

Mõõtetrafod. Osa 2: Lisanõuded voolutrafodele

Instrument transformers - Part 2: Additional requirements for current transformers (IEC 61869-2:2012)

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NATIONAL FOREWORD

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**Instrument transformers -
Part 2: Additional requirements for current transformers
(IEC 61869-2:2012)**

Transformateurs de mesure -
Partie 2: Exigences supplémentaires
concernant les transformateurs de courant
(CEI 61869-2:2012)

Messwandler -
Teil 2: Zusätzliche Anforderungen für
Stromwandler
(IEC 61869-2:2012)

This European Standard was approved by CENELEC on 2012-10-23. 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 CEN-CENELEC Management Centre 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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 38/435/FDIS, future edition 1 of IEC 61869-2, prepared by IEC/TC 38, "Instrument transformers" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61869-2:2012.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2013-07-23
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-10-23

This document supersedes EN 60044-1:1999 + A1:2000 + A2:2003 and EN 60044-6:1999.

Additionally it introduces technical innovations in the standardization and adaptation of the requirements for current transformers for transient performance.

This Part 2 is to be used in conjunction with, and is based on, EN 61869-1:2009, *General Requirements* – however the reader is encouraged to use its most recent edition.

This Part 2 follows the structure of EN 61869-1:2009 and supplements or modifies its corresponding clauses.

When a particular clause/subclause of Part 1 is not mentioned in this Part 2, that clause/subclause applies as far as is reasonable. When this standard states "addition", "modification" or "replacement", the relevant text in Part 1 is to be adapted accordingly.

For additional clauses, subclauses, figures, tables, annexes or notes, the following numbering system is used:

– clauses, subclauses, tables, figures and notes that are numbered starting from 201 are additional to those in Part 1;

– additional annexes are lettered 2A, 2B, etc.

Annex ZZ of EN 61869-1 is not applicable for this part of the series.

An overview of the planned set of standards at the date of publication of this document is given below. The updated list of standards prepared by IEC TC38 is available at the website: www.iec.ch; the updated list of standards prepared by IEC TC38 and approved by CENELEC is available at the website: www.cenelec.eu.

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| PRODUCT FAMILY STANDARDS | | PRODUCT STANDARD | PRODUCTS | OLD STANDARD |
|---|--|------------------|--|--------------|
| 61869-1 GENERAL REQUIREMENTS FOR INSTRUMENT TRANSFORMERS | 61869-6 ADDITIONAL GENERAL REQUIREMENT FOR ELECTRONIC INSTRUMENT TRANSFORMERS AND LOW POWER STAND ALONE SENSORS | 61869-2 | ADDITIONAL REQUIREMENTS FOR CURRENT TRANSFORMERS | 60044-1 |
| | | 61869-3 | ADDITIONAL REQUIREMENTS FOR INDUCTIVE VOLTAGE TRANSFORMERS | 60044-2 |
| | | 61869-4 | ADDITIONAL REQUIREMENTS FOR COMBINED TRANSFORMERS | 60044-3 |
| | | 61869-5 | ADDITIONAL REQUIREMENTS FOR CAPACITIVE VOLTAGE TRANSFORMERS | 60044-5 |
| | | 61869-7 | ADDITIONAL REQUIREMENTS FOR ELECTRONIC VOLTAGE TRANSFORMERS | 60044-7 |
| | | 61869-8 | ADDITIONAL REQUIREMENTS FOR ELECTRONIC CURRENT TRANSFORMERS | 60044-8 |
| | | 61869-9 | DIGITAL INTERFACE FOR INSTRUMENT TRANSFORMERS | |
| | | 61869-10 | ADDITIONAL REQUIREMENTS FOR LOW-POWER STAND-ALONE CURRENT SENSORS | |
| | | 61869-11 | ADDITIONAL REQUIREMENTS FOR LOW POWER STAND ALONE VOLTAGE SENSOR | 60044-7 |
| | | 61869-12 | ADDITIONAL REQUIREMENTS FOR COMBINED ELECTRONIC INSTRUMENT TRANSFORMER OR COMBINED STAND ALONE SENSORS | |
| | | 61869-13 | STAND ALONE MERGING UNIT | |

Since the publication of EN 60044-6 (*Requirements for protective current transformers for transient performance*) in 1999, the area of application of this kind of current transformers has been extended. As a consequence, the theoretical background for the dimensioning according to the electrical requirements has become much more complex. In order to keep this standard as user-friendly as possible, the explanation of the background information will be transferred to the Technical Report IEC/TR 61869-100, which is now in preparation.

