

**Instrument transformers - Three-phase  
inductive voltage transformers having  $U_m$  up  
to 52 kV**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

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<p>Standard on kinnitatud Eesti Standardikeskuse 20.02.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p>	<p>This standard is ratified with the order of Estonian Centre for Standardisation dated 20.02.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p>
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**Võtmesõnad:** fidelity, insulation, marking, potential transformers, precision, rated voltages, rating, rating plates, ratings, specification (approval), specifications, standard values, temperature rises, testing, tests, three-phase, three-phase transformers, voltage fluctuations

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English version

**Instrument transformers -  
Three-phase inductive voltage transformers having  $U_m$  up to 52 kV**

Transformateurs de mesure -  
Transformateurs inductifs de tension  
triphasés avec  $U_m$  jusqu'à 52 kV

Messwandler -  
Dreiphasige Spannungswandler  
mit  $U_m$  bis 52 kV

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European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

This European Standard was prepared by the Technical Committee CENELEC TC 38X, Instrument transformers.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50482 on 2007-09-01.

This European Standard supersedes HD 587 S1:1993. It is to be used in conjunction with EN 60044-2:1999.

The following dates were fixed:

- latest date by which the EN has to be implemented  
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  - latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2010-09-01
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# 1 General

## 1.1 Scope

This European Standard specifies the requirements and tests for new three-phase voltage transformers with  $U_m$  up to 52 kV and frequencies from 15 Hz to 100 Hz, for use with electrical instruments or electrical protective devices.

NOTE Single-phase voltage transformers connected in a three-phase bank are not covered in this document.

## 1.2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 60044-2:1999, Instrument transformers – Part 2: Inductive voltage transformers (IEC 60044-2:1997, mod.)

EN 60270:2001, High-voltage test techniques – Partial discharge measurements (IEC 60270:2000)

HD 588.1 S1:1991, High-voltage test techniques – Part 1: General definitions and test requirements (IEC 60060-1:1989 + corr. March 1990)

# 2 Definitions

Clause 2 of EN 60044-2:1999 is applicable with the following additions:

## 2.3 Additional definitions for three-phase inductive voltage transformers

### 2.3.1

#### three-phase voltage transformer

a voltage transformer which has three line-to-neutral primary windings the neutral point of which can be earthed or unearthed and in which one or more of the three line-to-neutral secondary windings can be connected for three-phase operation or residual voltage operation

### 2.3.2

#### rated output of a three-phase voltage transformer

the per phase value of the apparent power (in volt-amperes at a specified power factor) that a three-phase voltage transformer is intended to supply to the secondary circuit, at the rated secondary voltage and with rated per-phase burden connected to it

# 3 General requirements

Clause 3 of EN 60044-2:1999 applies.

# 4 Normal and special service conditions

Clause 4 of EN 60044-2:1999 applies.

# 5 Ratings

## 5.1 Standard values of rated voltages

### 5.1.1 Rated primary voltages

The standard values of rated line-to-line primary voltage of three-phase voltage transformer shall be one of the values of nominal system voltage designated by EN 60044-2:1999.

NOTE The performance of a voltage transformer as a measuring or protection transformer is based on the rated primary voltage, whereas the rated insulation level is based on one value of the highest voltages for equipment of EN 60071.