STANDARDISERINGEN I SVERIGE
SWEDISH STANDARDS INSTITUTION

SVENSK STANDARD SS-EN 60 521

SVENSKA ELEKTROTEKNISKA NORMER, SEN

Handläggande organ	Fastställd	Utgåva	Sida	Ingår i
Svenska Elektriska Kommissionen, SEK	1995-04-28	1	1 (1+5+36)	SEK Översikt 13

Registrering
Reg 406 01 06

Elmätare - Växelströmsmätare för aktiv energi av noggrannhetsklass 0,5, 1 och 2

Class 0,5, 1 and 2 alternating-current watthour meters

Som svensk standard gäller europastandarden EN 60 521: 1995. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60 521: 1995.

Nationellt förord

Europastandarden EN 60 521: 1995

består av:

- **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC

- **IEC 521, Second edition, 1988 - Class 0,5, 1 and 2 alternating-current watthour meters**

  utarbetad inom International Electrotechnical Commission, IEC.

Tidigare utgiven svensk standard SS 406 01 06, utgåva 1, 1980, gäller ej fr o m 1995-04-28.

ICS 17.220.20

Tryckt i juni 1995

NORSTEDTS TRYCKERI
TRYCKT PÅ PAPPER MILJÖMÄRKT MED SVANEN

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60521

ICS 17.220.20

Supersedes HD 309.1 S1:1979

Descriptors: Watthour meters, induction type meters, alternating-current meters, class 0,5, class 1, class 2

English version

Class 0,5, 1 and 2 alternating-current watthour meters
(IEC 521:1988)

Compteurs d'énergie active à courant alternatif des classes 0,5, 1 et 2
(CEI 521:1988)

Wechselstrom-Wirkverbrauchzähler der Klassen 0,5, 1 und 2
(IEC 521:1988)

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 60521:1995 E

Foreword

The text of the International Standard IEC 521:1988, prepared by IEC TC 13, Equipment for electrical energy measurement and load control, was submitted to the formal vote and was approved by CENELEC as EN 60521 on 1994-07-05 without any modification.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1995-07-15
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1995-07-15

For products which have complied with HD 309.1 S1:1979 before 1995-07-15, as shown by the manufacturer or by a certification body, this previous standard may continue to apply for production until 2000-07-15.

Annexes designated "normative" are part of the body of the standard.
Annexes designated "informative" are given for information only.
In this standard, annexes ZA and ZB are normative and annex A is informative.
Annexes ZA and ZB have been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 521:1988 was approved by CENELEC as a European Standard without any modification.

ANNEX ZA (normative)

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

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

NOTE : 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
28	1925	International standard of resistance for copper	-	-
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	series	High-voltage test techniques	HD 588.1 S1 EN 60060-2	1991 1994
85	1984	Thermal evaluation and classification of electrical insulation	HD 566 S1	1990
145	1963	Var-hour (reactive energy) meters	-	-
185	1966*	Current transformers	-	-
211	1966	Maximum demand indicators, Class 1.0.	-	-
387	1972*	Symbols for alternating-current electricity meters	-	-
414 (mod)	1973	Safety requirements for indicating and recording electrical measuring instruments and their accessories	HD 215 S1	1974

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* The title of HD 472 S1 is: Nominal voltages for low voltage public electricity supply systems
* IEC 185:1987 + A1:1990 are harmonized as HD 553 S2:1993
* IEC 387:1992 is harmonized as EN 60387:1992

IEC Publication	Date	Title	EN/HD	Date
514 (mod)	1975	Acceptance inspection of Class 2 alternating current watthour meters	EN 60514	1995
529	1976*	Classification of degrees of protection provided by enclosures	-	-
695-2-1	1980	Fire hazard testing - Part 2: Test methods - Glow-wire test and guidance	HD 444.2.1 S1	1983
817	1984	Spring-operated impact-test apparatus and its calibration	HD 495 S1	1987

Other publication:

ISO 75:1974 - Plastics and ebonite - Determination of temperature of deflection under load

* IEC 529:1989 is harmonized as EN 60529:1991 + Corrigendum May 1993

CONTENTS

CLASS 0.5, 1 AND 2 ALTERNATING-CURRENT WATTHOUR METERS

EXPLANATORY FOREWORD IN RELATION TO CLASS 0.5 METERS

1. Class 0.5 alternating-current watthour meters are employed chiefly for the measurement of very large amounts of energy, but where the load range is small.

2. This class of meter constitutes a particular category which is not entirely in line with the series Class 1 and Class 2.

3. The effect of influence factors (frequency, voltage, etc.) is generally less than for Class 1 and Class 2, but not necessarily in strict proportion to the class indices.

4. The testing of this class of meter requires the use of reference standards of high accuracy, low distortion supply sources and highly qualified and experienced personnel for its operation.

   Owing to the large quantities of energy to be measured with Class 0.5 alternating-current watthour meters, it is necessary for them to be verified more frequently than Class 1 and Class 2 meters.

5. The installation of these meters should be carried out with great care, eliminating or reducing to a minimum external influence factors such as magnetic fields, non-verticality and the range of ambient temperature.

1. Scope

This standard applies only to newly manufactured induction type watthour meters of accuracy Classes 0.5, 1 and 2, for the measurement of alternating current electrical active energy of a frequency in the range 45 Hz to 65 Hz and it applies to their type tests only*.

It applies to the assembly of meters and accessories, including current transformers, when enclosed in the meter case. It does not apply to maximum demand indicators (see IEC Publication 211).

It does not apply to any kind of measuring device such as those used for telemetering electrical energy.

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* The subject of acceptance testing of Class 2 watthour meters is dealt with in IEC Publication 514.

It does not apply to meters for testing purposes or to special types of watthour meters (e.g. excess meters), except for multi-rate meters.

It does not apply to watthour meters where the voltage across the connection terminals exceeds 600 V (line-to-line voltage for meters for polyphase systems).

Notes 1.- For portable meters and meters for outdoor use, additional requirements may be necessary.

2.- For var-hour meters, see IEC Publication 145.