

STN	Železnice Brzdové systémy vlakových jednotiek Časť 2: Skúšobné metódy	STN EN 16185-2+A1 28 4008
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Railway applications - Braking systems of multiple unit trains - Part 2: Test methods

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 04/20

Obsahuje: EN 16185-2:2014+A1:2019

Oznámením tejto normy sa ruší
STN EN 16185-2 (28 4008) z júna 2015

130608

EUROPEAN STANDARD

EN 16185-2:2014+A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2019

ICS 45.040

Supersedes EN 16185-2:2014

English Version

Railway applications - Braking systems of multiple unit trains - Part 2: Test methods

Applications ferroviaires - Systèmes de freinage pour trains automoteurs - Partie 2 : Méthodes d'essai

Bahnanwendungen - Bremssysteme für Triebzüge - Teil 2: Prüfverfahren

This European Standard was approved by CEN on 13 October 2014 and includes Amendment 1 approved by CEN on 9 September 2019.

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

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

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EN 16185-2:2014+A1:2019 (E)**European foreword**

This document (EN 16185-2:2014+A1:2019) 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of an identical text or by endorsement, at the latest by May 2020 and conflicting national standards shall be withdrawn at the latest by May 2020.

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 includes Amendment 1 approved by CEN on 9 September 2019.

This document supersedes EN 16185-2:2014.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** **A1**.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 2008/57/EC.

For relationship with EU Directive 2008/57/EC, see informative Annex ZA, which is an integral part of this document.

This series of European Standards *Railway applications — Braking systems of multiple unit trains* consists of:

- *Part 1: Requirements and definitions;*
- *Part 2: Test methods.*

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, Turkey and the United Kingdom.

1 Scope

This European Standard specifies test methods and acceptance criteria for a brake system for use in self propelling thermal and electric trains, in the following document called EMU/DMU, operating on routes of the European conventional rail system network.

This European Standard is applicable to:

- all new vehicles designs of self-propelling thermal and electric trains;
- all major overhauls of the EMU/DMU if they involve redesigning or extensive alteration to the brake system of the vehicle concerned.

This European Standard does not cover:

- locomotive hauled trains which are specified by EN 14198;
- mass transit rolling stock which is specified by EN 13452 (all parts);
- high speed trains being operated at speeds greater than 200 km/h which are specified by EN 15734-1 and tests in EN 15734-2.

The functional testing requirements set out in this European Standard assume the vehicles are fitted with brake system architecture as defined in EN 16185-1.

The braking performance obtained by applying the tests defined in this European Standard can be used to assess compliance with the required braking performance as defined in EN 16185-1.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 14478:2005, *Railway applications — Braking — Generic vocabulary*

EN 15595, *Railway applications — Braking — Wheel slide protection*

EN 15663, *Railway applications — Definition of vehicle reference masses*

EN 15734-2:2010¹⁾, *Railway applications — Braking systems of high speed trains — Part 2: Test methods*

EN 16185-1:2014, *Railway applications — Braking systems of multiple unit trains — Part 1: Requirements and definitions*

EN 16207:2014, *Railway applications — Braking — Functional and performance criteria of Magnetic Track Brake systems for use in railway rolling stock*

EN 16334, *Railway applications — Passenger Alarm System — System requirements*

EN 50128, *Railway applications — Communication, signalling and processing systems — Software for railway control and protection systems*

¹⁾ This document is currently impacted by the corrigendum EN 15734-2:2010/AC:2012.

EN 16185-2:2014+A1:2019 (E)

EN ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories (ISO/IEC 17025)*

EN 16834:2019, *Railway applications — Braking — Brake performance*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN

- a) sum of the delay time and the application force build-up time during brake application, and
- b) sum of the delay time and the application force release time during brake release