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Electroacoustics – Instruments for the measurement of sound intensity – Electromagnetic and electrostatic compatibility requirements and test procedures

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTROACOUSTICS –
INSTRUMENTS FOR THE MEASUREMENT OF SOUND INTENSITY –
ELECTROMAGNETIC AND ELECTROSTATIC COMPATIBILITY
REQUIREMENTS AND TEST PROCEDURES

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In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

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ELECTROACOUSTICS – INSTRUMENTS FOR THE MEASUREMENT OF SOUND INTENSITY – ELECTROMAGNETIC AND ELECTROSTATIC COMPATIBILITY REQUIREMENTS AND TEST PROCEDURES

1 Scope

- 1.1 This Technical Specification specifies requirements for instruments that measure sound intensity using pairs of pressure sensing microphones with respect to their immunity to power-and radio-frequency fields and to electrostatic discharge, and the permitted radio-frequency emissions, together with test procedures to verify conformance. Sound intensity measuring instruments are available in many different configurations and may be powered by batteries or from external power supply systems. The technical requirements in this Technical Specification apply to all configurations of instruments for the measurement of sound intensity.
- 1.2 The electromagnetic and electrostatic compatibility requirements are equally applicable for sound intensity measuring instruments used in residential, commercial and light-industrial environments, or industrial sites. The requirements of this Technical Specification are additional to those contained in IEC 61043 and do not alter any of the specifications contained therein. The requirements do not apply retrospectively to sound intensity measuring instruments complying with IEC 61043 prior to the publication of this Technical Specification.
- NOTE 1 Compliance with this Technical Specification does not insure that the sound intensity measuring system is immune to interference from all electromagnetic sources.
- NOTE 2 These requirements are the first attempt at defining electromagnetic and electrostatic compatibility requirements for sound intensity measuring systems. Requirements can be changed later when wider experience has been gained if found necessary.

2 Normative references

The following referenced documents are indispensable for the application 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.

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

IEC 61000-4-3:2002, Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test Amendment 1 (2002)

IEC 61000-4-20:2010, Electromagnetic compatibility (EMC) – Part 4-20: Testing and measurement techniques – Emission and immunity testing in transverse electromagnetic (TEM) waveguides

IEC 61000-6-1:1997, Electromagnetic compatibility (EMC) – Part 6: Generic standards – Section 1: Immunity for residential, commercial and light-industrial environments

IEC 61000-6-2:1999, Electromagnetic compatibility (EMC) – Part 6-2: Generic standards – Immunity for industrial environments

CISPR/IEC 61000-6-3:1996, Electromagnetic compatibility (EMC) – Part 6: Generic standards – Section 3: Emission standard for residential, commercial and light-industrial environments

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IEC 61043, Electroacoustics – Instruments for the measurement of sound intensity – Measurement with pairs of pressure sensing microphones

CISPR 22:2003, Information technology equipment – Radio disturbance characteristics – Limits and methods of measurement



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FINAL VERSION

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