



BSI Standards Publication

Railway applications — Bodyside entrance systems for rolling stock

This is a preview of BS EN 14752:2025. [Click here to purchase the full version from the ANSI store.](#)

National foreword

This British Standard is the UK implementation of EN 14752:2025. It supersedes BS EN 14752:2019+A1:2021, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee RAE/4/-/6, Railway Applications - Bodyside Entrances.

A list of organizations represented on this committee can be obtained on request to its committee manager.

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

© The British Standards Institution 2025
Published by BSI Standards Limited 2025

ISBN 978 0 539 28179 8

ICS 45.060.01; 45.060.20; 45.140

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 June 2025.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

This is a preview of BS EN 14752:2025. [Click here to purchase the full version from the ANSI store.](#)

EUROPÄISCHE NORM

June 2025

ICS 45.140

Supersedes EN 14752:2019+A1:2021

English Version

Railway applications - Bodyside entrance systems for rolling stock

Applications ferroviaires - Systèmes de porte d'accès pour matériel roulant

Bahnanwendungen - Seiteneinstiegssysteme für Schienenfahrzeuge

This European Standard was approved by CEN on 28 April 2025.

CEN 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 CEN 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 CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents		Page
European foreword		6
Introduction		7
1	Scope	8
2	Normative references	8
3	Terms and definitions	9
4	Constructional requirements	13
4.1	Door design	13
4.1.1	Door throughway design	13
4.1.2	Steps	15
4.1.3	Staff access from track level	18
4.1.4	Relative position of the step edge	18
4.1.5	Train surfing	18
4.1.6	Door windows	18
4.1.7	Design of body side entrance doors used for accessing driver's cabs	19
4.1.8	Water drainage	19
4.2	Mechanical strength	19
4.2.1	Door mechanical strength	19
4.2.2	Step(s) mechanical strength	21
4.3	Local door operating devices	22
4.3.1	Door control devices	22
4.3.2	Emergency egress device	23
4.3.3	Access device	24
4.4	Labels/warning signs	25
4.5	Interfaces with the vehicle	25
4.5.1	Electric and pneumatic power supplies	25
4.5.2	Mechanical interface with the vehicle	25
4.6	Other requirements	25
4.6.1	Fire protection	25
4.6.2	Insulation	26
4.7	Electronic equipment	26
4.7.1	Hardware	26
4.7.2	Software for electronic door control systems	26
4.8	Reliability, availability, maintainability and safety (RAMS)	26
4.9	Protection against electrical hazards	27
4.10	Environmental conditions	27
4.10.1	Weather	27
4.10.2	Water tightness	27
4.10.3	Pressure tightness	28
4.11	Manual and semi-automatic ramps, bridging plates	28
5	Operational requirements	28
5.1	Door control	28
5.1.1	General	28
5.1.2	Release doors and steps	28
5.1.3	Interlocking of released doors	29
5.1.4	Single point failure	29

This is a preview of BS EN 14752:2025. [Click here to purchase the full version from the ANSI store.](#)

5.1.5	Mechanical locking	29
5.1.6	Out-of-service devices	29
5.1.7	Isolation for maintenance purposes	31
5.2	Closing and opening conditions	31
5.2.1	Safety during closing	31
5.2.2	Entrance system closed proving	43
5.3	Opening conditions	43
5.3.1	Safety during opening	43
5.3.2	Limitation of opening	43
5.4	Moveable step obstacle detection	44
5.4.1	General	44
5.4.2	Steps outside the vehicle	44
5.4.3	Steps inside the vehicles	44
5.5	Emergency operation	44
5.5.1	Emergency egress	44
5.5.2	Emergency windows in access doors	47
5.5.3	Access device	47
5.5.4	Powering up	48
5.6	Other requirements	48
5.6.1	Passenger access door area illumination	48
5.6.2	Status indication	48
6	Categories of tests	48
6.1	General	48
6.2	Type tests	48
6.3	Routine tests during manufacture	49
6.4	Routine tests on the fully assembled vehicle/train consist	49
7	Documentation related to installation and maintenance of the entrance system	49
Annex A (normative) Passenger operating devices		50
A.1	Purpose	50
A.2	Design of door control devices	50
A.3	Labels on or near control devices	51
A.4	Recommended emergency egress device	52
A.5	Sample of labels	53
Annex B (normative) Water test procedure		54
B.1	Purpose	54
B.2	Test arrangement	54
B.3	Test procedure	55
B.4	Test decision	55
Annex C (normative) Specification and testing of the pressure tightness of door		57
C.1	Purpose	57
C.2	Calculation – Flowchart	57
C.3	Example of pressure tightness requirement specification	57
C.4	Pressure tightness testing	58
C.4.1	General	58

This is a preview of BS EN 14752:2025. [Click here to purchase the full version from the ANSI store.](#)

