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Krafttransformatorer – Del 2: Temperaturstegring hos vätskeisolerade transformatorer

*Power transformers –
Part 2: Temperature rise for liquid-immersed transformers*

Som svensk standard gäller europastandarden EN 60076-2:2011. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60076-2:2011.

Nationellt förord

Europastandarden EN 60076-2:2011

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- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 60076-2, Third edition, 2011 - Power transformers - Part 2: Temperature rise for liquid-immersed transformers**

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Postadress: SEK, Box 1284, 164 29 KISTA
Telefon: 08 - 444 14 00. Telefax: 08 - 444 14 30
E-post: sek@elstandard.se. Internet: www.elstandard.se

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SEK Svensk Elstandard

Box 1284
164 29 Kista
Tel 08-444 14 00
www.elstandard.se

English version

**Power transformers -
Part 2: Temperature rise for liquid-immersed transformers
(IEC 60076-2:2011)**

Transformateurs de puissance -
Partie 2: Echauffement des
transformateurs immergés dans le liquide
(CEI 60076-2:2011)

Leistungstransformatoren -
Teil 2: Übertemperaturen für
flüssigkeitsgefüllte Transformatoren
(IEC 60076-2:2011)

This European Standard was approved by CENELEC on 2011-03-30. 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, Croatia, 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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 14/669/FDIS, future edition 3 of IEC 60076-2, prepared by IEC TC 14, Power transformers, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60076-2 on 2011-03-30.

This European Standard supersedes EN 60076-2:1997.

EN 60076-2:2011 includes the following significant technical changes with respect to EN 60076-2:1997:

- the standard is applicable only to liquid immersed transformers;
- the winding hot-spot temperature rise limit was introduced among the prescriptions;
- the modalities for the temperature rise test were improved in relation to the new thermal requirements;
- five informative annexes were added in order to facilitate the standard application.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

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) 2011-12-30 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) 2014-03-30 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60076-2:2011 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

- | | |
|--------------------|--|
| [2] IEC 60296:2003 | NOTE Harmonized as EN 60296:2004 (not modified). |
| [3] IEC 60567:2005 | NOTE Harmonized as EN 60567:2005 (not modified). |
| [4] IEC 60599:1999 | NOTE Harmonized as EN 60599:1999 (not modified). |
| [5] IEC 60836:2005 | NOTE Harmonized as EN 60836:2005 (not modified). |
| [6] IEC 61099:2010 | NOTE Harmonized as EN 61099:2010 (not modified). |
-

Annex ZA
(normative)

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

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.

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)	-	Power transformers - Part 1: General	EN 60076-1	-
IEC 60076-8	1997	Power transformers - Part 8: Application guide	-	-
IEC 60085	2007	Electrical insulation - Thermal evaluation and designation	EN 60085	2008
IEC 61181	2007	Mineral oil-filled electrical equipment - Application of dissolved gas analysis (DGA) to factory tests on electrical equipment	EN 61181	2007
IEC Guide 115	2007	Application of uncertainty of measurement to conformity assessment activities in the electrotechnical sector	-	-

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POWER TRANSFORMERS –

Part 2: Temperature rise for liquid-immersed transformers

1 Scope

This part of IEC 60076 applies to liquid-immersed transformers, identifies power transformers according to their cooling methods, defines temperature rise limits and gives the methods for temperature rise tests.

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.

IEC 60076-1, *Power transformers – Part 1: General*

IEC 60076-8:1997, *Power transformers – Part 8: Application guide*

IEC 60085:2007, *Electrical insulation – Thermal evaluation and designation*

IEC 61181:2007, *Mineral oil-filled electrical equipment – Application of dissolved gas analysis (DGA) to factory tests on electrical equipment*

IEC Guide 115:2007, *Application of uncertainty of measurement to conformity assessment activities in the electrotechnical sector*