

RAUDTEEALASED RAKENDUSED. NÕUDED ERTMS-I
RAUDTEEÄÄRSETELE SIGNAALIDELE

Railway applications - Requirements for ERTMS
Trackside Boards

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 16494:2025 sisaldab Euroopa standardi EN 16494:2025 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 09.04.2025.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 16494:2025 consists of the English text of the European standard EN 16494:2025.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 09.04.2025.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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ICS 03.220.30, 33.070.50

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EUROPEAN STANDARD

EN 16494

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Supersedes EN 16494:2015

English Version

Railway applications - Requirements for ERTMS Trackside Boards

Applications ferroviaires - Exigences relatives aux pancartes ERTMS

Bahnanwendungen - Anforderungen an ERTMS-Strecken- und Signaltafeln

This European Standard was approved by CEN on 24 February 2025.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 16494:2025) has been prepared by Technical Committee CEN/TC 256 "Railway applications", the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by October 2025, and conflicting national standards shall be withdrawn at the latest by October 2025.

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

This document supersedes EN 16494:2015.

This document includes the following changes with respect to EN 16494:2015:

- clarification of the scope to exclude mobile, backlit and temporary signs;
- dimensional corrections to the ETCS Stop Marker and ETCS Location Marker;
- new trackside boards were introduced (traction system 25 kV, 15 kV, 3000 V, 1500 V and 750 V, audible warning device, safe stopping area, non-stopping area, inhibition of magnetic shoe brake, inhibition of eddy current brake, inhibition of regenerative brake and level crossing marker);
- an option for diamond-shaped trackside boards (electric traction MBs only);
- clarification to existing maintenance requirements;
- revision of the options for standard dimensions.

This document has been prepared under a standardization request addressed to CEN and CENELEC by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

This document was produced for the specification and harmonization of a specific set of ERTMS trackside boards to support ETCS and GSM-R operations.

This document is a preview generated by EVS

1 Scope

This document is applicable to the heavy rail system.

This document defines the requirements for the provision, visibility, readability, maintenance and testing of a specific set of ERTMS trackside boards associated with the following DMI and ETCS track conditions:

- ETCS stop marker;
- ETCS location marker;
- level transition, corresponding to transitions between ETCS levels;
- lower pantograph;
- pantograph lowered;
- raise pantograph;
- neutral section announcement;
- neutral section;
- end of neutral section;
- GSM-R network border marker;
- no traction system fitted announcement;
- no traction system fitted indication;
- traction system AC 25 kV 50 Hz announcement;
- traction system AC 25 kV 50 Hz indication;
- traction system AC 15 kV 16,7 Hz announcement;
- traction system AC 15 kV 16,7 Hz indication;
- traction system DC 3 kV announcement;
- traction system DC 3 kV indication;
- traction system DC 1,5 kV announcement;
- traction system DC 1,5 kV indication;
- traction system DC 600/750 V announcement;
- traction system DC 600/750 V indication;
- activate the audible warning device (horn) indication;
- safe stopping area announcement;
- safe stopping area indication for start;

- safe stopping area indication for end;
- inhibition of brake announcement/indication for start/indication for revocation;
- level crossing marker.

NOTE The brake MBs apply for any of the three brake types (eddy current, magnetic shoe, regenerative), whereas the exact type concerned would be known by the driver via existing Route knowledge.

The following ETCS track conditions are outside the scope of this document:

- safe stopping area semi-continuous indication for in-between;
- non-stopping area announcement;
- non-stopping area indication for start;
- non-stopping area indication for end;
- non-stopping area semi-continuous indication for in-between;
- close air conditioning intake announcement;
- close air conditioning intake indication;
- open air conditioning intake announcement;
- open air conditioning intake indication.

This document includes the arrangement of the boards and their interface with existing systems (track, cab design including cab sight lines, visibility by the driver and train head lamps).

Mobile, backlit and temporary signs are not within the scope of this document.

The application of ERTMS trackside boards is not within the scope of this document.

Sighting requirements are not within the scope of this document. The sighting process needs to be implemented in accordance with national rules.

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 12899-1:2007, *Fixed, vertical road traffic signs - Part 1: Fixed signs*

EN 50125-3:2003,¹ *Railway applications - Environmental conditions for equipment - Part 3: Equipment for signalling and telecommunications*

¹ Document impacted by EN 50125-3:2003/AC:2010.