SLOVENSKI STANDARD
SIST EN 60687:1995

01-avgust-1995

Statični števci električne delovne energije izmeničnega toka (razreda 0.2 in 0.5 S)

Alternating current static watt-hour meters for active energy (classes 0,2 S and 0,5 S)

Elektronische Wechselstrom-Wirkverbrauchszähler (Genauigkeitsklassen 0,2 S und 0,5 S)

Compteurs statiques d'énergie active pour courant alternatif (classes 0,2 S et 0,5 S)

Ta slovenski standard je istoveten z: **EN 60687:1992**

ICS:

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

SIST EN 60687:1995 **en**

EUROPEAN STANDARD | EN 60687

NORME EUROPEENNE

EUROPÄISCHE NORM | November 1992

UDC 621.317.785.025

Descriptors: Watt-hour meters for active energy, static meters, alternating current meters

ENGLISH VERSION

Alternating current static watt-hour meters for active energy (classes 0,2 S and 0,5 S) (IEC 687:1992)

Compteurs statiques d'énergie active pour courant alternatif (classes 0,2 S et 0,5 S)

(CEI 687:1992)

Elektronische Wechselstrom-Wirkverbrauchszähler (Genauigkeitsklassen 0,2 S und 0,5 S)

(IEC 687:1992)

This European Standard was approved by CENELEC on 1991-12-10. 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 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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, 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 60687:1992 E

FOREWORD

The text of document 13(CO)1013, as prepared by IEC Technical Committee N° 13: Equipment for electrical energy measurement and load control, was submitted to the IEC-CENELEC parallel vote in April 1991.

The reference document was approved by CENELEC as EN 60687 on 10 December 1991.

The following dates were fixed:

- latest date of publication of an identical national standard	(dop)	1993-06-01
- latest date of withdrawal of conflicting national standards	(dow)	1993-06-01

For products which have complied with the relevant national standard before 1993-06-01, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 1998-06-01.

Annexes designated "normative" are part of the body of the standard. In this standard, annexes ZA and ZB are normative.

ENDORSEMENT NOTICE

The text of the International Standard IEC 687:1992 was approved by CENELEC as a European Standard without any modification.

ANNEX ZA (normative)

Special national conditions

Special national condition: National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions. If it affects harmonization, it forms part of the European Standard or Harmonization Document.

For the countries in which the relevant special national conditions apply these provisions are normative, for other countries they are informative.

Clause	Special national condition
4.4	**GERMANY**

Additional Subclause:

4.4.7 Influence of earth fault

Three-phase four-wire meters, connected to distribution networks, which are equipped with ground-fault neutralizers, and in which this earth fault condition may last for several hours, shall comply with the appropriate national requirements regarding immunity against earth fault of DIN VDE 0418 part 12.

ANNEX ZB (normative)

OTHER INTERNATIONAL PUBLICATIONS QUOTED IN THIS STANDARD WITH THE REFERENCES OF THE RELEVANT EUROPEAN PUBLICATIONS

When the international publication has been modified by CENELEC common modifications, indicated by (mod), the relevant EN/HD applies.

IEC Publication	Date	Title	EN/HD	Date
38 (mod)	1983	IEC standard voltages	HD 472 S1	1989
50(301)	1983	International Electrotechnical Vocabulary (IEV) - Chapter 301: General terms on measurements in electricity	-	-
50(302)	1983	Chapter 302: Electrical measuring instruments	-	-
50(303)	1983	Chapter 303: Electronic measuring instruments	-	-
60	-	High-voltage test techniques	-	-
68-2-1	1990	Environmental testing Part 2: Tests - Tests A: Cold	EN 60068-2-1	1992
68-2-2	1974	Part 2: Tests - Test B: Dry heat	HD 323.2.2 S1*	1988
68-2-6	1982	Part 2: Tests - Test Fc and guidance: Vibration (sinusoidal)	HD 323.2.6 S2*	1988
68-2-11	1981	Part 2: Tests - Test Ka: Salt mist	HD 323.2.11 S1	1988
68-2-27	1987	Part 2: Tests - Test Ea and guidance: Shock	HD 323.2.27 S2	1988
68-2-30	1980	Part 2: Tests - Test Db and guidance: Damp heat, cyclic (12 + 12-hour cycle)	HD 323.2.30 S2*	1987
85	1984	Thermal evaluation and classification of electrical insulation	HD 566 S1	1990
185 (mod)	1987	Current transformers	HD 553 S1	1992
186 (mod)	1987	Voltage transformers	HD 554 S1*	1992
255-4	1976	Electrical relays - Part 4: Single input energizing quantity measuring relays with dependent specified time	-	-

