



BSI Standards Publication

Railway applications - Electromagnetic compatibility

Part 4: Emission and immunity of the signalling
and telecommunications apparatus

National foreword

This British Standard is the UK implementation of EN 50121-4:2016+A1:2019. It supersedes BS EN 50121-4:2016, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to CENELEC text carry the number of the CENELEC amendment. For example, text altered by CENELEC amendment A1 is indicated by A1 A1.

The UK participation in its preparation was entrusted to Technical Committee GEL/9, Railway Electrotechnical Applications.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Date	Text affected
31 May 2019	Implementation of CENELEC amendment A1:2019

English Version

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

Applications ferroviaires - Compatibilité électromagnétique -
Partie 4: Emission et immunité des appareils de
signalisation et de télécommunication

Bahnanwendungen - Elektromagnetische Verträglichkeit -
Teil 4: Störaussendungen und Störfestigkeit von Signal-
und Telekommunikationseinrichtungen

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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European foreword

This document (EN 50121-4:2016) has been prepared by 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) 2017-07-24
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2019-10-24

This document supersedes EN 50121-4:2015.

EN 50121-4:2016 includes the following significant technical changes with respect to EN 50121-4:2006:

- clarification of scope (Clause 1);
- set dated normative references (Clause 2);
- new definition (Clause 3);
- emission requirement extended in the frequency range 1 GHz to 6 GHz following EN 61000-6-4;
- immunity requirement extended in the frequency range 5,1 GHz to 6 GHz;

EN 50121-4:2016 includes the following significant technical changes with respect to EN 50121-4:2015

- revision of Annex ZZ.

This European Standard is to be read in conjunction with EN 50121-1.

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) see informative Annex ZZ, which is an integral part of this document.

This standard forms Part 4 of the European Standard series EN 50121, published under the general title "Railway applications - Electromagnetic compatibility". The series consists of:

- Part 1: *General*;
- Part 2: *Emission of the whole railway system to the outside world*;
- Part 3-1: *Rolling stock – Train and complete vehicle*;
- Part 3-2: *Rolling stock – Apparatus*;
- Part 4: *Emission and immunity of the signalling and telecommunications apparatus*;
- Part 5: *Emission and immunity of fixed power supply installations and apparatus*.

Introduction

This European Standard has been prepared in the form of a Product Standard.

It defines the immunity and emission test requirements for apparatus defined in the scope in relation to the electromagnetic disturbances likely to be experienced in the railway. In particular, the test requirements represent the essential electromagnetic immunity requirements and have been selected to ensure an adequate level of immunity for apparatus installed on the railway locations.

Test requirements are specified for each port considered.

Safety considerations are not covered by this standard.

In specific situations, where the level of disturbances may exceed the levels considered in this standard, e.g. at a special location or where a hand-held transmitter is used in very close proximity to an apparatus, special mitigation measures may have to be employed.