SVENSK STANDARD SS-EN 60076-3

Fastställd	Utgåva	Sida	Ingår i
2001-06-29	1	1 (1+63)	SEK Översikt 14

Svenska Elektriska Kommissionen, SEK

Krafttransformatorer – Del 3: Isolationsnivåer, isolationsprovning och yttre luftavstånd

Power transformers – Part 3: Insulation levels, dielectric tests and external clearances in air

Som svensk standard gäller europastandarden EN 60076-3:2001. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60076-3:2001.

Nationellt förord

Europastandarden EN 60076-3:2001

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC

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

utarbetad inom International Electrotechnical Commission, IEC.

*) Se även bifogat Corrigendum, december 2000.

ICS 29.180

Denna standard är fastställd av Svenska Elektriska Kommissionen, SEK, som också kan lämna upplysningar om **sakinnehållet** i standarden.
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EUROPEAN STANDARD **EN 60076-3**

NORME EUROPÉENNE

EUROPÄISCHE NORM May 2001

ICS 29.180 Supersedes HD 398.3 S1:1986 + A1:1995

English version

Power transformers
Part 3: Insulation levels, dielectric tests and external clearances in air
(IEC 60076-3:2000 + corrigendum 2000)

Transformateurs de puissance
Partie 3: Niveaux d'isolement, essais diélectriques et distances d'isolement dans l'air
(CEI 60076-3:2000 + corrigendum 2000)

Leistungstransformatoren
Teil 3: Isolationspegel, Spannungsprüfungen und äußere Abstände in Luft
(IEC 60076-3:2000 + corrigendum 2000)

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

Ref. No. EN 60076-3:2001 E

Foreword

The text of document 14/347/FDIS, future edition 2 of IEC 60076-3, prepared by IEC TC 14, Power transformers, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60076-3 on 2001-01-01.

This European Standard supersedes HD 398.3 S1:1986 + A1:1995.

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)	2001-10-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2004-01-01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. Annexes designated "informative" are given for information only. In this standard, annexes D, ZA and ZB are normative and annexes A, B and C are informative.
Annexes ZA and ZB have been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60076-3:2000 + corrigendum December 2000 was approved by CENELEC as a European Standard with the following editorial modification.

[redacted]

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.

Publication	Year	Title	EN/HD	Year
IEC 60050-421	—[1)]	International electrotechnical vocabulary (IEV) Chapter 421: Power transformers and reactors	-	-
IEC 60060-1	—[1)]	High-voltage test techniques Part 1: General definitions and test requirements	HD 588.1 S1	1991[2)]
IEC 60060-2	—[1)]	Part 2: Measuring systems	EN 60060-2 + A11	1994[2)] 1998
IEC 60071-1	1993	Insulation co-ordination Part 1: Definitions, principles and rules	EN 60071-1	1995
IEC 60071-2	1976	Part 2: Application guide	HD 540.2 S1[3)]	1991
IEC 60076-1 (mod)	—[1)]	Power transformers Part 1: General	EN 60076-1	1997[2)]
IEC 60137	1995	Insulated bushings for alternating voltages above 1 kV	EN 60137	1996
IEC 60270	—[1)]	High-voltage test techniques - Partial discharge measurements	EN 60270	2001[2)]
IEC 60722	—[1)]	Guide to the lightning impulse and switching impulse testing of power transformers and reactors	-	-
IEC 60790	—[1)]	Oscilloscopes and peak voltmeters for impulse tests	HD 479 S1	1986[2)]

1) Undated reference

2) Valid edition at date of issue

3) HD 540.2 S1 is superseded by EN 60071-2:1997, which is based on IEC 60071-2:1996.

Publication	Year	Title	EN/HD	Year
IEC 61083-1 (mod)	—[1)]	Digital recorders for measurements in high-voltage impulse tests Part 1: Requirements for digital recorders	EN 61083-1	1993[2)]
IEC 61083-2	—[1)]	Part 2: Evaluation of software used for the determination of the parameters of impulse waveforms	EN 61083-2	1997[2)]
CISPR 16-1	1993	Specification for radio disturbance and immunity measuring apparatus and methods Part 1: Radio disturbance and immunity measuring apparatus	-	-

[redacted]

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POWER TRANSFORMERS –

Part 3: Insulation levels, dielectric tests and external clearances in air

1 Scope

This International Standard applies to single-phase and three-phase oil-immersed power transformers (including auto-transformers), with the exception of certain small and special transformers, as defined in the scope of IEC 60076-1. It identifies transformer windings to their highest voltage for equipment U_m associated with their corresponding rated insulation levels and details the relevant applicable dielectric tests and minimum external clearances in air between live parts of bushings and to objects at earth potential.

For categories of power transformers and reactors which have their own IEC standards, this standard is applicable only to the extent in which it is specifically called up by cross reference in the other standards.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 60076. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 60076 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60050(421), *International Electrotechnical Vocabulary (IEV) – Chapter 421: Power transformers and reactors*

IEC 60060-1, *High-voltage test techniques – Part 1: General definitions and test requirements*

IEC 60060-2, *High-voltage test techniques – Part 2: Measuring systems*

IEC 60071-1:1993, *Insulation coordination – Part 1: Definitions, principles and rules*

IEC 60071-2:1976, *Insulation coordination – Part 2: Application guide*

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

IEC 60137:1995, *Bushings for alternating voltages above 1 000 V*

IEC 60270, *Partial discharge measurements*

IEC 60722, *Guide to the lightning impulse and switching impulse testing of power transformers and reactors*

IEC 60790, *Oscilloscopes and peak voltmeters for impulse tests*

IEC 61083-1, *Digital recorders for measurements in high-voltage impulse tests – Part 1: Requirements for digital recorders*

IEC 61083-2, *Digital recorders for measurements in high-voltage impulse tests – Part 2: Evaluation of software used for the determination of the parameters of impulse waveforms*

CISPR 16-1:1993, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 1: Radio disturbance and immunity measuring apparatus*