
Železniške naprave - Voznikova kabina - 9. del: Zunanja vidljivost vozil podzemne železnice

Railway applications - Driver's cabs - Part 9 : External visibility for metro vehicles

Bahnanwendungen - Führerraum - Teil 9: Sichtbedingungen nach außen bei U-Bahnfahrzeugen

Applications ferroviaires - Cabines de conduite - Partie 9: Visibilité extérieure depuis la cabine de métro

Ta slovenski standard je istoveten z: EN 16186-9:2026

ICS:

45.060.10	Vlečna vozila	Tractive stock
45.140	Oprema za podzemne vlake, tramvaje in lahka tirna vozila	Metro, tram and light rail equipment

SIST EN 16186-9:2026**en,fr,de**

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 16186-9

October 2026

ICS 45.060.10; 45.140

English Version

**Railway applications - Driver's cab - Part 9: External
visibility for metro vehicles**

Applications ferroviaires - Cabines de conduite - Partie
9 : Visibilité extérieure depuis la cabine de métro

Bahnanwendungen - Führerraum - Teil 9:
Sichtbedingungen nach außen bei U-Bahnfahrzeugen

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Ref. No. EN 16186-9:2026 E

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European foreword

This document (EN 16186-9:2026) 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of an identical text or by endorsement, at the latest by April 2027, and conflicting national standards shall be withdrawn at the latest by April 2027.

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 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.

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EN 16186 *Railway applications — Driver’s cab* consists of the following parts:

- *Part 1: Anthropometric data and visibility;*
- *Part 2: Integration of displays, controls and indicators;*
- *Part 3: Design of displays;*
- *Part 4: Layout and access;*
- *Part 5: External visibility for tram vehicles;*
- *Part 6: Integration of displays, controls and indicators for tram vehicles;*
- *Part 7: Design of displays for tram vehicles;*
- *Part 8: Tram vehicle layout and access;*
- *Part 9: External visibility for metro vehicles.*

NOTE Parts 1 to 4 of the above-mentioned standard series are only applicable for heavy rail vehicles and parts 5 to 8 are only applicable to tram vehicles.

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.

EN 16186-9:2026 (E)**1 Scope**

This document defines front visibility conditions including positions of drivers and its assessment.

This document applies to metro vehicles with or without permanent driver, excluding shuttles used for short distance transportation.

Metro vehicle definition is according to EN 17343.

NOTE For special vehicles, see EN 14033-4 and EN 15746-4.

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 17343, *Railway applications — General terms and definitions*

EN 15152:2019+A1:2023, *Railway applications — Windscreens for trains*

EN 15663, *Railway applications — Vehicle reference masses*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 17343 and the following apply.

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

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

3.1**primary vision area**

area of the windscreen through which track and signals are visible from the driving position

[SOURCE: EN 15152:2019+A1:2023, 3.3, modified – note 1 to entry has been deleted.]

3.2**secondary vision area term**

area of the windscreen outside the primary vision area, through which the driver can also look from the driving position

[SOURCE: EN 15152:2019+A1:2023, 3.4, modified – note 1 to entry has been deleted.]

3.3**windscreen**

glazing in front of a driver through which the track ahead can be observed

[SOURCE: EN 15152:2019+A1:2023, 3.2, modified — “or passengers” is removed.]

3.4**side windscreen**

additional glazing positioned at the side of a windscreen that is predominately positioned transversely to the running direction

[SOURCE: EN 15152:2019+A1:2023, 3.2.2]

3.5**driver dummies**

models referring to the min and max anthropometric data

Note 1 to entry: The anthropometric data are provided in Clause 4.

3.6**driverless metro**

metro that, in normal operation, is operated without a driver on board

Note 1 to entry: A driverless metro can be operated by a driver with a simplified desk in degraded conditions.

3.7**shuttle**

rail system that runs back and forth between two points

4 Driver's anthropometric data**4.1 General**

This Clause defines the anthropometric data on which the requirements in this document are based.

The background on these anthropometric data are provided in CEN/TR 16823.

4.2 Data

Figure 1 and Figure 2 give the body size measures.