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**Railway applications –
Interference limits of existing track circuits used on European railways**
(CENELEC Technical Report 50507:2007)

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Upplysningar om **sakinnehållet** i rapporten lämnas av
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English version

**Railway applications –
Interference limits of existing track circuits used on European railways**

Applications ferroviaires -
Limites des interférences des circuits
de voie existants sur les réseaux
ferroviaires européens

Bahnanwendungen -
Störgrenzwerte von Gleiskreisen
der europäischen Bahnen

This Technical Report was approved by CENELEC on 2007-01-16.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, 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 and the United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

This Technical Report was prepared by SC 9XA, Communication, signalling and processing systems, of Technical Committee CENELEC TC 9X, Electrical and electronic applications for railways.

The draft, which was based on information supplied by some European railway infrastructure authorities for track circuits currently in use in the individual countries, was submitted to vote and was approved by CENELEC as CLC/TR 50507 on 2007-01-16.

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1 Scope

This Technical Report has been written to define the interference limits of existing track circuits used on European railways. The purpose of this Technical Report is to provide an overview, a reference and a source of information for other specifications and specifications that are presently in preparation. As required by the CENELEC rules, it will be updated as needed and will be finally replaced by a future specification or standard.

According to CENELEC rules, the existing national specifications are not required to be replaced by this Technical Report. They will remain in use as the basis for approval of vehicles in the respective countries. Where available, the national specifications are referenced in Annex A of this Technical Report.

The two main parts of this Technical Report are:

- 1) the List of European track circuit equipment;
- 2) the National Annex.

The contents of these two parts have been provided by railway infrastructure representatives. Not all EU countries have provided information and in some cases the information may be incomplete.

In 4.5, the track circuits are classified into preferred and non-preferred types ¹⁾ with regard to their future use on interoperable lines. This definition provides an indication which types of track circuits are preferred for new signalling projects.

In Annex A the interference limits and test specifications are defined within a template prepared by CENELEC, which is intended to ensure a large degree of common content and to facilitate comparisons between national specifications. The content of Annex A is based on existing national specifications.

This Technical Report will remain informative until it is replaced by a specification. It may, however, be used as a basis for defining requirements, for example in improved national specifications. If the content is used in the TSI, the TSI document shall clearly define the consequences of the requirements. The vehicles have only to be made compatible with the track circuits used on the lines where they run, as defined in EN 50238. Normally an approval certificate will be restricted to these lines or countries.

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 50238, *Railway applications - Compatibility between rolling stock and train detection systems*

UIC leaflet 512, *Rolling stock – Conditions to be fulfilled in order to avoid difficulties in the operation of track circuits and treadles*

TSI CCS AAA1; *Train detection systems characteristics necessary to be compatible with rolling stock.*

¹⁾ Previously Class A and Class B as defined in TSI CCS.