



NSAI
Standards

Irish Standard
I.S. EN 50317:2012

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

I.S. EN 50317:2012

Incorporating amendments/corrigenda issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

<p><i>This document replaces:</i> EN 50317:2002 EN 50317:2002/A1:2004 EN 50317:2002/A2:2007</p>	<p><i>This document is based on:</i> EN 50317:2012 EN 50317:2002</p>	<p><i>Published:</i> 20 January, 2012 18 July, 2002</p>
<p>This document was published under the authority of the NSAI and comes into effect on:</p> <p>26 January, 2012</p>		<p>ICS number: 29.280 45.060.10</p>
<p>NSAI 1 Swift Square, Northwood, Santry Dublin 9</p>	<p>T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W NSAI.ie</p>	<p>Sales: T +353 1 857 6730 F +353 1 857 6729 W standards.ie</p>
<p>Údarás um Chaighdeáin Náisiúnta na hÉireann</p>		

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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Contents

Foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Abbreviations and symbols	5
5 General.....	6
6 Measurement of total mean uplift force	7
7 Measurement of contact force.....	8
7.1 General requirements	8
7.2 Aerodynamic influence of the measurement system	8
7.3 Inertia correction.....	8
7.4 Aerodynamic correction	8
7.5 Calibration of the measurement system.....	9
7.6 Measurement parameters	9
7.7 Measurement results.....	10
8 Measurement of displacement	10
8.1 General.....	10
8.2 Vertical displacement of the contact point	10
8.3 Uplift at the support	10
8.4 Measurement of other displacements in the overhead contact line.....	10
9 Measurement of arcing.....	10
9.1 General requirements	10
9.2 Calibration of the arc measurement system	12
9.3 Adjustment of threshold for the measurement distance.....	12
9.4 Values to be measured	12
9.5 Measurement results.....	12
Annex ZZ (informative) Coverage of Essential Requirements of EC Directives	14
Figure	
Figure 1 — Detector location.....	11

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.

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

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

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-