

**Convertor transformers - Part 2: Transformers for  
HVDC applications**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN 61378-2:2002 sisaldab Euroopa standardi EN 61378-2:2001 ingliskeelset teksti.	This Estonian standard EVS-EN 61378-2:2002 consists of the English text of the European standard EN 61378-2:2001.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 18.04.2001.	Date of Availability of the European standard is 18.04.2001.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile [standardiosakond@evs.ee](mailto:standardiosakond@evs.ee).

ICS 29.180

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EUROPEAN STANDARD

**EN 61378-2**

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2001

ICS 29.180

English version

**Convertor transformers**  
**Part 2: Transformers for HVDC applications**  
(IEC 61378-2:2001)

Transformateurs de conversion  
Partie 2: Transformateurs pour  
applications CCHT  
(CEI 61378-2:2001)

Stromrichtertransformatoren  
Teil 2: Transformatoren für  
HGÜ-Anwendungen  
(IEC 61378-2:2001)

This European Standard was approved by CENELEC on 2001-01-01. 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, Czech Republic, 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 text of document 14/384/FDIS, future edition 1 of IEC 61378-2, prepared by IEC TC 14, Power transformers, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61378-2 on 2001-01-01.

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) 2001-11-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2004-01-01

Annexes designated "normative" are part of the body of the standard.

In this standard, annex ZA is normative.

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 61378-2:2001 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 60310      NOTE: Harmonized as EN 60310:1996 (not modified).

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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 hereafter. 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 (including amendments).

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60076-1 (mod)	1993	Power transformers Part 1: General	EN 60076-1	1997
IEC 60076-2 (mod)	1993	Part 2: Temperature rise	EN 60076-2	1997
IEC 60076-3	2000	Part 3: Insulation levels, dielectric tests and external clearances in air	EN 60076-3	2001
IEC 60076-5 (mod)	1976	Part 5: Ability to withstand short-circuit	HD 398.5 S1 <sup>1)</sup>	1983
IEC 60076-8	1997	Part 8: Application guide	-	-
IEC 60076-10	2 <sup>2)</sup>	Part 10: Determination of sound levels	-	-
IEC 60137	1995	Insulated bushings for alternating voltages above 1 kV	EN 60137	1996
IEC 60146-1-1	1991	Semiconductor convertors - General requirements and line commutated convertors Part 1-1: Specifications of basic requirements	EN 60146-1-1	1993
IEC 60146-1-2	1991	Semiconductor convertors - General requirements and line commutated convertors Part 1-2: Application guide	-	-
IEC 60214 (mod)	1989	On-load tap-changers	EN 60214	1997
IEC 60270	2000	High-voltage test techniques - Partial discharge measurements	EN 60270	2001
IEC 60354	1991	Loading guide for oil-immersed power transformers	-	-

1) HD 398.5 S1 is superseded by EN 60076-5:2000 which is based on IEC 60076-5:2000.

2) To be published.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60567	1992	Guide for the sampling of gases and of oil from oil-filled electrical equipment and for the analysis of free and dissolved gases	EN 60567	1992
IEC 61378-1	1997	Convertor transformers Part 1: Transformers for industrial applications	EN 61378-1 + corr. November	1998 1998

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**CONVERTOR TRANSFORMERS –****Part 2: Transformers for HVDC applications**

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
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International Standard IEC 61378-2 has been prepared by IEC technical committee 14: Power transformers.

The text of this standard is based on the following documents:

FDIS	Report on voting
14/384/FDIS	14/386/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

IEC 61378 consists of the following parts, under the general title: Convertor transformers:

- Part 1: Transformers for industrial applications;
- Part 2: Transformers for HVDC applications;
- Part 3: Application guide (under consideration).

The committee has decided that the contents of this publication will remain unchanged until 2004. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.