Irish Standard
I.S. EN 50617-2:2015&AC:2016

Railway Applications - Technical parameters of train detection systems for the interoperability of the trans-European railway system - Part 2: Axle counters

I.S. EN 50617-2:2015&AC:2016

Incorporating amendments/corrigenda/National Annexes issued since publication:

EN 50617-2:2015/AC:2016

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

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This document is based on:	*Published:*
EN 50617-2:2015	2015-04-24

This document was published under the authority of the NSAI and comes into effect on:	ICS number:
2016-01-27	NOTE: If blank see CEN/CENELEC cover page

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National Foreword

I.S. EN 50617-2:2015&AC:2016 is the adopted Irish version of the European Document EN 50617-2:2015, Railway Applications - Technical parameters of train detection systems for the interoperability of the trans-European railway system - Part 2: Axle counters

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

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CENELEC

Corrigendum to EN 50617-2:2015

English version

In order to align the text of C.6.2 with Figure C.13, modify the third bullet in C.6.2 as follows:

– a minimum of 80 cm shall be provided as metallic free zone around the 1 m rail.

January 2016

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50617-2

April 2015

ICS 29.280

English Version

Railway Applications - Technical parameters of train detection systems for the interoperability of the trans-European railway system - Part 2: Axle counters

Applications ferroviaires - Paramètres techniques des systèmes de détection des trains - Partie 2: Compteurs d'essieux

Bahnanwendungen - Technische Parameter von Gleisfreimeldesystemen - Teil 2: Achszähler

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

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Foreword

This document (EN 50617-2:2015) has been prepared by CLC/SC 9XA "Communication, signalling and processing systems" 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)	2016-03-09
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2018-03-09

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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 relationship with EU Directive 2008/57/EC amended by Commission Directive 2011/18/EU, see informative Annex ZZ, which is an integral part of this document.

This document is Part 2 of the EN 50617 series, which consists of the following parts under the common title "*Railway Applications - Technical parameters of train detection systems*":

- Part 1: Track circuits;
- Part 2: Axle counters.

Introduction

The working group CENELEC/SC9XA WGA4-2 has developed the limits for electromagnetic compatibility between rolling stock and train detection systems, specifically track circuits and axle counter systems, and correspondingly published two technical specifications: CLC/TS 50238-2 and CLC/TS 50238-3. These limits and associated measurement methods are based on characteristics of existing systems that are well established and still put forward for signalling renewals by infrastructure managers.

To meet the requirements for compatibility between train detection systems and rolling stock in the future and to achieve interoperability and free movement within the European Union, it is necessary to define a “FrM” and a complete set of interface requirements.

Track circuits and axle counter systems, are an integral part of the CCS trackside subsystem in the context of the Rail Interoperability Directive. The relevant basic parameters are enumerated in the CCS and LOC&PAS TSI and specified in the mandatory Specification CCS TSI Index 77 “Interfaces between Control-Command and Signalling Trackside and other Subsystems”. This standard refers whenever needed to the mandatory specification.

The already published specifications CLC/TS 50238-2 and CLC/TS 50238-3 can be used to ascertain conformity of individual train detection systems to the requirements of the TSIs and to the Notified National Rules, which will be in place for the parameters still declared “open points” in CCS TSI Index 77.

The requirements defined in this standard are either compliant with those of CCS TSI Index 77 or can be used as input information for the closure of open points of the CCS TSI Index 77. Where applicable, the standard should refer to the rolling stock FrM in the TSI CCS and the parameter values defined in the CCS TSI Index 77.

1 Scope

This European Standard specifies parameters for the design and usage of axle counter systems.

For this, the standard specifies the technical parameters of axle counter systems associated with the magnetic field limits for RST in the context of interoperability. In addition test methods are defined for establishing the conformity and the performance of axle counter products.

The specified parameters are structured and allocated according to their basic references as follows:

- Axle counter system parameters

- Train based parameters

- Track based parameters

- Environmental and other parameters

Each parameter is defined by a short general description, the definition of the requirement, the relation to other standards and a procedure to show the fulfilment of the requirement as far as necessary. An overview on the safety relevance of each parameter is given – in the context of this European Standard – in a separate table.

This European Standard is intended to be used to assess compliance of axle counter systems and other forms of wheel sensors used for train detection, in the context of the European Directive on the interoperability of the trans-European railway system and the associated technical specification for interoperability relating to the control-command and signalling track-side subsystems.

The frequency bands and rolling stock emission limits are currently defined in the axle counter FrM as specified in the CCS TSI Index 77.

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 50121-4, *Railway applications — Electromagnetic compatibility — Part 4: Emission and immunity of the signalling and telecommunications apparatus*

EN 50124-2, *Railway applications — Insulation coordination — Part 2: Overvoltages and related protection*

EN 50125-3:2003, *Railway applications — Environmental conditions for equipment — Part 3: Equipment for signaling and telecommunications*

EN 50126 (all parts), *Railway applications — The specification and demonstration of Reliability, Availability, Maintainability and Safety (RAMS)*

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

EN 50129, *Railway applications — Communications, signalling and processing systems — Safety related electronic systems for signalling*

EN 50238-1, *Compatibility between rolling stock and train detection systems — Part 1: General*

EN 60068-2-1, *Environmental testing — Part 2-1: Tests — Tests A: Cold (IEC 60068-2-1)*