---

* HD 323.2.2 S1:1988 includes IEC 68-2-2A:1976
HD 323.2.6 S2:1988 includes A1:1983 + A2:1985 to IEC 68-2-6
HD 323.2.30 S2:1987 includes A1:1985 to IEC 68-2-30
HD 554 S1:1992 includes A1:1988 to IEC 186

359	1987	Expression of the performance of electrical and electronic measuring equipment	-	-
387	1972*	Symbols for alternating-current electricity meters	-	-
417C	1977	Graphical symbols for use on equipment Index, survey and compilation of the single sheets - Third supplement	HD 243 S9*	1991
514 (mod)	1975	Acceptance inspection of Class 2 alternating-current watt-hours meters	HD 309.2 S1	1979
521	1988*	Class 0.5, 1 and 2 alternating-current watt-hour meters	-	-
529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529	1991
664	1980	Insulation co-ordination within low-voltage systems including clearances and creepage distances for equipment	-	-
695-2-1	1991	Fire hazard testing - Part 2: Test methods - Section 1: Glow-wire test and guidance	-	-
721-3-3	1987	Classification of environmental conditions Part 3: Classification of groups of environmental parameters and their severities - Stationary use at weather protected locations (Corrigendum April 1988)	HD 478.3.3 S1	1989
736	1982	Testing equipment for electrical energy meters	-	-
801-1	1984	Electromagnetic compatibility for industrial-process measurement and control equipment Part 1: General introduction	HD 481.1 S1	1987
801-2	1984	Part 2: Electrostatic discharge requirements	HD 481.2 S1	1987
801-3	1984	Part 3: Radiated electromagnetic field requirements	HD 481.3 S1	1987

----

* IEC 387:1992 was harmonized as EN 60387:1992
HD 243 S9:1991 includes supplements A:1974 to J:1990 to IEC 417
IEC 521:1976, (mod) was harmonized as HD 309.1 S1:1979

801-4	1988	Part 4: Electrical fast transient/burst requirements	-	-
817	1984	Spring-operated impact-test apparatus and its calibration	HD 495 S1	1987
1036 (mod)	1990	Alternating current static watt-hour meters for active energy (classes 1 and 2)	EN 61036	1992
CISPR 14 (mod)	1985	Limits and methods of measurement of radio interference characteristics of	EN 55014	1987
+ A2 (mod)	1989	household electrical appliances, portable tools and similar electrical apparatus	+ A2	1990

Other publications

ISO 75:1987 - Plastics and ebonite - Determination of temperature of deflection under load.

NORME INTERNATIONALE
INTERNATIONAL STANDARD

CEI
IEC
687

Deuxième édition
Second edition
1992-06

Compteurs statiques d'énergie active pour courant alternatif (classes 0,2 S et 0,5 S)

Alternating current static watt-hour meters for active energy (classes 0,2 S and 0,5 S)

Bureau Central de la Commission Electrotechnique Internationale 3, rue de Varembé Genève, Suisse

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE W

Pour prix, voir catalogue en vigueur
For price, see current catalogue

CONTENTS

Tables

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ALTERNATING CURRENT STATIC WATT-HOUR METERS FOR ACTIVE ENERGY (CLASSES 0,2 S AND 0,5 S)

FOREWORD

1) The formal decisions or agreements of the IEC on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.

2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.

3) In order to promote international unification, the IEC expresses the wish that all National Committees should adopt the text of the IEC recommendation for their national rules in so far as national conditions will permit. Any divergence between the IEC recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.

This International Standard has been prepared by IEC Technical Committee No. 13: Equipment for electrical energy measurement and load control.

This second edition of IEC 687 cancels and replaces the first edition issued in 1980 with the status of a report.

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

DIS	Report on Voting
13(CO)1013	13(CO)1017

Full information on the voting for the approval of this standard can be found in the Voting Report indicated in the above table.

Annexes A, B and C form an integral part of this standard.

Annex D is for information only.

INTRODUCTION

This International Standard has been prepared with reference to IEC 521 and IEC 1036.

Like IEC 521 and IEC 1036 this standard includes type tests only.

The test levels are regarded as minimum values to guarantee the proper function of the meter under normal working conditions. For special applications, other test levels might be necessary and might have to be fixed between the user and the manufacturer.

The reliability aspects of equipment for electrical energy measurement and load control will be handled separately by a working group of TC 13.

Tests, test conditions and test levels have been taken from IEC 521, IEC 1036 and other appropriate IEC specifications. Tests have been added with respect to electromagnetic compatibility (EMC).