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Information technology - RFID in rail

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ICS 35.040.50, 35.240.60

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EUROPEAN STANDARD

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## Information technology - RFID in rail

Technologies de l'information - Identification par radiofréquence dans le secteur ferroviaire

Informationstechnik - RFID in Eisenbahnanwendungen

This European Standard was approved by CEN on 11 October 2020.

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## European foreword

This document (EN 17230:2020) has been prepared by Technical Committee CEN/TC 225 “AIDC Technologies”, the secretariat of which is held by TSE.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2021, and conflicting national standards shall be withdrawn at the latest May 2021.

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## **Introduction**

The aim of this document is to describe the implementation of the European Vehicle Number (EVN) of the railway rolling stock in an electronic format via the ISO/IEC 18000-63 UHF Radio Frequency Identification (RFID) technology in order to enable a consistent approach for an interoperable implementation.

Furthermore, the authors of this document recognize that there exists today rolling stock which uses other numbering schemes than the EVN, for example in the Baltic States. Some of these cases are addressed in this document for informative purposes.

## 1 Scope

The RFID tag location, tag data content and functional requirements have been developed for application on the main line railway networks. Other networks (such as metro) could apply to this document but are outside of its scope.

This document contains:

- description of the RFID tag installation location;
- description of the RFID tag data content;
- description of the functional requirements in relation to the RFID tag track side reading performance.

## 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.

EN 13775-1, *Railway applications - Measuring of new and modified freight wagons - Part 1: Measuring principles*

EN 14067-1:2003, *Railway applications - Aerodynamics - Part 1: Symbols and units*

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

ETSI EN 302 208, *Electromagnetic compatibility and Radio spectrum Matters (ERM); Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W and in the band 915 MHz to 921 MHz with power levels up to 4 W*

ISO/IEC 15459 (all parts), *Information technology - Automatic identification and data capture techniques - Unique identification*

ISO/IEC 18000-63, *Information technology - Radio frequency identification for item management - Part 63: Parameters for air interface communications at 860 MHz to 960 MHz Type C*

ISO/IEC 19762, *Information technology - Automatic identification and data capture (AIDC) techniques - Harmonized vocabulary*

ISO/IEC 20248, *Information technology - Automatic identification and data capture techniques - Data structures - Digital signature meta structure*