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Railway applications -

Fixed installations -

Particular requirements for AC switchgear -

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

Som svensk standard gäller europastandarden EN 50152-2:1997. Den svenska standarden innehåller den officiella engelska språkversionen av EN 50152-2:1997.

SS-EN 50152-2 skall användas tillsammans med SS-IEC 129, utgåva 1,1990, SS-EN 60129, utgåva 1,1994 och dess separat utgivna tillägg A1 och A2 samt SS-IEC 265-1, utgåva 1,1990, och dess separat utgivna tillägg A2.

ICS 29.120.60; 45.020

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

English version

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

This European Standard was approved by CENELEC on 1996-10-01. 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.

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CENELEC

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

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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 50152-2 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with the EN have to be withdrawn (dow) 1997-12-01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 2 is to be used in conjunction with EN 60129, *Alternating current disconnectors and earthing switches*, and/or HD 355.1 S3, *High voltage switches - Part 1: High voltage switches or rated voltages above 1 kV and less than 52 kV*, depending from the equipment involved.

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

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Introduction

This standard is divided into two parts.

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

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

EN50152-2 has to be used in conjunction with EN60129:1994 and HD355.1 S3:1995. Where a particular subclause of EN 60129 and HD 355.1 S3 is not mentioned in this standard, that subclause 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 60129 and HD 355.1 S3 is to be adapted accordingly. Numbering of clauses and subclauses follows the numbering of HD 355.1 S3.

NOTE 1: Where terms defined in EN 60129 and HD 355.1 S3 conflict with definitions of same term as given in IEC 50(811): 1991, or the other railway applications documents listed in the nonnative references, the definitions used in EN 60129 and HD 355.1 S3 are to be used.

NOTE 2: The suffix N which appears in this Standard for rated values is not used in EN 60 129 and HD 355.1 s3.

The following print types are used:

- 1) Arab numbers and capital bold type for clauses;
- 2) Arab numbers and bold italic/reman type for other titles;
- 3) Roman type for requirements;
- 3) Italic type for text specifications;
- 4) small Roman type 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 ^o	Railway applications - Insulation co-ordination - Part 1: Basic requirements - Clearances and creepage distances
EN 50152-1	1997	Railway applications - Fixed installations - Particular requirements for ac. switchgear - Part 1: Single phase circuit breakers with U_m above 1 kV
EN 50163	1995	Railway applications - Supply voltages of traction systems
EN 60129 A1 A2	1994 1994 1996	Alternating current disconnectors and earthing switches
EN 60068-2 HD 323.2	series series	Environmental testing (IEC 68-2 series)
EN 60507	1993	Artificial pollution tests on high voltage insulators to be used in a.c. systems (IEC 507: 1991)
EN 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 355.1 S3	1995	High voltage switches - Part 1: High-voltage switches for rated voltages above 1 kV and less than 52 kV (IEC 265-1:1983 + A1:1984 + A2:1994)
HD 478	series	Classification of environmental conditions (IEC 72 1 series)
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 601:1989 + corrigenda March 1990 + March 1992)
IEC 50(605)	1983	International Electrotechnical Vocabulary - 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 SCOPE

Replacement:

This Part of EN 50152 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 2/3 Hz and 50 Hz on traction systems having an above 1 kV up to 52 kV.

This standard 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).