C.4.2	Variable pressure measurement method	58
C.4.3	Variant: Constant pressure method of measurement	60
Annex D (normative) Requirements for measuring the closing forces of power-operated doors		62
D.1	General	62
D.2	Terms and definitions	62
D.3	Measurements	63
D.3.1	Conditions of measurement	63
D.3.2	Measurement points	63
D.3.3	Measuring method	63
Annex E (normative) Test plan		65
Annex F (normative) Load requirements for doors due to aerodynamic loads on passenger trains		67
Annex G (informative) Clauses in this document requiring clarification in the technical specification		68
Annex H (normative) RIC-KEY		70
Annex I (informative) Calculation of kinetic energy		71
Annex J (informative) Passenger flow detection		77
J.1	General	77
J.2	Light barrier	77
J.3	Step sensors for external steps	77
Annex K (informative) Full door throughway detection system		78
K.1	General	78
K.2	Full door throughway detection systems	78
K.2.1	Full door throughway detection system near the door leaves	78
K.2.2	Full door throughway detection on the door leaf	83
Annex L (informative) Partial door throughway detection system		84
L.1	General	84
L.2	Partial door throughway detection	84
L.2.1	General	84
L.2.2	Detection area	84
L.2.3	Testing	85
Annex M (normative) Anti-Drag test belt material definition		87
M.1	Test object dimension:	87
M.2	Test belt fabric requirements	87
Annex N (informative) Hazards, protection goals and related requirements		88
N.1	General	88

This is a preview of BS EN 14752:2025. [Click here to purchase the full version from the ANSI store.](#)

N.2	Relation to the risk management process	88
	Bibliography	91

This is a preview of BS EN 14752:2025. [Click here to purchase the full version from the ANSI store.](#)

European foreword

This document (EN 14752:2025) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2025, and conflicting national standards shall be withdrawn at the latest by December 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 14752:2019+A1:2021.

The main changes compared with EN 14752:2019+A1:2021 are as follows:

- References to EN 16584-1:2025 replace the previous requirements throughout the document;
- Door buttons changed to Door Control Device Local door control device changed to local door operation device throughout the document;
- Figure 1 was added in 4.1.1.1 Minimum width;
- Requirement for structural integrity was added in 4.2.1.1 *Passenger retention forces*;
- 5.2.1.3 *Closing and opening signals* was reworded for clarity and precision;
- In 5.2.1.3.2 *Audible signals*, reference to EN 17285:2020 for sound pressure level was added and figures for measurement sound pressure level were removed;
- 5.2.1.5 *Anti Drag System* subclause was updated and the definition of measurement criteria and test objects were included;
- In Annex A, Figure A1 and A2 were updated;
- Annex J was renamed “Passenger flow detection” and a definition for step sensors for external steps was added;
- Annex K, Annex L, Annex M and Annex N were added.

NOTE The technical changes referred to include the significant technical changes from the EN revised but are not an exhaustive list of all modifications from the previous edition.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

This is a preview of BS EN 14752:2025. [Click here to purchase the full version from the ANSI store.](#)

Introduction

This document specifies the minimum requirements for construction and operation of railway passenger access systems and covers:

- Safe access and egress from passenger trains through body side doors and steps;
- Usability for persons with reduced mobility;
- A minimum risk of injury to persons as a result of door and step operation;
- That the doors and moveable steps, ramps, bridging plates remain closed when the vehicle is in motion; and
- Safe maintenance of the entrance systems.

Statutory legal obligations to minimize operational safety risks to ensure staff and passenger safety for the intended door system may require enhancement to the minimum requirement's detailed in this document. Annex G stipulates clauses that are to be clarified and possibly enhanced within a technical specification when referring to this document for the intended passenger service operation of the door system.

This is a preview of BS EN 14752:2025. [Click here to purchase the full version from the ANSI store.](#)

1 Scope

This document applies to passenger body side entrance systems of all newly designed railway vehicles such as tram, metro, suburban, main-line and high-speed trains that carry passengers. The requirements of this document also apply to existing vehicles undergoing refurbishment of the door equipment, as far as it is reasonably practicable.

This document also specifies the requirements for testing of entrance systems.

This document makes reference to manual and power operated entrance systems. For manual doors, clauses referring to power operation are not applicable.

This document does not apply to the following:

- Entrance systems for equipment access, inspection or maintenance purposes and for crew only use;
- Doors on freight wagons; and
- Doors or hatches specifically provided for escape under emergency conditions.

Where passenger bodyside entrance doors are to be used for staff access, EN 16116-1:2022, EN 16186-4:2019 and EN 16186-8:2022+A1:2024 provide the details for the staff access requirements.

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.

EN 12663-1, *Railway applications — Structural requirements of railway vehicle bodies — Part 1: Locomotives and passenger rolling stock (and alternative method for freight wagons)*

EN 13032-1:2004+A1:2012, *Light and lighting — Measurement and presentation of photometric data of lamps and luminaires — Part 1: Measurement and file format*

EN 13272 (all parts), *Railway applications — Electrical lighting for rolling stock in public transport systems*

EN 14067 (all parts), *Railway applications — Aerodynamics*

EN 16116-1:2022, *Railway applications — Design requirements for steps, handrails and associated access for staff — Part 1: Passenger vehicles, vans and locomotives*

EN 16186-4:2019, *Railway applications — Driver's cab — Part 4: Layout and access*

EN 16186-8:2022+A1:2024, *Railway applications — Driver's cab — Part 8: Tram vehicle layout and access*

EN 16584-1:—¹, *Design for PRM Use — General requirements — Part 1: Contrast*

EN 16585-1:—², *Design for PRM Use — Equipment and components onboard rolling stock — Part 1: Toilets*

¹ Under preparation. Stage at the time of publication: FprEN 16584-1:2025.

² Under preparation. Stage at the time of publication: FprEN 16585-1:2025.