

Stationary transformers in traction systems

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Descriptors: Railway equipment, stationary railway equipment, electric traction, transformer, specification, characteristic

English version

Stationary transformers in traction systems

Transformateurs de sous-stations
de traction

Stationäre Transformatoren in
Bahnstromversorgungssystemen

This Harmonization Document was approved by CENELEC on 9 March 1993. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for implementation of this Harmonization Document on a national level.

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

This Harmonization Document exists in three official versions (English, French, German).

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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 Harmonization Document was prepared by the Joint Working Group "Stationary traction transformers" of CENELEC Technical Committees SC 9XC, Electric supply and earthing systems for public transport equipment and ancillary apparatus (fixed installations), and TC 14, Power transformers.

The draft was submitted to the Unique Acceptance Procedure (UAP) and approved by CENELEC as HD 591 S1 on 1993-03-09.

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- latest date of withdrawal of
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1 General

1.1 Scope

This document covers specific characteristics of stationary transformers for the supply of power to a.c. and d.c. traction systems.

NOTE 1: Transformers feeding a.c. contact lines are covered by IEC 76, endorsed as HD 398, but require a few particular prescriptions.

NOTE 2: Transformers feeding d.c. contact lines through static convertors are covered by IEC 146, but require some additional or modified prescriptions.

NOTE 3: Transformers mounted on-board of traction vehicles are covered by IEC 310 and are excluded.

1.2 Normative references

This Harmonization Document 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 hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this Harmonization Document only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

1.2.1 The references to the following documents are normative:

HD 398		Power transformers ¹⁾ (IEC 76)
HD 398.1 S1	1980	Part 1: General (IEC 76-1:1976, modified)
HD 398.2 S1 A1	1980 1988	Part 2: Temperature rise (IEC 76-2:1976, modified)
HD 398.3 S1	1986	Part 3: Insulation levels and dielectric tests (IEC 76-3:1980 + A1:1981, modified)
HD 398.5 S1 A1	1983 1988	Part 5: Ability to withstand short circuit (IEC 76-5:1976 + A1:1979, modified)
HD 464 S1 A2	1988 1991	Dry-type power transformers (IEC 726:1982 + A1:1986, modified)
IEC 146	series	Semiconductor convertors

1.2.2 Additional useful information may be found in the following IEC Guides:

IEC 354	1991	Loading guide for oil-immersed power transformers
IEC 905	1987	Loading guide for dry-type power transformers

1) In case of new editions of IEC 76 and subsequent endorsement by CENELEC, the present document will be amended. Pending such amendment, the equivalent clauses of the new IEC 76 publications (and relevant HD) shall be taken as reference.