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

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

Endorsement notice

The text of the International Standard IEC 61869-2:2012 was approved by CENELEC as a European Standard without any modification.

Annex ZA

(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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.

Addition to Annex ZA of EN 61869-1:2009:

| <u>Publication</u> | <u>Year</u> | <u>Title</u> | <u>EN/HD</u> | <u>Year</u> |
|--------------------|-------------|---|--------------|-------------|
| IEC 61869-1 (mod) | 2007 | Instrument transformers - Part 1: General requirements | EN 61869-1 | 2009 |

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CONTENTS

| | |
|---|----|
| FOREWORD..... | 5 |
| 1 Scope..... | 8 |
| 2 Normative references | 8 |
| 3 Terms and definitions | 8 |
| 3.1 General definitions | 8 |
| 3.3 Definitions related to current ratings | 9 |
| 3.4 Definitions related to accuracy | 10 |
| 3.7 Index of abbreviations | 18 |
| 5 Ratings..... | 20 |
| 5.3 Rated insulation levels..... | 20 |
| 5.3.2 Rated primary terminal insulation level | 20 |
| 5.3.5 Insulation requirements for secondary terminals | 20 |
| 5.3.201 Inter-turn insulation requirements | 20 |
| 5.5 Rated output..... | 20 |
| 5.5.201 Rated output values | 20 |
| 5.5.202 Rated resistive burden values | 20 |
| 5.6 Rated accuracy class..... | 21 |
| 5.6.201 Measuring current transformers | 21 |
| 5.6.202 Protective current transformers | 22 |
| 5.6.203 Class assignments for selectable-ratio current transformers | 26 |
| 5.201 Standard values for rated primary current..... | 26 |
| 5.202 Standard values for rated secondary current..... | 27 |
| 5.203 Standard values for rated continuous thermal current | 27 |
| 5.204 Short-time current ratings | 27 |
| 5.204.1 Rated short-time thermal current (I_{th}) | 27 |
| 5.204.2 Rated dynamic current (I_{dyn}) | 27 |
| 6 Design and construction | 27 |
| 6.4 Requirements for temperature rise of parts and components | 27 |
| 6.4.1 General | 27 |
| 6.13 Markings..... | 27 |
| 6.13.201 Terminal markings..... | 27 |
| 6.13.202 Rating plate markings..... | 28 |
| 7 Tests | 30 |
| 7.1 General | 30 |
| 7.1.2 Lists of tests | 30 |
| 7.2 Type tests..... | 31 |
| 7.2.2 Temperature-rise test | 31 |
| 7.2.3 Impulse voltage withstand test on primary terminals | 33 |
| 7.2.6 Tests for accuracy..... | 33 |
| 7.2.201 Short-time current tests | 35 |
| 7.3 Routine tests | 36 |
| 7.3.1 Power-frequency voltage withstand tests on primary terminals | 36 |
| 7.3.5 Tests for accuracy | 36 |
| 7.3.201 Determination of the secondary winding resistance (R_{ct})..... | 38 |
| 7.3.202 Determination of the secondary loop time constant (T_s)..... | 38 |

