

ISO 16283-1:2014-02 (E)

Acoustics - Field measurement of sound insulation in buildings and of building elements - Part 1: Airborne sound insulation

Contents	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Instrumentation	5
4.1 General	5
4.2 Calibration	5
4.3 Verification	5
5 Frequency range	5
6 General	6
7 Default procedure for sound pressure level measurement	7
7.1 General	7
7.2 Generation of sound field	7
7.3 Fixed microphone positions	8
7.4 Mechanized continuously-moving microphone	9
7.5 Manually-scanned microphone	10
7.6 Minimum distances for microphone positions	12
7.7 Averaging times	12
7.8 Calculation of energy-average sound pressure levels	13
8 Low-frequency procedure for sound pressure level measurement	14
8.1 General	14
8.2 Generation of sound field	14
8.3 Microphone positions	14
8.4 Averaging time	15
8.5 Calculation of low-frequency energy-average sound pressure levels	15
9 Background noise (default and low-frequency procedure)	16
9.1 General	16
9.2 Correction to the signal level for background noise	17
10 Reverberation time in the receiving room (default and low-frequency procedure)	17
10.1 General	17
10.2 Generation of sound field	18
10.3 Default procedure	18
10.4 Low-frequency procedure	18
10.5 Interrupted noise method	18
10.6 Integrated impulse response method	18
11 Conversion to octave bands	19
12 Recording results	19

13	Uncertainty	19
14	Test report	19
	Annex A (normative) Requirements for loudspeakers	21
	Annex B (informative) Forms for recording results	22
	Annex C (informative) Additional guidance	25
	Annex D (informative) Horizontal measurements -- Examples of suitable loudspeaker and microphone positions	30
	Annex E (informative) Vertical measurements -- Examples of suitable loudspeaker and microphone positions	37
	Bibliography	43