
Železniške naprave - Načrtovanje za osebe z omejenimi gibalnimi sposobnostmi - Splošne zahteve - 2. del: Informacije

Railway applications - Design for PRM use - General requirements - Part 2: Information

Bahnanwendungen - Gestaltung für die Nutzung durch PRM - Allgemeine Anforderungen - Teil 2: Informationen

Applications ferroviaires - Conception destinée à l'usage par les PMR: Exigences générales - Partie 2: Informations

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Bahnanwendungen - Gestaltung für die Nutzung durch PRM - Allgemeine Anforderungen - Teil 2: Informationen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 256.

If this draft becomes a European Standard, 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.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

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European foreword

This document (prEN 16584-2:2022) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 16584-2:2017.

In comparison with the previous edition, the following technical modifications have been made:

- The document template has been updated
- The document has been revised generally for document references and editorial issues with grammar
- Scope modified
- Normative references updated
- Terms and definitions revised
- 5.1 removed references to annexes covering EC verification and testing requirements
- 5.2.2.2 (2) Route identification – text updated
- 5.2.5 (4) Visual Information – text updated
- 5.2.8 (3) additional requirement
- 5.3.1.1 (1) Priority Seats – text updated, and assessment added
- 5.3.3.2 Exterior Doors - text amended and additional requirements
- 5.3.5.2 (2) Signage, Pictograms and Tactile Information – text updated
- 5.3.5.3 (6) Dynamic Visual Information – text updated
- 5.7 (ii) Call for Aid - text changed to align with the TSI
- 6.1.1(5) Methodologies – Internal Displays - text updated
- Annex A “EC verification - Interoperability constituents” removed
- Annex B “Summary of testing requirements” removed
- Subsequent annexes renumbered
- A.2 updated
- A.5 Call for Aid text updated
- G.1 updated

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- G.4 additional text
- H.5 updated
- I.5 replacement figure
- L.2 updated
- Annex N text updated
- Annex ZA updated.
- Bibliography updated

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For relationship with EU Directive(s) / Regulation(s), see informative Annex ZA, which is an integral part of this document.

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Introduction

This document is part of a suite of four 'Design for PRM use' standards that have in total nine parts:

- EN 16584 is a standard that covers both infrastructure and rolling stock — Railway applications — Design for PRM use — General requirements:
 - Part 1: Contrast (EN 16584-1)
 - Part 2: Information (EN 16584-2)
 - Part 3: Optical and friction characteristics (EN 16584-3)
- EN 16585 is a standard that covers rolling stock — Railway applications — Design for PRM use — Equipment and components onboard rolling stock:
 - Part 1: Toilets (EN 16585-1)
 - Part 2: Elements for sitting, standing and moving (EN 16585-2)
 - Part 3: Clearways and internal doors (EN 16585-3)
- EN 16586 is a standard that covers rolling stock — Railway applications — Design for PRM use — Accessibility of persons with reduced mobility to rolling stock:
 - Part 1: Steps for access and egress (EN 16586-1)
 - Part 2: Boarding aids (EN 16586-2)
- EN 16587 is a standard that covers infrastructure — Railway applications — Design for PRM use — Requirements for obstacle-free routes for infrastructure.

These standards aim to clarify the requirements (with clear and consistent terms and definitions) and to define the associated criteria and, where appropriate, methodologies to allow a clear pass/fail assessment.

prEN 16584-2:2022 (E)**1 Scope**

This document describes the specific 'Design for PRM use' requirements applying to both infrastructure and rolling stock and the assessment of those requirements. The following applies to this document:

- The definitions and requirements describe specific aspects of 'Design for PRM use' required by persons with disabilities and persons with reduced mobility as defined in the PRM TSI.
- This document defines elements that are universally valid for obstacle-free travelling including lighting, contrast, tactile feedback, transmission of visual and acoustic information. The definitions and requirements of this document cover the infrastructure and rolling stock applications.
- This document only refers to aspects of accessibility for PRM passengers; it does not define non-PRM related requirements and definitions.
- This document assumes that the infrastructure or rolling stock is in its defined operating condition.
- Where minimum or maximum dimensions are quoted these are absolute NOT nominal requirements.
- This document is not specifically intended for Urban Rail, however these standards or clauses from these standards can be adopted by Urban Rail projects should they choose to do so.

The 'General requirements' standard is written in three parts:

- Part 1 contains
 - Contrast
- This document is Part 2 and contains
 - Spoken information
 - Written information
 - Tactile information
 - Pictograms
 - Audible signals
- Part 3 contains
 - Lighting
 - Low reflective properties
 - Transparent obstacles
 - Slip resistance

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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 81-70:2021, *Safety rules for the construction and installations of lifts — Particular applications for passenger and good passenger lifts — Part 70: Accessibility to lifts for persons including persons with disability*

prEN 16584-1:2022, *Railway applications — Design for PRM use — General requirements — Part 1: Contrast*

prEN 16584-3:2022, *Railway applications — Design for PRM use — General requirements — Part 3: Optical and friction characteristics*

prEN 16585-1:2022, *Railway applications — Design for PRM use — Equipment and components onboard rolling stock — Part 1: toilets*

prEN 16585-2:2022, *Railway applications — Design for PRM use — Equipment and components onboard rolling stock — Part 2: Elements for sitting, standing and moving*

prEN 16587:2022, *Railway applications — Design for PRM use — Requirements for obstacle-free routes for infrastructure*

EN 60268-16, *Sound system equipment - Part 16: Objective rating of speech intelligibility by speech transmission index*

ISO 3864-1, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings*

ISO 7000, *Graphical symbols for use on equipment — Registered symbols*

ISO 7001, *Graphical symbols — Public information symbols*

ISO 21542, *Building construction — Accessibility and usability of the built environment*

EN 17285:2020, *Railway applications — Acoustics — Measuring of door audible warnings*

ETSI EN 301-462:2000-03, *Human Factors (HF) Symbols to identify telecommunications facilities for deaf and hard of hearing people*

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prEN 16584-2:2022 (E)**3 Terms and definitions**

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1**ascender**

part of any of the characters b, d, f, h, i, j, k, l or t which protrudes above the x-height of the character

Note 1 to entry: For examples see Annex F

3.2**bezel**

raised area that surrounds a pressel as part of a pushbutton

3.3**character height**

vertical size of uppercase letters or numbers

Note 1 to entry: For examples see Annex F.

