Railway applications - Fixed installations - Particular requirements for a.c. switchgear -- Part 2: Single-phase disconnectors, earthing switches and switches with Un above 1 kV

Railway applications - Fixed installations - Particular requirements for a.c. switchgear -- Part 2: Single-phase disconnectors, earthing switches and switches with Un above 1 kV

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 50152-2:2008 sisaldab Euroopa standardi EN 50152-2:2007 ingliskeelset teksti.	This Estonian standard EVS-EN 50152-2:2008 consists of the English text of the European standard EN 50152-2:2007.
Standard on kinnitatud Eesti Standardikeskuse 31.01.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 31.01.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 14.12.2007.	Date of Availability of the European standard text 14.12.2007.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 29.280, 45.020

Võtmesõnad: a.c., characteristic, definition, disconnector, electric switchgear, electric traction, railway fixed equipment, requirement, switch, test

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50152-2

December 2007

ICS 29.280; 45.020

Supersedes EN 50152-2:1997

English version

Railway applications - Fixed installations - Particular requirements for a.c. switchgear - Part 2: Single-phase disconnectors, earthing switches and switches with U_n above 1 kV

Applications ferroviaires - Installations fixes - Spécifications particulières pour appareillage à courant alternatif - Partie 2: Sectionneurs monophasés, sectionneurs de terre et commutateurs avec U_n supérieur à 1 kV

Bahnanwendungen - Ortsfeste Anlagen - Besondere Anforderungen an Wechselstrom-Schaltanlagen - Teil 2: Einphasige Trennschalter, Erdungsschalter und Lastschalter mit U_n über 1 kV

This European Standard was approved by CENELEC on 2007-07-01. 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, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the 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

Ref. No. EN 50152-2:2007 E

Foreword

This European Standard was prepared by SC 9XC, Electric supply and earthing systems for public transport equipment and ancillary apparatus (fixed installations), of Technical Committee CENELEC TC 9X, Electric and electronic applications for railways.

This European Standard supersedes EN 50152-2:1997 and has been prepared taking into account the changes that have been made in the high voltage switchgear and controlgear Standards of IEC TC 17 and in EN 50124-1/A2:2005.

This document is technically equivalent to EN 50152-2:1997 except for the normative references which have changed and the revised classification of rated insulation voltages according to Table A.2 of EN 50124-1/A2:2005.

The text of the draft was submitted to the unique acceptance procedure and was approved as EN 50152-2 on 2007-07-01.

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) 2008-07-01

– latest date by which the national Standards conflicting with the EN have to be withdrawn (dow) 2010-07-01

This Part 2 is to be used in conjunction with EN 62271-102, and/or EN 60265-1, depending from the equipment involved.

Contents

Page

Tables

Introduction

EN 50152 series is divided as follows:

Part 1: Single-phase circuit breakers with U_n above 1 kV.

Part 2: Single-phase disconnectors, earthing switches and switches with U_n above 1 kV.

Part 3-1: Measurement, control and protection devices for specific use in a.c. traction systems – Application guide.

Part 3-2: Measurement, control and protection devices for specific use in a.c. traction systems – Single-phase current transformers.

Part 3-3: Measurement, control and protection devices for specific use in a.c. traction systems – Single-phase voltage transformers.

EN 50152-2 has to be used in conjunction with EN 62271-102 and EN 60265-1.

Where a particular Clause of EN 62271-102 and EN 60265-1 is not mentioned in this standard, that Clause applies as far as reasonable. Where requirements relate exclusively to three-phase systems or to voltages outside those in use in traction systems, they are not applicable. Where this standard states "addition" or "replacement", the relevant text of EN 62271-102 and EN 60265-1 is to be adapted accordingly.

The numbering of clauses in EN 60694, EN 62271-102 and EN 60265-1 is not used in this European Standard. The numbering in square brackets refers to the numbering of clauses in EN 60694, EN 62271-102 and EN 60265-1.

NOTE 1 Where terms defined in EN 62271-102 and EN 60265-1 conflict with definitions of same terms as given in IEC 60050-811:1991, or the other railway applications documents listed in the normative references, the definitions used in EN 62271-102 and EN 60265-1 are to be used.

NOTE 2 The suffix N which appears in this Standard for rated values is not used in EN 62271-102 and EN 60265-1.

1 Scope

This EN 50152-2 is applicable to single-phase a.c. one-pole disconnectors, earthing switches and switches (switch-disconnectors and general purpose switches) designed for indoor or outdoor fixed installations for operation at frequencies of 16,7 Hz and 50 Hz on traction systems having an U_{Nm} above 1 kV up to 52 kV.

This EN 50152-2 is also applicable to two-pole disconnectors, earthing switches and switches (switch-disconnectors and general purpose switches) connected in the following manner either:

a) one pole supplying the connection to the contact line of the track, the other supplying the connection to the feeder cable which runs alongside the same track and is used to boost the track voltage at regular intervals in combination with autotransformers;

or

b) the two poles of the disconnector, earthing switch or switch (switch-disconnector or general purpose switch) are connected in series to provide secure isolation (i.e. two breaks in series).

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 50124-1:2001 + A2:2005, *Railway applications - Insulation coordination - Part 1: Basic requirements - Clearances and creepage distances for all electrical and electronic equipment*

EN 50152-1, 2007, *Railway applications - Fixed installations - Particular requirements for a.c. switchgear - Part 1: Single phase circuit breakers with U_n above 1 kV*

EN 50163:2004, *Railway applications - Supply voltages of traction systems*

EN 60265-1:1998, *High voltage switches - Part 1: Switches for rated voltages above 1 kV and less than 52 kV* (IEC 60265-1:1998)

EN 60507:1993, *Artificial pollution tests on high voltage insulators to be used in a.c. systems* (IEC 60507:1991)

EN 60694:1996, *Common specifications for high-voltage switchgear and controlgear standards* (IEC 60694:1996)

EN 60721 (all parts)*, Classification of environmental conditions* (IEC 60721 all parts)

EN 62271-100:2001*, High-voltage switchgear and controlgear - Part 100: High-voltage alternating current circuit-breakers* (IEC 62271-100:2001)

EN 62271-102:2002*, High-voltage switchgear and controlgear - Part 102: Alternating current disconnectors and earthing switches* (IEC 62271-102:2001)

IEC 60050-811:1991, *International Electrotechnical Vocabulary (IEV) - Chapter 811: Electric traction*