AMERICAN NATIONAL STANDARD

Acoustics – Measurement of airborne noise emitted and structure-borne vibration induced by small air-moving devices – Part 2: Structure-borne vibration measurements (a nationally adopted international standard)

ANSI/ASA S12.11-2013/Part 2 / ISO 10302-2 :2011

Accredited Standards Committee S12, Noise

Standards Secretariat
Acoustical Society of America
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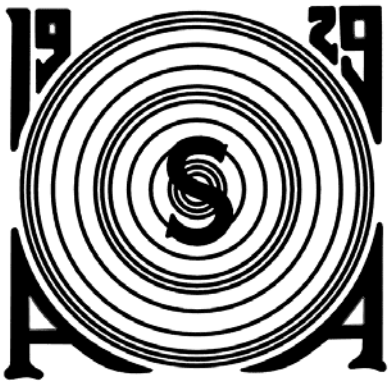

ANSI/ASA S12.11-2013/Part 2/ ISO 10302-2:2011
(Revision of ANSI/ASA S12.11–2003/Part 2 (R 2008))

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Secretariat:

Acoustical Society of America

Approved on December 4, 2013 by:

American National Standards Institute, Inc.

Abstract

ANSI/ASA S12.11-2013/Part 2 / ISO 10302-2:2011 covers vibration levels from small air-moving devices (AMDs) with mounting footprints of less than 0.48 m × 0.90 m for the full-size test plenum defined in ANSI/ASA S12.11/Part 1 / ISO 10302-1 and less than 0.18 m × 0.3 m for the half-size plenum.

It covers all types of AMDs which can be mounted on, and are self-supported at, the discharge or inlet plane of a test plenum box as specified in ANSI/ASA S12.11-2013/Part 1 / ISO 10302-1:2011.

The procedures defined in this part of this American National Standard specify methods for determining the vibration levels that a small AMD would induce in an average structure used in information technology and telecommunications equipment. The methods specified in this part of this American National Standard allow the determination of induced vibration levels for the individual AMD that is tested. These data can be used to determine the statistical values of vibration levels for a production series if levels are measured for several units of that series.

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Foreword

[*This Foreword is for information only, and is not a part of the American National Standard* ***ANSI/ASA S12.11-2013/Part 2 / ISO 10302-2:2011*** *American National Standard Acoustics – Measurement of airborne noise emitted and structure-borne vibration induced by small air-moving devices – Part 2: Structure-borne vibration measurements.*]

This standard comprises a part of a group of definitions, standards, and specifications for use in noise. It was developed and approved by Accredited Standards Committee S12 Noise, under its approved operating procedures. Those procedures have been accredited by the American National Standards Institute (ANSI). The Scope of Accredited Standards Committee S12 is as follows:

> *Standards, specifications, and terminology in the field of acoustical noise pertaining to methods of measurement, evaluation, and control, including biological safety, tolerance, and comfort, and physical acoustics as related to environmental and occupational noise.*

This standard is an identical national adoption of ISO 10302-2:2011. It revises and replaces ANSI/ASA S12.11–2003/Part 2 (R 2008) American National Standard Acoustics – Measurement of Noise and Vibration of Small Air-Moving Devices – Part 2: Structure-Borne Vibration. ISO 10302-2:2011 was prepared by Technical Committee ISO/TC 43 Subcommittee SC 1, Noise.

In conformance with ANSI and ISO rules, the words "this part of this American National Standard" replace the words "this part of ISO 10302" where they appear in the ISO document, decimal points were substituted in place of the decimal commas used in ISO documents, and American English spelling is used in place of British English spelling.

The ANSI/ASA equivalent for one of the ISO standards referenced in this standard is:

- ANSI/ASA S12.11-2013 Part 1 / ISO 10302-1:2011 is the identical national adoption of ISO 10302-1:2011

At the time this Standard was submitted to Accredited Standards Committee S12, Noise for approval, the membership was as follows:

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S.J. Lind, *Vice-Chair*

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R.D. Godfrey	M.A. Nobile	L.A. Wilber
R.D. Hellweg		G.E. Winzer

Working Group S12/WG 3, Measurement of Noise from Information Technology and Telecommunications Equipment, which assisted Accredited Standards Committee S12, Noise, in the development of this standard, had the following membership.

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Suggestions for improvements of this standard will be welcomed. They should be sent to Accredited Standards Committee S12, Noise, in care of the Standards Secretariat of the Acoustical Society of America, 35 Pinelawn Road, Suite 114E, Melville, New York 11747-3177. Telephone: 631-390-0215; Fax: 631-390-0217; E-mail: asastds@aip.org.

American National Standard

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2 Normative references

The following referenced documents are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 266, *Acoustics — Preferred frequencies*

ISO 5348, *Mechanical vibration and shock — Mechanical mounting of accelerometers*

ISO 10302-1:2011, *Acoustics — Measurement of airborne noise emitted and structure-borne vibration induced by small air-moving devices — Part 1: Airborne noise measurement*

ISO 16063-11, *Methods for the calibration of vibration and shock transducers — Part 11: Primary vibration calibration by laser interferometry*

ISO 16063-21, *Methods for the calibration of vibration and shock transducers — Part 21: Vibration calibration by comparison to a reference transducer*

IEC 61260, *Electroacoustics — Octave-band and fractional-octave-band filters*

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