| | | |
|------------------------|---|----|
| 7.3.203 | Test for rated knee point e.m.f. (E_k) and exciting current at E_k | 39 |
| 7.3.204 | Inter-turn overvoltage test | 39 |
| 7.4 | Special tests | 40 |
| 7.4.3 | Measurement of capacitance and dielectric dissipation factor | 40 |
| 7.4.6 | Internal arc fault test | 40 |
| 7.5 | Sample tests..... | 41 |
| 7.5.1 | Determination of the remanence factor | 41 |
| 7.5.2 | Determination of the instrument security factor (FS) of measuring current transformers | 41 |
| Annex 2A (normative) | Protective current transformers classes P, PR..... | 42 |
| Annex 2B (normative) | Protective current transformer classes for transient performance | 47 |
| Annex 2C (normative) | Proof of low-leakage reactance type | 63 |
| Annex 2D (informative) | Technique used in temperature rise test of oil-immersed transformers to determine the thermal constant by an experimental estimation | 64 |
| Annex 2E (informative) | Alternative measurement of the ratio error (ε)..... | 66 |
| Annex 2F (normative) | Determination of the turns ratio error | 68 |
| Figure 201 | – Duty cycles | 15 |
| Figure 202 | – Primary time constant T_P | 16 |
| Figure 203 | – Secondary linked flux for different fault inception angles γ | 17 |
| Figure 2A.1 | – Vector Diagram | 42 |
| Figure 2A.2 | – Error triangle..... | 43 |
| Figure 2A.3 | – Typical current waveforms | 44 |
| Figure 2A.4 | – Basic circuit for 1:1 current transformer | 44 |
| Figure 2A.5 | – Basic circuit for current transformer with any ratio..... | 45 |
| Figure 2A.6 | – Alternative test circuit | 45 |
| Figure 2B.1 | – Short-circuit current for two different fault inception angles | 48 |
| Figure 2B.2 | – $\psi_{\max}(t)$ as the curve of the highest flux values, considering all relevant fault inception angles γ | 48 |
| Figure 2B.3 | – Relevant time ranges for calculation of transient factor | 49 |
| Figure 2B.4 | – Determination of K_{tf} in time range 1 at 50 Hz for $T_s = 1,8$ s | 50 |
| Figure 2B.5 | – Determination of K_{tf} in time range 1 at 60 Hz for $T_s = 1,5$ s | 50 |
| Figure 2B.6 | – Determination of K_{tf} in time range 1 at 16,7 Hz for $T_s = 5.5$ s | 50 |
| Figure 2B.7 | – Limiting the magnetic flux by considering core saturation..... | 52 |
| Figure 2B.8 | – Basic circuit | 53 |
| Figure 2B.9 | – Determination of remanence factor by hysteresis loop | 55 |
| Figure 2B.10 | – Circuit for d.c. method..... | 56 |
| Figure 2B.11 | – Time-amplitude and flux-current diagrams | 56 |
| Figure 2B.12 | – Recordings with shifted flux base line | 57 |
| Figure 2B.13 | – Circuit for capacitor discharge method | 58 |
| Figure 2B.14 | – Typical records for capacitor discharge method | 59 |
| Figure 2B.15 | – Measurement of error currents | 60 |
| Figure 2D.1 | – Graphical extrapolation to ultimate temperature rise | 65 |
| Figure 2E.1 | – Simplified equivalent circuit of the current transformer | 66 |

| | |
|---|----|
| Table 201 – Limits of ratio error and phase displacement for measuring current transformers (classes 0,1 to 1)..... | 21 |
| Table 202 – Limits of ratio error and phase displacement for measuring current transformers (classes 0,2S and 0,5S) | 22 |
| Table 203 – Limits of ratio error for measuring current transformers (classes 3 and 5)..... | 22 |
| Table 204 – Characterisation of protective classes | 23 |
| Table 205 – Error limits for protective current transformers class P and PR | 23 |
| Table 206 – Error limits for TPX, TPY and TPZ current transformers..... | 25 |
| Table 207 – Specification Methods for TPX, TPY and TPZ current transformers | 26 |
| Table 208 – Marking of terminals | 28 |
| Table 10 – List of tests | 31 |

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The committee has decided that the contents of this publication will remain unchanged until the stability 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,
- withdrawn,
- replaced by a revised edition, or
- amended.

INSTRUMENT TRANSFORMERS –

Part 2: Additional requirements for Current Transformers

1 Scope

This part of IEC 61869 is applicable to newly manufactured inductive current transformers for use with electrical measuring instruments and/or electrical protective devices having rated frequencies from 15 Hz to 100 Hz.

2 Normative references

Clause 2 of IEC 61869-1:2007 is applicable with the following additions:

IEC 61869-1:2007, *Instrument Transformers – Part 1: General requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions in IEC 61869-1:2007 apply with the following additions:

3.1 General definitions

3.1.201

current transformer

instrument transformer in which the secondary current, under normal conditions of use, is substantially proportional to the primary current and differs in phase from it by an angle which is approximately zero for an appropriate direction of the connections

[SOURCE: IEC 60050-321:1986, 321-02-01]

3.1.202

measuring current transformer

current transformer intended to transmit an information signal to measuring instruments and meters

[SOURCE: IEC 60050-321:1986, 321-02-18]

3.1.203

protective current transformer

a current transformer intended to transmit an information signal to protective and control devices

[SOURCE: IEC 60050-321: 1986, 321-02-19]

3.1.204

class P protective current transformer

protective current transformer without remanent flux limit, for which the saturation behaviour in the case of a symmetrical short-circuit is specified

3.1.205

class PR protective current transformer

protective current transformer with remanent flux limit, for which the saturation behaviour in the case of a symmetrical short-circuit is specified