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Mättransformatorer–
Del 7: Elektroniska spänningstransformatorer

Instrument transformers –
Part 7: Electronic voltage transformers

Som svensk standard gäller europastandarden EN 60044-7:2000. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60044-7:2000.

Nationellt förord

Europastandarden EN 60044-7:2000

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– **IEC 60044-7, First edition, 1999 - Instrument transformers - Part 7: Electronic voltage transformers**

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English version

Instrument transformers
Part 7: Electronic voltage transformers
(IEC 60044-7:1999)

Transformateurs de mesure
Partie 7: Transformateurs de tension électroniques
(CEI 60044-7:1999)

Meßwandler
Teil 7: Elektronische Spannungswandler
(IEC 60044-7:1999)

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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.

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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

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Foreword

The text of document 38/242/FDIS, future edition 1 of IEC 60044-7, prepared by IEC TC 38, Instrument transformers, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60044-7 on 1999-12-01.

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)	2000-10-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2002-12-01

Annexes designated "normative" are part of the body of the standard.
Annexes designated "informative" are given for information only.
In this standard, annexes A and ZA are normative and annexes B and C are informative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60044-7:1999 was approved by CENELEC as a European Standard without any modification.

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 60038 (mod)	1983	IEC standard voltages[1)]	HD 472 S1	1989
IEC 60044-2 (mod)	1997	Instrument transformers Part 2: Inductive voltage transformers	EN 60044-2	1999
IEC 60050-161	1990	International Electrotechnical Vocabulary (IEV) Chapter 161: Electromagnetic compatibility	-	-
IEC 60050-321	1986	Chapter 321: Instrument transformers	-	-
IEC 60050-601	1985	Chapter 601: Generation, transmission and distribution of electricity - General	-	-
IEC 60050-604	1987	Chapter 604: Generation, transmission and distribution of electricity - Operation	-	-
IEC 60060-1 + corr. March	1989 1990	High-voltage test techniques Part 1: General definitions and test requirements	HD 588.1 S1	1991
IEC 60071-1	1993	Insulation co-ordination Part 1: Definitions, principles and rules	EN 60071-1	1995
IEC 60186 (mod)	1987	Voltage transformers	HD 554 S1[2)]	1992
IEC 60255-5	1977	Electrical relays Part 5: Insulation tests for electrical relays	-	-
IEC 60255-6 (mod)	1988	Part 6: Measuring relays and protection equipment	EN 60255-6 + corr. February	1994 1995
IEC 60255-11	1979	Part 11: Interruptions to and alternating component (ripple) in d.c. auxiliary energizing quantity of measuring relays	-	-

[1)] The title of HD 472 S1 is: Nominal voltages for low-voltage public electricity supply systems.

[2)] HD 554 S1 includes A1:1988 to IEC 60186, mod.

Publication	Year	Title	EN/HD	Year
IEC 60255-22-1	1988	Part 22: Electrical disturbance tests for measuring relays and protection equipment Section 1: 1 MHz burst disturbance tests	-	-
IEC 60270	1981	Partial discharge measurements	-	-
IEC 60617-1	1985	Graphical symbols for diagrams Part 1: General information, general index, Cross-reference tables	-	-
IEC 60694	1996	Common specifications for high-voltage switchgear and controlgear standards	EN 60694 + corr. May	1996 1999
IEC 60721	series	Classification of environmental conditions	EN 60721 HD 478	series series
IEC 60815	1986	Guide for the selection of insulators in respect of polluted conditions	-	-
IEC 61000-4-1	1992	Electromagnetic compatibility (EMC) Part 4: Testing and measurement techniques Section 1: Overview of immunity tests	EN 61000-4-1	1994
IEC 61000-4-2	1995	Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	EN 61000-4-2	1995
IEC 61000-4-3 (mod)	1995	Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	1996
IEC 61000-4-4	1995	Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	1995
IEC 61000-4-5	1995	Part 4-5: Testing and measurement techniques - Surge immunity test	EN 61000-4-5	1995
IEC 61000-4-8	1993	Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test	EN 61000-4-8	1993
IEC 61000-4-9	1993	Part 4-9: Testing and measurement techniques - Pulse magnetic field immunity test	EN 61000-4-9	1993
IEC 61000-4-10	1993	Part 4-10: Testing and measurement techniques - Damped oscillatory magnetic field immunity test	EN 61000-4-10	1993

