



**NSAI**  
Standards

Irish Standard  
I.S. EN 13848-1:2019

# Railway applications - Track - Track geometry quality - Part 1: Characterization of track geometry

**I.S. EN 13848-1:2019**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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## National Foreword

I.S. EN 13848-1:2019 is the adopted Irish version of the European Document EN 13848-1:2019, Railway applications - Track - Track geometry quality - Part 1: Characterization of track geometry

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EUROPEAN STANDARD

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NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2019

ICS 93.100

Supersedes EN 13848-1:2003+A1:2008

English Version

## Railway applications - Track - Track geometry quality - Part 1: Characterization of track geometry

Applications ferroviaires - Voie - Qualité géométrique  
de la voie - Partie 1: Caractérisation de la géométrie de  
voie

Bahnwendungen - Oberbau - Gleislagequalität - Teil  
1: Beschreibung der Gleisgeometrie

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## European foreword

This document (EN 13848-1:2019) 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of an identical text or by endorsement, at the latest by September 2019, and conflicting national standards shall be withdrawn at the latest by September 2019.

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 13848-1:2003+A1:2008.

The main changes with respect to the previous edition are listed below:

- Uncertainty and resolution values are exported to the relevant other parts (EN 13848-2, -3 and -4);
- Addition of *DO* domain;
- New Annex A on decolouring;
- Improvement of Annex B on mainly cyclic top and dip angle;
- New Annex C and D on filtering;
- New Annex F on simulation.

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 European Standard is one of the EN 13848 series, *Railway applications — Track — Track geometry quality*, as listed below:

- *Part 1: Characterization of track geometry;*
- *Part 2: Measuring systems — Track recording vehicles;*
- *Part 3: Measuring systems — Track construction and maintenance machines;*
- *Part 4: Measuring systems — Manual and lightweight devices;*
- *Part 5: Geometric quality levels — Plain line, switches and crossings;*
- *Part 6: Characterisation of track geometry quality.*

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Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## 1 Scope

This document gives definitions for the principal track geometry parameters and specifies minimum requirements for measurement and the analysis methods. The aim is to allow the comparability of the output of different measuring systems.

This document does not apply to Urban Rail Systems.

## 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 13848-2, *Railway applications — Track — Track geometry quality — Part 2: Measuring systems — Track recording vehicles*

EN 13848-3, *Railway applications — Track — Track geometry quality — Part 3: Measuring systems — Track construction and maintenance machines*

EN 13848-4, *Railway applications — Track — Track geometry quality — Part 4: Measuring systems — Manual and lightweight devices*

EN 13848-5:2017, *Railway applications — Track — Track geometry quality — Part 5: Geometric quality levels — Plain line, switches and crossings*

## 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:

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

NOTE Refer also to the symbols and definitions described in Clause 4.

### 3.1

#### **track geometry quality**

assessment of excursions in the vertical and lateral planes from the mean or designed geometrical characteristics of specified parameters which give rise to safety concerns or have a correlation with ride quality

### 3.2

#### **gauge face**

inside face of the running rail head

### 3.3

#### **running table**

upper surface of the head of the rail

Note 1 to entry: See Figure 1.

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