

SVENSK STANDARD SS-EN 62053-31

1

Handläggande organ Fastställd Utgåva Sida Ingår i

Svenska Elektriska Kommissionen, SEK

1 (1+19) SEK Öv

SEK Översikt 13 Reg 406 01 93

© INNEHÅLLET I SVENSK STANDARD ÄR UPPHOVSRÄTTSLIGT SKYDDAT. SIS HAR COPYRIGHT PÅ SVENSK STANDARD. EFTERTRYCK UTAN TILLSTÅND ÄR FÖRBJUDET.

1998-06-26

Elmätare -

Del 31: Fordringar på pulsgivare för elektromekaniska eller elektroniska mätare (enbart 2-tråds)

Electricity metering equipment (a.c.) –
Particular requirements –
Part 31: Pulse output devices for electromechanical and electronic meters (two wires only)

Som svensk standard gäller europastandarden EN 62053-31:1998. Den svenska standarden innehåller den officiella engelska språkversionen av EN 62053-31:1998.

Nationellt förord

Europastandarden EN 62053-31:1998

består av:

- europastandardens ikraftsättningsdokument, utarbetat inom CENELEC
- IEC 62053-31, First edition, 1998 Electricity metering equipment (a.c.) Particular requirements Part 31: Pulse output devices for electromechanical and electronic meters (two wires only)

utarbetad inom International Electrotechnical Commission, IEC.

ICS 91.140.50

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN 62053-31

April 1998

ICS 91.140.50

Descriptors: Electricity metering, pulse output device, induction meter, static meter

English version

Electricity metering equipment (a.c.) Particular requirements Part 31: Pulse output devices for electromechanical and electronic meters (two wires only) (IEC 62053-31:1998)

Equipement de comptage de l'électricité (c.a.) - Prescriptions particulières
Partie 31: Dispositifs de sortie
d'impulsions pour compteurs
électromécaniques et électroniques
(seulement deux fils)
(CEI 62053-31:1998)

Einrichtungen zur Messung der elektrischen Energie (AC) Besondere Anforderungen Teil 31: Impulseinrichtungen für Induktionszähler und elektronische Zähler (nur Zweidrahtsysteme) (IEC 62053-31:1998)

This European Standard was approved by CENELEC on 1998-04-01. 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, Czech Republic, 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

^{© 1998} CENELEC - All rights of exploitation in any form and by any means reserved worldwide for CENELEC members.

Foreword

The text of document 13/1134/FDIS, future edition 1 of IEC 61393, prepared by IEC TC 13, Equipment for electrical energy measurement and load control, was submitted to the IEC-CENELEC parallel vote. The document was published by IEC as IEC 62053-31 and was approved by CENELEC as EN 62053-31 on 1998-04-01.

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) 1999-01-01

 latest date by which the national standards conflicting with the EN have to be withdrawn

(dow) 2001-01-01

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, C and ZA are normative and annexes D, E and F are informative.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62053-31:1998 was approved by CENELEC as a European Standard without any modification.

Page 3 EN 62053-31:1998

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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	EN/HD	<u>Year</u>
IEC 60145	1963	Var-hour (reactive energy) meters	-	-
IEC 60381-1	1982	Analogue signals for process control systems Part 1: Direct current signals	HD 452.1 S1	1984
IEC 60521	1988	Class 0,5, 1 and 2 alternating-current watt-hour meters	EN 60521 + corr. December	1995 1997
IEC 60687	1992	Alternating current static watt-hour meters for active energy (classes 0,2 S and 0,5 S)	EN 60687 + corr. March	1992 1993
IEC 61036	1996	Alternating current static watt-hour meters for active energy (classes 1 and 2)	EN 61036	1996
IEC 61268	1995	Alternating current static var-hour meters for reactive energy (classes 2 and 3)	EN 61268	1996
IEC 62053-61 ¹⁾	1998	Electricity metering equipment (a.c.) Particular requirements Part 61: Power consumption and voltage requirements	EN 62053-61	1998

¹⁾ This document was voted as prEN 61899.

CONTENTS

		Page	
Cla	use		
1	Scope	9	
2	Normative references	9	
3	Definitions	11	
•	3.1 General definitions	11	
	3.2 Definitions related to functional elements	11	
4	Requirements	11	
•	4.1 Functional requirements	11	
	4.2 Mechanical requirements	13	
	4.3 Climatic conditions	13	
	4.4 Electrical requirements	13	
	4.5 Electromagnetic compatibility (EMC)	15	
5	Tests and test conditions	15	
J	5.1 General testing procedures	15	
	5.2 Tests for mechanical requirements	17	
	5.3 Tests for climatic influences	17	
		17	
	5.4 Tests for electrical requirements	17	
	5.5 Tests for electromagnetic compatibility (EMC)	19	
	5.6 Functional tests	19	
Tak	ble 1 – Specified operating conditions	13	
ıaı	ble 7 - Specified operating conditions		
Anı	nexes		
Α	Physical interface of the pulse output	21	
В	Output pulse waveform		
С	Test of pulse output device		
D	Test of pulse input device	27	
Ε	Special application – Pulse output device for long distances according to IEC 60381-1		
F	Test schedule	37	

ELECTRICITY METERING EQUIPMENT (AC) – PARTICULAR REQUIREMENTS –

Part 31: Pulse output devices for electromechanical and electronic meters (two wires only)

1 Scope

This part of IEC 62053 is applicable to passive, two-wire, externally powered pulse output devices to be used in electricity meters as defined by the relevant standards of technical committee 13 (see normative references) as well as future standards for static VA-hour meters.

Such pulse output devices are used to transmit pulses, representing a finite energy quantity, to a receiver (e.g. a tariff device).

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 62053. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 62053 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 60145:1963, Var-hour (reactive energy) meters

IEC 60381-1:1982, Analogue signals for process control systems – Part 1: Direct current signals

IEC 60521:1988, Classes 0,5, 1 and 2 alternating-current watt-hour meters

IEC 60687:1992, Alternating current static watt-hour meters for active energy (classes 0,2 S and 0,5 S)

IEC 61036:1996, Alternating current static watt-hour meters for active energy (classes 1 and 2)

IEC 61268:1995, Alternating current static var-hour meters for reactive energy (classes 2 and 3)

IEC 61899:1997, Static electric energy meters – Power consumption and voltage requirements – Multi-energy and multi-function meters