
Močnostni transformatorji - 13. del: Samozaščitni, s tekočino polnjeni transformatorji (IEC 60076-13:2006)

(istoveten EN 60076-13:2006)

Power transformers - Part 13: Self-protected liquid-filled transformers (IEC 60076-13:2006)

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Power transformers
Part 13: Self-protected liquid-filled transformers
(IEC 60076-13:2006)

Transformateurs de puissance
Partie 13: Transformateurs auto-protégés
immergés dans un liquide diélectrique
(CEI 60076-13:2006)

Leistungstransformatoren
Teil 13: Selbstgeschützte
flüssigkeitsgefüllte Transformatoren
(IEC 60076-13:2006)

This European Standard was approved by CENELEC on 2006-09-01. 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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 14/530/FDIS, future edition 1 of IEC 60076-13, prepared by IEC TC 14, Power transformers, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60076-13 on 2006-09-01.

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) 2007-06-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2009-09-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60076-13:2006 was approved by CENELEC as a European Standard without any modification.

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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)	1993	Power transformers Part 1: General	EN 60076-1 A11	1997 1997
A1	1999		A1 A12	2000 2002
IEC 60076-2 (mod)	- ¹⁾	Power transformers Part 2: Temperature rise	EN 60076-2	1997 ²⁾
IEC 60076-3 + corr. December	2000 2000	Power transformers Part 3: Insulation levels, dielectric tests and external clearances in air	EN 60076-3	2001
IEC 60076-5	2000	Power transformers Part 5: Ability to withstand short circuit	EN 60076-5 ³⁾	2000
IEC 60076-7	- ¹⁾	Power transformers Part 7: Loading guide for oil-immersed power transformers	-	-
IEC 60137	- ¹⁾	Insulated bushings for alternating voltages above 1 000 V	EN 60137	2003 ²⁾
IEC 60270	- ¹⁾	High-voltage test techniques - Partial discharge measurements	EN 60270	2001 ²⁾
IEC 60282-1	- ¹⁾	High-voltage fuses Part 1: Current-limiting fuses	EN 60282-1	2006 ²⁾
IEC 60296	- ¹⁾	Fluids for electrotechnical applications - Unused mineral insulating oils for transformers and switchgear	EN 60296 + corr. September	2004 ²⁾ 2004
IEC 60836	- ¹⁾	Specifications for unused silicone insulating liquids for electrotechnical purposes	EN 60836	2005 ²⁾
IEC 61099	- ¹⁾	Specification for unused synthetic organic esters for electrical purposes	EN 61099	1992 ²⁾

¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

³⁾ EN 60076-5 is superseded by EN 60076-5:2006, which is based on IEC 60076-5:2006.

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First edition
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Transformateurs de puissance –

**Partie 13:
Transformateurs auto-protégés
immergés dans un liquide diélectrique**

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Power transformers –
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<https://standards.iteh.ai/catalog/standards/sist/41711650-73c9-4a27-8555-c760a131e8c9/sist-en-60076-13-2007>
Self-protected liquid-filled transformers

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

POWER TRANSFORMERS –

Part 13: Self-protected liquid-filled transformers

FOREWORD

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International Standard IEC 60076-13 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
14/530/FDIS	14/536/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 2.

IEC 60076 consists of the following parts, under the general title *Power transformers*:

- Part 1: General
- Part 2: Temperature rise
- Part 3: Insulation levels, dielectric tests and external clearances in air
- Part 4: Guide to the lightning impulse and switching impulse testing – Power transformers and reactors
- Part 5: Ability to withstand short circuit
- Part 6: Reactors ¹
- Part 7: Loading guide for oil-immersed power transformers
- Part 8: Application guide
- Part 10: Determination of sound levels
- Part 10-1: Determination of sound levels – Application guide
- Part 11: Dry-type transformers
- Part 12: Loading guide for dry-type power transformers¹
- Part 13: Self-protected liquid-filled transformers
- Part 14: Design and application of liquid-immersed power transformers using high-temperature insulation materials
- Part 15: Gas-filled-type power transformers¹

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed, <https://standards.iteh.ai/catalog/standards/sist/b41b4650-73c9-4a27-9555-c7b0af31c8c9/sist-en-60076-13-2007>
- withdrawn,
- replaced by a revised edition, or
- amended.

¹ Under consideration.

POWER TRANSFORMERS –

Part 13: Self-protected liquid-filled transformers

1 Scope

This part of IEC 60076 applies to high-voltage/low-voltage self-protected liquid-filled and naturally cooled transformers for rated power 50 kVA to 1 000 kVA for indoor or outdoor use having a

- primary winding (high-voltage) with highest voltage for equipment up to 24 kV;
- secondary winding (low-voltage) with highest voltage for equipment of 1,1 kV.

These transformers are equipped with a self-protection and disconnection device to protect the environment, property and people and prevent any disturbance of the high-voltage network from the consequences of an internal transformer fault.

Transformers covered by this standard comply with the relevant requirements prescribed in the IEC 60076 series.

The self-protected transformer may be used in conjunction with other devices to provide system coordination and sensitive system protection. The protection system is not designed to be functional when the power supply is from the low-voltage side. The self-protected transformer is not intended to function in parallel with another transformer.

NOTE This standard may be applied to transformers with a higher voltage than 24 kV or other rated power by agreement between the manufacturer and the purchaser. Validation tests should be carried out at the appropriate level.

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 60076-1:1993, *Power transformers – Part 1: General*
Amendment 1 (1999)²

IEC 60076-2, *Power transformers – Part 2: Temperature rise*

IEC 60076-3:2000, *Power transformers – Part 3: Insulation levels, dielectric tests and external clearances in air*

IEC 60076-5:2000, *Power transformers – Part 5: Ability to withstand short circuit*

² There exists a consolidated edition 2.1 (2000) that includes edition 2 and its amendment.