



**NSAI**  
Standards

Irish Standard  
I.S. EN 50119:2009

# Railway applications - Fixed installations - Electric traction overhead contact lines

## I.S. EN 50119:2009

*Incorporating amendments/corrigenda issued since publication:*

EN 50119:2009/A1:2013

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<b>NSAI</b> 1 Swift Square, Northwood, Santry Dublin 9	T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie  W NSAI.ie	<b>Sales:</b> T +353 1 857 6730 F +353 1 857 6729 W standards.ie
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EUROPEAN STANDARD

**EN 50119/A1**

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English version

**Railway applications -  
Fixed installations -  
Electric traction overhead contact lines**

Applications ferroviaires -  
Installations fixes -  
Lignes aériennes de contact pour la  
traction électrique

Bahnanwendungen -  
Ortsfeste Anlagen -  
Oberleitungen für den elektrischen  
Zugbetrieb

This amendment A1 modifies the European Standard EN 50119:2009; it was approved by CENELEC on 2013-03-11. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

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

**Management Centre: Avenue Marnix 17, B - 1000 Brussels**

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## **Foreword**

This document (EN 50119:2009/A1:2013) has been prepared by CLC/SC 9XC "Electric supply and earthing systems for public transport equipment and ancillary apparatus (Fixed installations)".

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) 2014-03-11
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2016-03-11

This standard was amended to correct some technical mistakes and to add some clarifications. The requirements for insulators were also completed with mechanical and surface requirements.

English version

**Railway applications -  
Fixed installations -  
Electric traction overhead contact lines**

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Lignes aériennes de contact  
pour la traction électrique

Bahnanwendungen -  
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Oberleitungen  
für den elektrischen Zugbetrieb

This European Standard was approved by CENELEC on 2009-04-01. 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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European Committee for Electrotechnical Standardization  
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Europäisches Komitee für Elektrotechnische Normung

**Central Secretariat: Avenue Marnix 17, B - 1000 Brussels**

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**I.S. EN 50119:2009**

EN 50119:2009

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**Foreword**

This European Standard was 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.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50119 on 2009-04-01.

This European Standard supersedes EN 50119:2001.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2010-04-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) –

References to definitions in IEC 60050-811 in Clause 3 are included for user reference and in some cases may update or modify the current definition.

**National Standards implementing EN 50119:**

The National Standards implementing EN 50119 will comprise the full text of the Eurocode (including any annexes), as published by CENELEC, which may be preceded by a national title page and national foreword, and may be followed by a National Annex.

A National Annex, if included, may contain information on those parameters or statements in EN 50119 which are not normative, e.g.

- values where alternative values or informative values only are given in the standard,
- country specific data (e.g. geographical, climatic, etc.), e.g. ice loads or temperature limits,
- the procedure to be used where alternative procedures are given in the standard.

It may also contain

- decisions on the use of informative annexes, and
- references to non-contradictory complementary information to assist the user to apply the standard.

The National Annex shall not alter any provisions of the European Standard.

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## 1 Scope

This European Standard applies to electric traction overhead contact line systems in heavy railways, light railways, trolley busses and industrial railways of public and private operators.

It applies to new installations of overhead contact line systems and for the complete reconstruction of existing overhead contact line systems.

This standard contains the requirements and tests for the design of overhead contact lines, requirements for structures and their structural calculations and verifications as well as the requirements and tests for the design of assemblies and individual parts.

This standard does not provide requirements for conductor rail systems where the conductor rails are located adjacent to the running rails.

## 2 Normative references

The following referenced documents are indispensable for the application 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 206-1, *Concrete – Part 1: Specification, performance, production and conformity*

EN 485-1, *Aluminium and aluminium alloys – Sheet, strip and plate – Part 1: Technical conditions for inspection and delivery*

EN 755-1, *Aluminium and aluminium alloys- Extruded rod/bar, tube and profiles – Part 1: Technical conditions for inspection and delivery*

EN 755-2, *Aluminium and aluminium alloys – Extruded rod/bar, tube and profiles – Part 2: Mechanical properties*

EN 1536, *Execution of special geotechnical work – Bored piles*

EN 1537, *Execution of special geotechnical work – Ground anchors*

EN 1991-1-4:2005, *Eurocode 1: Actions on structures – Part 1-4: General actions – Wind actions*

ENV 1991-2-4:1995, *Eurocode 1: Basis of design and actions on structures – Part 2-4: Actions on structures – Wind actions*

EN 1992 (all parts), *Eurocode 2 – Design of concrete structures*

EN 1993 (all parts), *Eurocode 3: Design of steel structures*

EN 1993-1-1:2005, *Eurocode 3: Design of steel structures – Part 1-1: General rules and rules for buildings*

EN 1995 (all parts), *Eurocode 5: Design of timber structures*

EN 1997-1:2004, *Eurocode 7: Geotechnical design – Part 1: General rules*

EN 1997-2:2007, *Eurocode 7: Geotechnical design – Part 2: Ground investigation and testing*

EN 1998 (all parts), *Eurocode 8: Design of structures for earthquake resistance*

EN 1999 (all parts), *Eurocode 9: Design of aluminium structures*

EN 10025 (all parts), *Hot rolled products of structural steels*

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