SLOVENSKI STANDARD
SIST EN 60044-1:2001/A1:2001

01-marec-2001

Instrument transformers - Part 1: Current transformers - Amendment A1 (IEC 6044-1:1996/A1:2000)

Instrument transformers -- Part 1: Current transformers

Messwandler -- Teil 1: Stromwandler

Transformateurs de mesure -- Partie 1: Transformateurs de courant

Ta slovenski standard je istoveten z: **EN 60044-1:1999/A1:2000**

ICS:

17.220.20	Merjenje električnih in magnetnih veličin	Measurement of electrical and magnetic quantities

SIST EN 60044-1:2001/A1:2001 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60044-1/A1

October 2000

ICS 17.220.20

English version

Instrument transformers
Part 1: Current transformers
(IEC 60044-1:1996/A1:2000)

Transformateurs de mesure
Partie 1: Transformateurs de courant
(CEI 60044-1:1996/A1:2000)

Meßwandler
Teil 1: Stromwandler
(IEC 60044-1:1996/A1:2000)

This amendment A1 modifies the European Standard EN 60044-1:1999; it was approved by CENELEC on 2000-09-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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

Ref. No. EN 60044-1:1999/A1:2000 E

Foreword

The text of document 38/245/FDIS, future amendment 1 to IEC 60044-1:1996, prepared by IEC TC 38, Instrument transformers, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A1 to EN 60044-1:1999 on 2000-09-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2001-06-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2003-09-01

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.

Endorsement notice

The text of amendment A1:2000 to the International Standard IEC 60044-1:1996 was approved by CENELEC as an amendment to the European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

Publication	Year	Title	EN/HD	Year
Add:				
IEC 60044-6 (mod)	1992	Instrument transformers Part 6: Requirements for protective current transformers for transient performance	EN 60044-6	1999
CISPR 18-2	1986	Radio interference characteristics of overhead power lines and high-voltage equipment Part 2: Methods of measurement and procedure for determining limits	-	-

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
IEC
60044-1

1996

AMENDEMENT 1
AMENDMENT 1
2000-07

Amendement 1

Transformateurs de mesure –

Partie 1:
Transformateurs de courant

Amendment 1

Instrument transformers –

Part 1:
Current transformers

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FOREWORD

This amendment has been prepared by IEC technical committee 38: Instrument transformers.

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

FDIS	Report on voting
38/245/FDIS	38/257/RVD

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

The committee has decided that the contents of the base publication and its amendments will remain unchanged until 2002. At this date, the publication will be

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

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1 General

1.1 Scope

Replace the fifth paragraph by the following:

For certain protective systems, where the current transformer characteristics are dependant on the overall design of the protective equipment (for example high-speed balanced systems and earth-fault protection in resonant earthed networks), additional requirements are given in clause 13 for class PR transformers and in clause 14 for class PX transformers.

Clause 13 covers the requirements and tests in addition to those in clauses 3 to 10 that are necessary for current transformers for use with electrical protective relays, and in particular for forms of protection in which the prime requirement is the absence of remanent flux.

Clause 14 covers the requirements and tests in addition to those in clauses 3 to 10 that are necessary for current transformers for use with electrical protective relays, and in particular for forms of protection for which knowledge of the transformer's secondary excitation characteristic, secondary winding resistance, secondary burden resistance and turns ratio is sufficient to assess its performance in relation to the protective relay system with which it is to be used.

1.2 Normative references

Add to the existing list the title of the following standards:

IEC 60044-6:1992, *Instrument transformers – Part 6: Requirements for protective current transformers for transient performance*

CISPR 18-2:1986, *Radio interference characteristics of overhead power lines and high-voltage equipment – Part 2: Methods of measurement and procedure for determining limits*

2 Definitions

2.1 General definitions

Add the following new definitions:

2.1.32
rated resistive burden (R_b)
rated value of the secondary connected resistive burden in ohms

2.1.33
secondary winding resistance (R_{ct})
secondary winding d.c. resistance in ohms corrected to 75 °C or such other temperature as may be specified

2.3 Additional definitions for protective current transformers

Add the following new definitions:

2.3.5
class PR protective current transformer
a current transformer with limited remanence factor for which, in some cases, a value of the secondary loop time constant and/or a limiting value of the winding resistance may also be specified

2.3.6
saturation flux (Ψ_s)
that peak value of the flux which would exist in a core in the transition from the non-saturated to the fully saturated condition and deemed to be that point on the B-H characteristic for the core concerned at which a 10 % increase in B causes H to be increased by 50 %

2.3.7
remanent flux (Ψ_r)
that value of flux which would remain in the core 3 min after the interruption of an exciting current of sufficient magnitude to induce the saturation flux (Ψ_s) defined in 2.3.6

2.3.8
remanence factor (K_r)
the ratio $K_r = 100 \times \Psi_r / \Psi_s$, expressed as a percentage (%)

2.3.9
rated secondary loop time constant (T_s)
value of the time constant of the secondary loop of the current transformer obtained from the sum of the magnetizing and the leakage inductance (L_s) and the secondary loop resistance (R_s)

$$T_s = L_s / R_s$$