SVENSK STANDARD SS-EN 62056-21

Fastställd	Utgåva	Sida	Ingår i
2003-01-29	1	1 (1+70)	SEK Område 13

Svenska Elektriska Kommissionen, SEK

Elmätare – Datakommunikation för avläsning av elmätare och för styrning av tariff och belastning – Del 21: Lokal dataöverföring

Electricity metering – Data exchange for meter reading, tariff and load control – Part 21: Direct local data exchange

Som svensk standard gäller europastandarden EN 62056-21:2002. Den svenska standarden innehåller den officiella engelska språkversionen av EN 62056-21:2002.

Nationellt förord

Europastandarden EN 62056-21:2002

består av:

- **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
- **IEC 62056-21, First edition, 2002 - Electricity metering - Data exchange for meter reading, tariff and load control - Part 21: Direct local data exchange**

  utarbetad inom International Electrotechnical Commission, IEC.

Tidigare utgiven svensk standard SS-EN 61107, utgåva 2, 1996, gäller ej fr o m 2005-05-01.

ICS 17.220.20; 35.100; 91.140.50

Denna standard är fastställd av Svenska Elektriska Kommissionen, SEK,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

Svenska Elektriska Kommissionen, SEK, svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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EUROPEAN STANDARD **EN 62056-21**

NORME EUROPÉENNE

EUROPÄISCHE NORM June 2002

ICS 17.220.20;35.100;91.140.50 Supersedes EN 61107:1996

English version

Electricity metering - Data exchange for meter reading, tariff and load control Part 21: Direct local data exchange

(IEC 62056-21:2002)

Equipements de mesure de l'énergie électrique - Echange des données pour la lecture des compteurs, le contrôle des tarifs et de la charge Partie 21: Echange des données directes en local (CEI 62056-21:2002)

Messung der elektrischen Energie - Zählerstandsübertragung, Tarif- und Laststeuerung Teil 21: Datenübertragung für festen und mobilen Anschluss (IEC 62056-21:2002)

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 62056-21:2002 E

Foreword

The text of document 13/1271/FDIS, future edition 1 of IEC 62056-21, prepared by IEC TC 13, Equipment for electrical energy measurement and load control, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62056-21 on 2001-05-01.

This European Standard supersedes EN 61107:1996.

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) 2003-02-01

– latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2005-05-01

The International Electrotechnical Commission (IEC) and CENELEC draw attention to the fact that it is claimed that compliance with this International Standard / European Standard may involve the use of a maintenance service concerning the stack of protocols on which the present standard IEC 62056-21 / EN 62056-21 is based.

The IEC and CENELEC take no position concerning the evidence, validity and scope of this maintenance service.

The providers of the maintenance service have assured the IEC that they are willing to provide services under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statements of the providers of the maintenance service are registered with the IEC. Information may be obtained :

Manufacturer's identification, item 12) of 6.3.2: from

The FLAG Association, UK
www.dlms.com/flag

Enhanced identification character, item 24) of 6.3.2: from

DLMS [1)] User Association
Geneva / Switzerland
www.dlms.ch

Annexes designated "normative" are part of the body of the standard.
Annexes designated "informative" are given for information only.
In this standard, annexes A, B, E and ZA are normative and annexes C and D are informative.
Annex ZA has been added by CENELEC.

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Endorsement notice

The text of the International Standard IEC 62056-21:2002 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 62056-61	NOTE	Harmonized as EN 62056-61:2002 (not modified).
IEC 62056-62	NOTE	Harmonized as EN 62056-62:2002 (not modified).

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1) Device Language Message Specification

Annex ZA
(normative)

Normative references to international publications with their corresponding 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 (including amendments).

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

Publication	Year	Title	EN/HD	Year
IEC 60050-300	2001	International Electrotechnical Vocabulary - Electrical and electronic measurements and measuring instruments Part 311: General terms relating to measurements Part 312: General terms relating to electrical measurements Part 313: Types of electrical measuring instruments Part 314: Specific terms according to the type of instrument	-	-
IEC/TR 62051	1999	Electricity metering - Glossary of terms	-	-
IEC 62056-42	2002	Electricity metering - Data exchange for meter reading, tariff and load control Part 42: Physical layer services and procedures for connection-oriented asynchronous data exchange	EN 62056-42	2002
IEC 62056-46	2002	Part 46: Data link layer using HDLC protocol	EN 62056-46	2002
IEC 62056-53	2002	Part 53: COSEM application layer	EN 62056-53	2002
ISO/IEC 646	1991	Information technology - ISO 7-bit coded character set for information interchange	-	-
ISO/IEC 1155	1978	Information processing - Use of longitudinal parity to detect errors in information messages	-	-
ISO/IEC 1177	1985	Information processing - Character structure for start/stop and synchronous character-oriented transmission	-	-
ISO/IEC 1745	1975	Information processing - Basic mode control procedures for data communication systems	-	-

Publication	Year	Title	EN/HD	Year
ISO/IEC 7480	1991	Information technology - Telecommunications and information exchange between systems - Start/stop transmission signal quality at DTE/DCE interfaces	-	-
ITU-T Recommendation V.24	2000	List of definitions for interchange circuits between data terminal equipment (DTE) and data circuit-terminating equipment (DCE)	-	-
ITU-T Recommendation V.28	1993	Electrical characteristics for unbalanced double-current interchange circuits	-	-

CONTENTS

ELECTRICITY METERING – DATA EXCHANGE FOR METER READING, TARIFF AND LOAD CONTROL –

Part 21: Direct local data exchange

1 Scope

This part of IEC 62056 describes hardware and protocol specifications for local meter data exchange. In such systems, a hand-held unit (HHU) or a unit with equivalent functions is connected to a tariff device or a group of devices.

The connection can be permanent or disconnectable using an optical or electrical coupling. An electrical interface is proposed for use with a permanent connection, or when more than one tariff device needs to be read at one site. The optical coupler should be easily disconnectable to enable data collection via an HHU.

The protocol permits reading and programming of tariff devices. It is designed to be particularly suitable for the environment of electricity metering, especially as regards electrical isolation and data security. While the protocol is well-defined, its use and application are left to the user.

This standard is based on the reference model for communication in open systems. It is enhanced by further elements such as an optical interface, protocol controlled baud rate switchover, data transmission without acknowledgement of receipt. The protocol offers several modes for implementation in the tariff device. The HHU or equivalent unit acts as a master while the tariff device acts as a slave in protocol modes A to D. In protocol mode E, the HHU acts as a client and the tariff device acts as a server.

As several systems are in practical use already, particular care was taken to maintain compatibility with existing systems and/or system components and their relevant protocols.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60050-300:2001, *International Electrotechnical Vocabulary (IEV) – Electrical and electronic measurements and measuring instruments – Part 311: General terms relating to measurements – Part 312: General terms relating to electrical measurements – Part 313: Types of electrical measuring instruments – Part 314: Specific terms according to the type of instrument*