3.4**compressed 'ascender'**

ascender that has been compressed or squashed or misaligned and does not use a consistent x-height and/or ascender height

Note 1 to entry: For examples see Annex F.

3.5**compressed 'descender'**

descender that has been compressed or squashed or misaligned and does not use a consistent x-height and/or ascender height

Note 1 to entry: For examples see Annex F.

3.6**contrast**

perception of a difference visually between one surface or element of a building/rail vehicle and another by reference to their light reflectance values (LRV) or luminance values

Note 1 to entry: See BS 8300-1 and BS 8300-2 for further information.

3.7**customer information**

all visual and spoken information other than information intended only for staff

3.8**descender**

part of any of the characters g, j, p, q or y which protrudes below the level of the baseline

Note 1 to entry: For examples see Annex F.

3.9**essential information**

subset of customer information delivered within the confines of the infrastructure comprising information concerning the departure of train services and safety instructions

Note 1 to entry: Platform number, train routeing information, departure times and any updates/changes to previously available information and actions required in reaction to a threat to personal safety (e.g. evacuate station FIRE!, stand back from platform edge train approaching).

3.10**first step**

step that is the first step for a passenger to use, to overcome a height change

Note 1 to entry: For the external access/egress steps this will normally be the step that is closest to the platform edge (fixed or moveable step), therefore this is the first step when boarding and the last step when alighting.

Note 2 to entry: In the context of steps for internal height changes (other than the external access/egress steps) this means the first usable step when ascending and the edge of the walking floor when descending.

3.11**halo**

illuminated ring surrounding a pressel, not necessarily continuous

3.12**innovative solution**

technological progression that results in a solution that does not comply with the specification set out in Clause 5 of this standard or for which there are no assessment methods

Note 1 to entry: An innovative solution (Article 6 Commission Regulation (EU) No 1300/2014 or No xxxx/2022) may only be used following a positive opinion from the European Commission.

3.13**last step**

final step for an ascending passenger to use to overcome a height change, forming the edge of the walking floor

3.14**low reflective properties**

characteristics that reduce reflection of light from a surface

3.15**mixed case**

text using a combination of upper and lower case characters

Note 1 to entry: For examples see Annex F.

3.16**pictogram**

graphical symbol, diagram or figure with a particular meaning which directly represents or conveys its meaning independently of language through a pictorial representation of a physical object, action or character

Note 1 to entry: Refer to ISO 7001, ISO/TR 7239 and ISO 9186 (all parts) for rules regarding graphical symbols and frames.

prEN 16584-2:2022 (E)**3.17****pressel**

surface of the pushbutton which is pressed in order to activate the pushbutton

3.18**routeing information**

information, used by passengers to guide them on their journey, a guide as to which route to take to get to a required destination or facility and changes along that journey

Note 1 to entry: This can be temporary information to an event e.g. exhibition or sporting event but NOT any form of commercial advertising.

3.19**sans serif font**

character set from a sans serif typeface

Note 1 to entry: For examples see Annex F.

3.20**sans serif**

without serifs

Note 1 to entry: For examples see Annex F.

3.21**serif**

additional stroke or line attached to the main strokes of a character or number

Note 1 to entry: For examples see Annex F.

3.22**slip resistant**

surface finish that is sufficiently rough or otherwise specially formulated so that friction between the surface and a person's footwear or mobility aid is maintained at an acceptable level in both wet and dry conditions

Note 1 to entry: Snow and ice are outside this definition and this standard, therefore other special measures (e.g. operational) should be taken for steps and platforms etc that are exposed to these weather conditions.

3.23**spoken information**

information audibly communicated in words

Note 1 to entry: This can be direct, pre-recorded or synthesized information.

3.24**station**

any form of infrastructure where a train operates, and passengers can board or alight in normal operation

3.25**tactile**

information that is relayed through the physical sense of touch

Note 1 to entry: Tactile signs, controls, symbols, pictograms, guide path and Braille or raised characters are a physical means by which tactile information is provided.

3.26**typeface**

character set (letters and numbers) of a particular design that is categorised as either 'serif' or 'sans serif' where this is a collective definition of all the characters in that typeface and not the individual characters

Note 1 to entry: Examples of the characters in a 'serif and sans serif' typeface are shown in Annex F and example typefaces in Annex N.

3.27**universal toilet**

toilet designed to be used by all passengers including passengers in wheelchairs

3.28**visual acuity**

the threshold of the capacity of the eye to perceive fine details of a visual object (a sign), the recognizability of which depends on the visual angle

3.29**visual information**

written information, pictograms and markings

3.30**written information**

information visually communicated in words, letters and numerals, excluding pictograms and markings

4 Symbols and abbreviations**Table 1 — Abbreviations**

Abbreviation	Designation
EN	European Standard
ISO	the International Organization for Standardization
NCS	Natural Colour System
PRM	Persons with disabilities and persons with reduced mobility
RAL	German colour matching system issued by RAL gGmbH.
STI-PA	Speech Transmission Index Passenger Address
TSI	Technical Specification for Interoperability