

DIN EN 17285:2021-12 (E)

Railway applications - Acoustics - Measuring of door audible warnings

Contents	Page
European foreword	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Symbols and abbreviations	6
5 Instrumentation and calibration	6
5.1 Instrumentation	6
5.2 Calibration	6
6 Interior tests	6
6.1 Enumeration of vestibule types	6
6.2 Environmental conditions	8
6.3 Vehicle conditions	8
6.4 Measured quantities	8
6.5 Measurement procedure	8
6.5.1 General	8
6.5.2 Measurement positions for measurements in the vehicle	8
6.5.3 Sound pressure level measurement and duration of the signal	9
6.5.4 Pulse rate measurement	10
6.5.5 Frequency properties of the signal	10
6.5.6 Tonal prominence assessment	10
7 Exterior tests	11
7.1 General	11
7.2 Environmental conditions	11
7.3 Vehicle conditions	11
7.4 Measured quantities	11
7.5 Test procedure	11
7.5.1 General	11
7.5.2 Measurement positions for exterior tests	11
7.5.3 Sound pressure level measurement and duration of the signal	12
7.5.4 Pulse rate measurement	12
7.5.5 Frequency properties of the signal	12
7.5.6 Tonal prominence assessment	13
8 Test report	13
Annex A (normative) Tonal prominence assessment	14
A.1 General	14
A.2 Method	14
Annex B (normative) Test for an adaptive-level door warning	15
B.1 General	15
B.1.1 Introduction	15
B.1.2 Scope	15

B.1.3	Approach	15
B.2	Quantities specific to this annex	15
B.3	Instrumentation	17
B.4	Environmental and vehicle conditions	17
B.5	Measurement positions and data sampling	17
B.6	'Background' noise to be generated for the test	17
B.7	Procedure	18
B.8	Reporting requirements	20
B.9	Examples	20
B.9.1	General	20
B.9.2	Example 1	21
B.9.2.1	Description	21
B.9.2.2	Procedure	22
B.9.3	Example 2	25
B.9.3.1	Description	25
B.9.3.2	Procedure	26
B.9.4	Example 3	28
B.9.4.1	Description	28
B.9.4.2	Procedure	29
Annex C (normative) Laboratory tests		32
C.1	General	32
C.2	Mounting arrangements	32
C.3	Modes of operation	32
C.4	Instrumentation	32
C.5	Background noise level	33
C.6	Pulse rate estimation	33
C.7	Frequency analysis	33
C.8	Measurement of sound pressure level	33
Bibliography		36