

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Instrument transformers –
Part 3: Additional requirements for inductive voltage transformers**

**Transformateurs de mesure –
Partie 3: Exigences supplémentaires concernant les transformateurs inductifs
de tension**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

INSTRUMENT TRANSFORMERS –

Part 3: Additional requirements for inductive voltage transformers

FOREWORD

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This International Standard IEC 61869-3 has been prepared by subcommittee 38: Instrument transformers.

This standard replaces IEC 60044-2: Inductive Voltage Transformers.

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

FDIS	Report on voting
38/410/FDIS	38/413/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.

This standard is Part 3 of IEC 61869, published under the general title *Instrument transformers*.

This part 3 is to be read in conjunction with, and is based on, IEC 61869-1, *General Requirements* - first edition (2007)- however the reader is encouraged to use its most recent edition.

This Part 3 follows the structure of IEC 61869-1 and supplements or modifies its corresponding clauses.

When a particular clause/subclause of Part 1 is not mentioned in this Part 3, 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 301 are additional to those in Part 1;
- additional annexes are lettered 3A, 3B, etc.

An overview of the planned set of standards at the date of publication of this document is given below. The updated list of standards issued by IEC TC38 is available at the website: www.iec.ch.

PRODUCT FAMILY STANDARDS	PRODUCT STANDARD	PRODUCTS	OLD STANDARD
61869-1 GENERAL REQUIREMENTS FOR INSTRUMENT TRANSFORMERS		61869-2	ADDITIONAL REQUIREMENTS FOR CURRENT TRANSFORMERS 60044-1 60044-6
		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
	61869-6 ADDITIONAL GENERAL REQUIREMENT FOR ELECTRONIC INSTRUMENT TRANSFORMERS AND LOW POWER STAND ALONE SENSORS	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

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 3: Additional requirements for inductive voltage transformers

1 Scope

This part of IEC 61869 applies to new inductive voltage transformers for use with electrical measuring instruments and electrical protective devices at frequencies from 15 Hz to 100 Hz.

NOTE 301 Requirements specific to three-phase voltage transformers are not included in this standard but, so far as they are relevant, the requirements in clauses 4 to 10 apply to these transformers and a few references to them are included in those clauses (e.g. see 3.1.303, 5.301.1, 5.301.2, 5.5.301, 6.13.301.1 and Table 304).

All the transformers shall be suitable for measuring purposes, but, in addition, certain types may be suitable for protection purposes. Transformers for the dual purpose of measurement and protection shall comply with all clauses of this standard.

2 Normative references

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

IEC 60028, *International Standard of resistance for copper*

IEC 60038, *IEC standard voltages*

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

3 Terms, definitions and abbreviations

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

3.1 General definitions

3.1.301

voltage transformer

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

[IEC 60050-321:1986, 321-03-01]

3.1.302

unearthed voltage transformer

voltage transformer which has all parts of its primary winding, including terminals, insulated from earth to a level corresponding to its rated insulation level

3.1.303

earthed voltage transformer

single-phase voltage transformer which is intended to have one end of its primary winding directly earthed or a three-phase voltage transformer which is intended to have the star-point of its primary winding directly earthed