

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Railway applications – Electromagnetic compatibility –
Part 2: Emission of the whole railway system to the outside world**

**Applications ferroviaires – Compatibilité électromagnétique –
Partie 2: Émission du système ferroviaire dans son ensemble vers le monde
extérieur**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**RAILWAY APPLICATIONS –
ELECTROMAGNETIC COMPATIBILITY –****Part 2: Emission of the whole railway system to the outside world****FOREWORD**

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International Standard IEC 62236-2 has been prepared by IEC technical committee 9: Electrical equipment and systems for railways.

This third edition cancels and replaces the second edition published in 2008. It constitutes a technical revision and has been developed on the basis of EN 50121-2:2015.

This edition includes the following significant technical changes with respect to the previous edition:

- a) clarification of scope (Clause 1);
- b) combination of former Clause 5 and Annex A related to method of measurement for moving trains and traction substations (5.1);
- c) moving emission values for radiated H-fields in the frequency range 9 kHz to 150 kHz to new Annex C due to the fact that:
 - there are very few outside world victims;

- there is low reproducibility.
- d) clarification of acquisition method (5.2).

This International Standard is to be read in conjunction with IEC 62236-1.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
9/2336/FDIS	9/2366/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

A list of all parts in the IEC 62236, published under the general title *Railway applications – Electromagnetic compatibility*, can be found on the IEC website.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

RAILWAY APPLICATIONS – ELECTROMAGNETIC COMPATIBILITY –

Part 2: Emission of the whole railway system to the outside world

1 Scope

This part of IEC 62236 is intended to define the electromagnetic environment of the whole railway system including urban mass transit and light rail system. It describes the measurement method to verify the emissions, and gives the cartography values of the fields most frequently encountered.

This document specifies the emission limits of the whole railway system to the outside world.

The emission parameters refer to the particular measuring points defined in Clause 5. These emissions are assumed to exist at all points in the vertical planes which are 10 m from the centre lines of the outer electrified railway tracks, or 10 m from the fence of the substations.

Also, the zones above and below the railway system may be affected by electromagnetic emissions and particular cases are considered individually.

These specific provisions are used in conjunction with the general provisions in IEC 62236-1.

For existing railway lines, it is assumed that compliance with the emission requirements of IEC 62236-3-1, IEC 62236-3-2, IEC 62236-4 and IEC 62236-5 will ensure the compliance with the emission values given in this document.

For newly built railway systems, it is best practice to provide compliance to the emission limits given in this document (to be defined in the EMC plan according to IEC 62236-1).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

IEC 62236-1:2018, *Railway applications – Electromagnetic compatibility – Part 1: General*

CISPR 16-1-1:2015, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 1-1: Radio disturbance and immunity measuring apparatus – Measuring apparatus*

CISPR 16-1-4:2010, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 1-4: Radio disturbance and immunity measuring apparatus – Antennas and test sites for radiated disturbance measurements*

CISPR 16-1-4:2010/AMD1:2012

CISPR 16-1-4:2010/AMD2:2017

3 Terms, definitions and abbreviated terms

For the purposes of this document, the following terms and definitions apply.