STANDARDISERINGEN I SVERIGE
SWEDISH STANDARDS INSTITUTION

SVENSK STANDARD **SS-EN 50152-1**

Handläggande organ	Fastställd	Utgåva	Ingår i
Svenska Elektriska Kommissionen, SEK	1997-09-26	1	SEK Översikt 9
			Reg 481 01 41

Järnvägsanläggningar - Fasta installationer - Särskilda fordringar på växelspänningsställverk - Del 1: Enfas effektbrytare med märkspänning över 1 kV

Railway applications - Fixed installations - Particular requirements for AC switchgear - Part 1: Single-phase circuit-breakers with U_m above 1 kV

NORSTEDTS TRYCKERI
TRYCKT PÅ PAPPER MILJÖMÄRKT MED SVANEN

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Som svensk standard gäller europastandarden EN 50152-1:1997. Den svenska standarden innehåller den officiella engelska språkversionen av EN 50152-1:1997.

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ICS 29.120.60; 45.020

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Tryckt i oktober 1997

NORSTEDTS TRYCKERI
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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50152-1

June 1997

ICS 29.120.60; 45.020

Descriptors: Railway fixed equipment, electric traction, a.c., electric switchgear, circuit-breaker, definition, characteristic, test, requirement

English version

Railway applications - Fixed installations
Particular requirements for a,c. switchgear
Part 1: Single-phase circuit-breakers with U, above 1 kV

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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 50152-1:1997 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.

The text of the draft was submitted to the unique acceptance procedure and was approved by CENELEC as EN 50152 on 1996-10-01.

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) 1997-12-01

- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1997-12-01

This Part 1 is to be used in conjunction with HD 348 S6: 1995

Annexes designated “informative” are given for information only.
In this standard, annex A is informative.

Contents

Introduction

This standard is divided into two parts:

- Part 1 gives requirements for single-phase circuit-breakers with Um above 1 kV.

- Part 2 gives requirements for single-phase disconnectors, earthing switches and switches with Um above 1 kV.

EN 50152-1 has to be used in conjunction with HD 348 S6: 1995 *High-voltage alternating-current circuit-breakers* (IEC 56:1997 + A1:1992).

The essential requirements of HD 348 S6 have been transcribed in the document. Other complementary clauses of HD 348 S6 are mentioned in this standard. Where a particular subclause of HD 348 is not mentioned, but is not referred as "void" in this standard, that subclause applies as far as reasonable. Where this standard states "addition" or "replacement", the relevant text of HD 348 S6 is to be adapted accordingly.

NOTE 1: Where terms defined in HD 348 S6 conflict with definitions of the same terms as given in IEC 50(811): 1991 or of the other railway applications documents listed in the normative references, the definitions used in HD 348 S6: 1995 are to be used.

NOTE 2: The suffix *N* which appears in this Standard for rated values is not present in HD 348 S6.

The following print types are used:

1) Roman numbers and capital bold type for chapters of HD 348 and IEC 56;
2) Arab numbers and capital bold type for clauses of HD 348 and IEC 56;
2) Arab numbers and bold italic/reman type for other titles;
3) Roman type for requirements;
4) *Italic type for text specifications;*
5) small Roman types for explanations.

Normative references are referred in this introduction. Other documents applicable to this equipment when used for railway applications are listed in annex A.

Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications, These normative references are cited at the appropriate places in the text and the publications are listed thereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 50124-1	199X[1)]	Railway applications - Insulation co-ordination - Part 1: Basic requirements - Clearances and creepage distances
EN 50163	1995	Railway applications - Supply voltages of traction systems
EN 60068-2 HD 323.2	series series	Environmental testing - Part 2: Tests (IEC 68-2 series)
EN 60129 +A1 +A2	1994 1994 1996	Alternating current disconnectors and earthing switches
EN 60137	1996	Insulated bushings for alternating voltages above 1 kV (IEC 137:1995)
EN 60427	1992	Synthetic testing of high-voltage alternating current circuit-breakers (IEC 427:1989)
EN 60507	1993	Artificial pollution tests on high voltage insulators to be used on a.c. systems (IEC 507:1991)
HD 60694	1996	Common clauses for high-voltage switchgear and controlgear standards (IEC 694:1996)
HD 348 S6	1995	High-voltage alternating-current circuit-breakers (IEC 56:1987 + A1:1992 + A2:1995, mod.)
HD 478.2	series	Classification of environmental conditions - Part 2: Environmental conditions appearing in nature (IEC 721 series)
HD 553 S2	1993	Current transformers (IEC 185:1987 + A1:1990, modified)
HD 566 S1	1990	Thermal evaluation and classification of electric insulation (IEC 85:1984)
HD 588.1 S1	1991	High-voltage test techniques - Part 1: General definitions and test requirements (IEC 60-1:1989 + corrigenda March 1990 + March 1992)
IEC 50(605)	1983	International Electrotechnical Vocabulary (IEV) Chapter 605: Generation, transmission and distribution of electricity - Substations
IEC 50(811)	1991	Chapter 811: Electric traction
IEC 815	1986	Guide for the selection of insulators in respect of polluted conditions

[1)] in preparation.

I SERVICE CONDITIONS, DEFINITIONS, RATING, CONSTRUCTION AND DESIGN

1 SCOPE

This EN 50152-1 is applicable to single-phase a.c. one-pole circuit-breakers designed for indoor or outdoor fixed installations for operation at frequencies of 16 2/3 Hz and 50 Hz on traction systems having an U_{Nm} above 1 kV up to 52 kV.

This EN 50152-1 is also applicable to two-pole circuit-breakers when connected in the following manner: one pole supplying the connection to the contact line of the track, the second pole supplying the connection to the feeder cable which runs alongside the same track and which is used to boost the track voltage at regular intervals in combination with autotransformers. The centre of this circuit is connected to earth.

This standard is also applicable to the operating devices of circuit-breakers and to their auxiliary equipment.

This standard does not address circuit-breakers with dependent manual operating mechanism

NOTE: A rated short-circuit making current cannot be specified for these circuit-breakers and the use of these mechanisms may give reasons for the objection based on their safety in operation.