Publication	Year	Title	EN/HD	Year
IEC 61000-4-11	1994	Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	EN 61000-4-11	1994
IEC 61000-4-12	1995	Part 4-12: Testing and measurement techniques - Oscillatory waves immunity test - Basic EMC publication	EN 61000-4-12	1995
CISPR 11 (mod)	1997	Industrial, scientific and medical (ISM) radio-frequency equipment - Radio disturbance characteristics - Limits and methods of measurement	EN 55011	1998
		Electromagnetic compatibility - Generic emission standard Part 2: Industrial environment	EN 50081-2	1993

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INSTRUMENT TRANSFORMERS –

Part 7: Electronic voltage transformers

1 General

1.1 Scope

This part of International Standard IEC 60044 applies to newly manufactured electronic voltage transformers with analogue output, for use with electrical measuring instruments and electrical protective devices at frequencies from 15 Hz to 100 Hz.

NOTE 1 Optical arrangements usually include electronic components and are therefore considered to be within the application of this standard.

NOTE 2 Detailed information is given in annex B.

NOTE 3 Requirements specific to three-phase voltage transformers are not included in this standard but, so far as they are relevant, the requirements in clauses 3 to 11 apply to these transformers and a few references to them are included in those clauses (e.g. see 2.1.5, 5.1.1, 5.2, 11.2.1 and 11.2.2).

1.2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 60044. 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 60044 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 60038:1983, *IEC standard voltages*

IEC 60044-2:1997, *Instrument transformers – Part 2: Inductive voltage transformers*

IEC 60050(161):1990, *International Electrotechnical Vocabulary (IEV) – Chapter 161: Electromagnetic compatibility*

IEC 60050(321):1986, *International Electrotechnical Vocabulary (IEV) – Chapter 321: Instrument transformers*

IEC 60050(601):1985, *International Electrotechnical Vocabulary (IEV) – Chapter 601: Generation, transmission and distribution of electricity – General*

IEC 60050(604):1987, *International Electrotechnical Vocabulary (IEV) – Chapter 604: Generation, transmission and distribution of electricity – Operation*

IEC 60060 (all parts), *High-voltage techniques*

IEC 60060-1:1989, *High-voltage test techniques – Part 1: General definitions and test requirements*

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

IEC 60186:1987, *Voltage transformers*

IEC 60255-5:1977, *Electrical relays – Part 5: Insulation tests for electrical relays*

IEC 60255-6:1988, *Electrical relays – Part 6: Measuring relays and protection equipment*

IEC 60255-11:1979, *Electrical relays – Part 11: Interruptions to and alternating component (ripple) in d.c. auxiliary energizing quantity of measuring relays*

IEC 60255-22-1:1988, *Electrical relays – Part 22: Electrical disturbance tests for measuring relays and protection equipment – Section 1: 1 MHz burst disturbance tests*

IEC 60270:1981, *Partial discharges measurements*

IEC 60617-1:1985, *Graphical symbols for diagrams – Part 1: General information, general index. Cross-reference tables*

IEC 60694:1996, *Common specifications for high-voltage switchgear and controlgear standards*

IEC 60721 (all parts), *Classification of environmental conditions*

IEC 60815:1986, *Guide for the selection of insulators in respect of polluted conditions*

IEC 61000 (all parts), *Electromagnetic compatibility (EMC)*

IEC 61000-4-1:1992, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 1: Overview of immunity test. Basic EMC publication*

IEC 61000-4-2:1995, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 2: Electrostatic discharge immunity test. Basic EMC publication*

IEC 61000-4-3:1995, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 3: Radiated, radio-frequency, electromagnetic immunity test*

IEC 61000-4-4:1995, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 4: Electrical fast transient/burst immunity test. Basic EMC publication*

IEC 61000-4-5:1995, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 5: Surge immunity test*

IEC 61000-4-8:1993, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 8: Power frequency magnetic field immunity test. Basic EMC publication*

IEC 61000-4-9:1993, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 9: Pulse magnetic field immunity test. Basic EMC publication*

IEC 61000-4-10:1993, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 10: Damped oscillatory magnetic field immunity test. Basic EMC publication*

IEC 61000-4-11:1994, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 11: Voltage dips, short interruption and voltage variation immunity test*

IEC 61000-4-12:1995, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 12: Oscillatory waves immunity tests. Basic EMC publication*

CISPR 11 (EN 55011), *Industrial, scientific and medical (ISM) radio-frequency equipment – Electromagnetic disturbance characteristics – Limits and methods of measurement*

EN 50081-2:1993, *Electromagnetic compatibility – Generic immunity standard – Part 2: Industrial environment*