



BSI Standards Publication

**Railway applications — Current collection systems — Requirements for and validation of measurements of the dynamic interaction between pantograph and overhead contact line**

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## National foreword

This British Standard is the UK implementation of EN 50317:2012+A1:2022. It supersedes EN 50317:2012, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to CENELEC text carry the number of the CENELEC amendment. For example, text altered by CENELEC amendment A1 is indicated by A1 A1.

The UK participation in its preparation was entrusted to Technical Committee GEL/9/3, Railway Electrotechnical Applications - Fixed Equipment.

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

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30 September 2022	Implementation of CENELEC amendment A1:2022

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EUROPÄISCHE NORM

July 2022

ICS 29.280; 45.060.10

Supersedes EN 50317:2002 + A1:2004 + A2:2007

English version

**Railway applications -  
Current collection systems -  
Requirements for and validation of measurements of the dynamic  
interaction between pantograph and overhead contact line**

Applications ferroviaires -  
Systèmes de captage de courant -  
Prescriptions et validation des mesures de  
l'interaction dynamique entre le  
pantographe et la caténaire

Bahnanwendungen -  
Stromabnahmesysteme -  
Anforderungen und Validierung von  
Messungen des dynamischen  
Zusammenwirkens zwischen  
Stromabnehmer und Oberleitung

This European Standard was approved by CENELEC on 2011-12-26. CENELEC 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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# CENELEC

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

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## Foreword

This document (EN 50317:2012) has been prepared by CLC/SC 9XC, "Electric supply and earthing systems for public transport equipment and ancillary apparatus (Fixed installations)", of CLC/TC 9X, "Electrical and electronic applications for railways".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2012-12-26
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2014-12-26

This document supersedes EN 50317:2002 + A1:2004 + A2:2007.

EN 50317:2012 includes the following significant technical changes with respect to EN 50317:2002 + A1:2004 + A2:2007:

- new definitions for "cord force", "mean contact force" and "total mean uplift force" (Clause 3);
- updated abbreviation lists (Clause 4);
- requirements for examination of total mean uplift force and aerodynamic portions (new Clause 6);
- a clear relation between the different portions of contact force (7.1);
- limits for aerodynamic influences of the force measurement system (7.2);
- the aerodynamic correction for measured contact forces (7.4);
- corrections and elaborations for calibration of force measurement (7.5);
- adjustment of filter requirements (7.6);
- adjustment of accuracy requirements for measurement of displacements (Clause 8);
- updated requirements for measurement of arcing (Clause 9).

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

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For the relationship with EU Directive(s) 2008/57/EC, see informative Annex ZZ, which is an integral part of this document.

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## European foreword to Amendment 1

This document (EN 50317:2012/A1:2022) has been prepared by SC 9XC, Electric supply and earthing systems for public transport equipment and ancillary apparatus (fixed installations), of Technical Committee CENELEC TC 9X, Electrical and electronic applications for railways.

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