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ELEKTROMAGNETILISE ÜHILDUVUSE KATSEMEETODID
TELJELOENDURITEGA

Railway applications - Testing of rolling stock for
electromagnetic compatibility with axle counters

EESTI STANDARDI EESSÕNA

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See Eesti standard EVS-EN 50592:2016 sisaldab Euroopa standardi EN 50592:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 50592:2016 consists of the English text of the European standard EN 50592:2016.
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English Version

Railway applications - Testing of rolling stock for electromagnetic compatibility with axle counters

Applications ferroviaires - Essais du matériel roulant pour la compatibilité électromagnétique avec les compteurs d'essieux

Bahnwendungen - Prüfung von Fahrzeugen auf elektromagnetische Verträglichkeit mit Achszählern

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European foreword

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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) 2017-07-22
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2019-07-22

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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.

Introduction

This European Standard is being developed to permit compliance with the Railway Interoperability Directives. The vehicle test methodology presented in this European Standard is also applicable to the demonstration of compatibility with all types of axle counters which have established compatibility limits according to EN 50617-2.

Compliance with the limits for rolling stock is necessary for a reliable and safe operation of the railway system.

1 Scope

This European Standard defines, for the purpose of ensuring compatibility between rolling stock and axle counter systems, the measurement and evaluation methods of rolling stock emissions to demonstrate compatibility. The established limits for compatibility are defined as magnetic field strength that can disturb the axle counter detectors, as part of the axle counter system.

In the relevant frequency range of the axle counter detectors the magnetic field is dominant and only this type of field is considered. Experience has shown that the effects of electric fields are insignificant and therefore not considered.

NOTE 1 For axle counters systems whose limits are not defined in terms of magnetic fields at a detector level, National Rules apply where they exist (for more details, see also 4.1).

NOTE 2 The influence from metal parts or inductively coupled resonant circuits on the vehicle, eddy current brakes or magnetic brakes is out of the scope of this EN. Compatibility is established through individual testing according to the EN 50238 series or National Notified Technical Rules.

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

CLC/TS 50238-2, *Railway applications — Compatibility between rolling stock and train detection systems — Part 2: Compatibility with track circuits*

CLC/TS 50238-3, *Railway applications — Compatibility between rolling stock and train detection systems — Part 3: Compatibility with axle counters*

EN 50617-2, *Railway Applications — Technical parameters of train detection systems for the interoperability of the trans-European railway system - Part 2: Axle counters*

CISPR 16-4-2, *Specification for radio disturbance and immunity measuring apparatus and methods — Part 4-2: Uncertainties, statistics and limit modelling — Measurement instrumentation uncertainty*

ERA/ERTMS/033281, *Interfaces between Control-Command and Signalling Trackside and Other Subsystems*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the terms, definitions and abbreviations given in EN 50238 (all parts) and the following apply.

3.1.1

axle counter detector

detector consisting of the axle counter sensor and of the detection circuit, which includes in general filters and rectifiers

[SOURCE: EN 50617-2:2015, 3.1.2]

3.1.2

axle counter sensor

sensor head mounted in the track