

## **Raudteelased rakendused. Veosüsteemide tööpinge**

Railway applications - Supply voltages of traction systems

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 50163:2005 sisaldab Euroopa standardi EN 50163:2004 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 23.02.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 50163:2005 consists of the English text of the European standard EN 50163:2004.</p> <p>This document is endorsed on 23.02.2005 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This European Standard specifies the main characteristics of the supply voltages of traction systems, such as traction fixed installations, including auxiliary devices fed by the contact line, and rolling stock, for use in the following applications : – railways; - guided mass transport systems such as tramways, elevated and underground railways mountain railways, and trolleybus systems; – material transportation systems.</p>	<p><b>Scope:</b></p> <p>This European Standard specifies the main characteristics of the supply voltages of traction systems, such as traction fixed installations, including auxiliary devices fed by the contact line, and rolling stock, for use in the following applications : – railways; - guided mass transport systems such as tramways, elevated and underground railways mountain railways, and trolleybus systems; – material transportation systems.</p>
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ICS 29.280

Võtmesõnad:

English version

## **Railway applications – Supply voltages of traction systems**

Applications ferroviaires –  
Tensions d'alimentation des réseaux  
de traction

Bahnanwendungen –  
Speisespannungen von Bahnnetzen

This European Standard was approved by CENELEC on 2004-07-06. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

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 CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

# **CENELEC**

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

This European Standard was prepared by SC 9XC, Electric supply and earthing systems for public transport equipment and ancillary apparatus (fixed installations), of the Technical Committee CENELEC TC 9X, Electrical and electronic applications for railways. It also concerns the expertise of SC 9XB, Electromechanical material on board of rolling stock.

For TSI lines, modifications and amendments should be made within a process frame which is related to the legal status of the TSI.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50163 on 2004-07-06.

This European Standard supersedes EN 50163:1995.

The following dates were fixed:

- latest date by which the EN has to be implemented  
at national level by publication of an identical  
national standard or by endorsement (dop) 2005-07-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2007-07-01

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and covers essential requirements of EC Directives. See Annex ZZ.

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## 1 Scope

This European Standard specifies the main characteristics of the supply voltages of traction systems, such as traction fixed installations, including auxiliary devices fed by the contact line, and rolling stock, for use in the following applications :

- railways;
- guided mass transport systems such as tramways, elevated and underground railways mountain railways, and trolleybus systems;
- material transportation systems.

This European Standard does not apply to

- mine traction systems in underground mines,
- cranes, transportable platforms and similar transportation equipment on rails, temporary structures (e.g. exhibition structures) in so far as these are not supplied directly or via transformers from the contact line system and are not endangered by the traction power supply system,
- suspended cable cars,
- funicular railways.

This European Standard deals with long term overvoltages as shown in the Annex A.

## 2 Normative references

The following referenced documents are indispensable for the application 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 50119	Railway applications – Fixed installations - Electric traction overhead contact lines
EN 50122-1:1997	Railway applications – Fixed installations – Part 1: Protective provisions relating to electrical safety and earthing
EN 50160:1999	Voltage characteristics of electricity supplied by public distribution systems
EN 50215:1999	Railway applications – Testing of rolling stock after completion of construction and before entry into service
EN 50388 <sup>1)</sup>	Railway applications – Power supply and rolling stock – Technical criteria for the coordination between power supply (substation) and rolling stock to achieve interoperability
IEC 60050-811	International Electrotechnical vocabulary - Chapter 811: Electric traction

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<sup>1)</sup> At draft stage.