Railway applications - Radio remote control system of traction vehicle for shunting application

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NATIONAL FOREWORD

See Eesti standard EVS-EN 50239:2018 sisaldab Euroopa standardi EN 50239:2018 ingliskeelset teksti.	This Estonian standard EVS-EN 50239:2018 consists of the English text of the European standard EN 50239:2018.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 19.01.2018.	Date of Availability of the European standard is 19.01.2018.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 33.200, 45.060.10

EUROPEAN STANDARD

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English Version

Railway applications - Radio remote control system of traction vehicle for shunting application

Applications ferroviaires - Système de radiocommande à distance des véhicules de traction pour application de manoeuvre

Bahnanwendungen - Funkfernsteuerung von Triebfahrzeugen für Rangierbetrieb

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
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European foreword

This document (EN 50239:2018) has been prepared by CLC/SC 9XA “Communication, signalling, and processing systems” of CLC/TC 9X “Electrical and electronic applications for railways”.

This document supersedes EN 50239:1999.

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)	2018-11-27
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2020-11-27

The main changes with respect to EN 50239:1999 are listed below:

- contents related to Safety Integrity Level (SIL) have been deleted, in particular Annex A with all its examples of EN 50239:1999;
- the text of this European Standard is considering only shunting application;
- the title has been replaced by “Railway applications – Radio remote control system of traction vehicles for shunting application”.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

Introduction

This European Standard is prompted to offer a minimum set of requirements for the application of remote control of traction vehicles by means of radio communication, operated by ground personnel during shunting.

The minimum set of requirements is considered with reference to the following aspects:

- operational requirements for the use of radio remote control system;
- functional requirements for the radio remote control system;
- technical requirements for the radio remote control system.

1 Scope

This European Standard contains the application requirements relevant to the radio remote control of a traction unit for shunting application, operated by personnel not physically located at the controls within the vehicle cab.

Requirements specification for radio means and wireless protocols, as well as requirements specification for wireless communication between elements of the train, are not covered by this standard.

This European Standard is applicable to newly manufactured vehicles and retrofitted vehicles.

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 1037, *Safety of machinery - Prevention of unexpected start-up*

EN 50121-3-2:2016, *Railway applications - Electromagnetic compatibility - Part 3-2: Rolling stock - Apparatus*

EN 50121-4:2016, *Railway applications - Electromagnetic compatibility - Part 4: Emission and immunity of the signalling and telecommunications apparatus*

EN 50125-1:2014, *Railway applications - Environmental conditions for equipment - Part 1: Rolling stock and on-board equipment*

EN 50126-1, *Railway Applications - The Specification and Demonstration of Reliability, Availability, Maintainability and Safety (RAMS) - Part 1: Generic RAMS Process*

EN 50128, *Railway applications - Communication, signalling and processing systems - Software for railway control and protection systems*

EN 50129, *Railway applications - Communication, signalling and processing systems - Safety related electronic systems for signalling*

EN 50155:2017, *Railway applications - Rolling stock - Electronic equipment*

EN 50159, *Railway applications - Communication, signalling and processing systems - Safety-related communication in transmission systems*

3 Terms and definitions

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

3.1
addressing
set of rules that allows only the designated transmitter to address the corresponding receiver

3.2
command signal
signal from the transmitter or from the local control device to the traction vehicle to perform the specified task

3.3
direct acting brake
brake which uses directly controlled air pressure for creating braking effort, it means that by increasing the pressure in the brake pipe, the braking effort is increased, too