

Railway applications - Supply voltages of traction systems

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NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 50163:2002 sisaldab Euroopa standardi EN 50163:1995 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 18.12.2002 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 50163:2002 consists of the English text of the European standard EN 50163:1995.

This standard is ratified with the order of Estonian Centre for Standardisation dated 18.12.2002 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

ICS 29.280

characteristics, definitions, electric power supply, electric traction, railway vehicle, voltage

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ICS 29.280

Descriptors: Electric traction, railway vehicle, electric power supply, voltage, definitions, characteristics

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 1995-03-06. 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, 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

The CENELEC questionnaire procedure, performed for finding out whether or not IEC 850:1988 could be accepted without textual changes, has shown that some CENELEC common modifications were necessary for the acceptance as European Standard.

A first draft, prepared by the Technical Committee CENELEC TC 9X, Electrical and electronic applications for railways, and the ad hoc Working Group on the revision of IEC 850 was submitted to the Unique Acceptance Procedure but did not receive a sufficient number of positive votes.

A new draft was submitted to the formal vote and was approved by CENELEC as EN 50163 on 1995-03-06.

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) 1996-03-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 1996-03-01

For products which have complied with the relevant national standard before 1996-03-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2001-03-01.

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Introduction

National variations to this standard may exist provided they fulfil the following conditions:

- they apply to minor routes or well-localised areas;
- they are not likely to give advantage to local manufacturers at the time of the tenders;
- they do not involve European traffic.

In that case, they are considered de facto as special national conditions.

1 Scope

This standard applies to line voltages of traction systems under normal operating conditions.

NOTE: Specifications in other international documents referring to "the maximum voltage value specified in IEC 850" shall be interpreted as referring to $U_{\max 1}$ until such time as these documents have determined the appropriate definition of maximum voltage following the publication of EN 50163.

2 Definitions

2.1 voltage U

The potential at the train's current collector, measured between the supply conductor and the return conductor.

The values given in table 1 assume that the electrification system is operating normally with no maintenance outages or electrical faults.

This standard concerns mean value of d.c. voltage or r.m.s value of the fundamental (1st harmonic) a.c. voltage.

2.2 nominal voltage U_n

The designated value for a system.

2.3 highest permanent voltage $U_{\max 1}$

The maximum value of the voltage likely to be present indefinitely.