1995
IEC 61000-4-2	2008	Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	EN 61000-4-2	2009

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IEC 61000-4-3	2006	Electromagnetic compatibility (EMC) - Part 4-3 : Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	2006
+ A1	2007		+ A1	2008
+ A2	2010		+ A2	2010
IEC 61000-4-4	2012	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	2012
IEC 61000-4-6	2013	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	EN 61000-4-6	2014
IEC 61000-4-8	2009	Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test	EN 61000-4-8	2010
IEC 61000-4-16	2015	Electromagnetic compatibility (EMC) - Part 4-16: Testing and measurement techniques - Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz	EN 61000-4-16	2016
IEC 61000-4-17	1999	Electromagnetic compatibility (EMC) - Part 4-17: Testing and measurement techniques - Ripple on d.c. input power port immunity test	EN 61000-4-17	1999
+ A1	2001		+ A1	2004
+ A2	2008		+ A2	2009
IEC 61260-1	2014	Electroacoustics - Octave-band and fractional-octave-band filters - Part 1: Specifications	EN 61260-1	2014
IEC 61938	2013	Multimedia systems - Guide to the recommended characteristics of analogue interfaces to achieve interoperability	-	-
ITU-T Recommendation P.51	-	Artificial mouth	-	-
EN 55103-2	2009	Electromagnetic compatibility - Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use - Part 2: Immunity	EN 55103-2	2009
EN 300 422-2 V1.3.1	2011	Electromagnetic compatibility and radio spectrum matters (ERM) - Wireless microphones in the 25 MHz to 3 GHz frequency range - Part 2: Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive	EN 300 422-2 V1.3.1	2011

IEC 60268-4

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INTERNATIONAL STANDARD

Sound system equipment – Part 4: Microphones

IEC 60268-4:2018-09(en)

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INTERNATIONAL STANDARD

Sound system equipment – Part 4: Microphones

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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SOUND SYSTEM EQUIPMENT –

Part 4: Microphones

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 60268-4 has been prepared by IEC technical committee 100: Audio, video and multimedia systems and equipment.

This sixth edition cancels and replaces the fifth edition published in 2014. This edition constitutes a technical revision.

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

a) Subclause 19.4 on "pop" measurement replaces Annex C;
b) new Annex D for noise measurements in the digital domain.

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

CDV	Report on voting
100/2992/CDV	100/3109/RVC

Full information on the voting for the approval of this International Standard 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.

A list of all parts of the IEC 60268 series, under the general title *Sound system equipment*, can be found on the IEC website.

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

SOUND SYSTEM EQUIPMENT –

Part 4: Microphones

1 Scope

This part of IEC 60268 specifies methods of measurement for the electrical impedance, sensitivity, directional response pattern, dynamic range and external influences of sound system microphones, and also details the characteristics to be specified by the manufacturer.

It applies to sound system microphones for all applications for speech and music. It does not apply to measurement microphones, but it does apply to each audio channel of microphones having more than one channel, for example for stereo or similar use. It is also applicable to flush-mounted microphones and to the analogue characteristics of microphones with digital audio output.

For the purposes of this International Standard, a microphone includes all such devices as transformers, pre-amplifiers, or other elements that form an integral part of the microphone, up to the output terminals specified by the manufacturer.

The major characteristics of a microphone are considered in Clauses 6 to 21. Additional characteristics are considered in Annex A and Annex C.

NOTE The characteristics specified in this document do not describe the subjective response of the microphone. Further work is necessary to find new definitions and measurement procedures for a later introduction of objective characteristics for at least some of the subjective descriptions used to describe microphone performance.

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.

CISPR 35:2016, *Electromagnetic compatibility of multimedia equipment – Immunity requirements*

IEC 60268-1:1985, *Sound system equipment – Part 1: General*
IEC 60268-1:1985/AMD1:1988
IEC 60268-1:1985/AMD2:1988

IEC 60268-2:1987, *Sound system equipment – Part 2: Explanation of general terms and calculation methods*
IEC 60268-2:1987/AMD1:1991

IEC 60268-3:2013, *Sound system equipment – Part 3: Amplifiers*

IEC 60268-5:2003, *Sound system equipment – Part 5: Loudspeakers*
IEC 60268-5:2003/AMD1:2007

IEC 60268-11:1987, *Sound system equipment – Part 11: Application of connectors for the interconnection of sound system components*
IEC 60268-11:1987/AMD1:1989
IEC 60268-11:1987/AMD2:1991

IEC 60268-12:1987, *Sound system equipment – Part 12: Application of connectors for broadcast and similar use*
IEC 60268-12:1987/AMD1:1991
IEC 60268-12:1987/AMD2:1994

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 61000-4-3:2006/AMD1:2007
IEC 61000-4-3:2006/AMD2:2010

IEC 61000-4-4:2012, *Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement techniques – Electrical fast transient/burst 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 61000-4-8:2009, *Electromagnetic compatibility (EMC) – Part 4-8: Testing and measurement techniques – Power frequency magnetic field immunity test*

IEC 61000-4-16:2015, *Electromagnetic compatibility (EMC) – Part 4-16: Testing and measurement techniques – Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz*

IEC 61000-4-17:1999, *Electromagnetic compatibility (EMC) – Part 4-17: Testing and measurement techniques – Ripple on d.c. input power port immunity test*
61000-4-17:1999/AMD1:2001
61000-4-17:1999/AMD2:2008

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

IEC 61938:2013, *Multimedia systems – Guide to the recommended characteristics of analogue interfaces to achieve interoperability*

ITU-T Recommendation P.51:1996, *Artificial mouth*

EN 55103-2:2009, *Electromagnetic compatibility – Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use – Part 2: Immunity*

EN 300 422-2 V1.3.1:2011, *Electromagnetic compatibility and radio spectrum matters (ERM) – Wireless microphones in the 25 MHz to 3 GHz frequency range – Part 2: Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive*