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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Electricity metering – Payment systems – Part 31: Particular requirements – Static payment meters for active energy (classes 1 and 2)

Equipements de comptage de l'électricité – Systèmes à paiement – Partie 31: Exigences particulières – Compteurs statiques à paiement d'énergie active (classes 1 et 2)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRICITY METERING – PAYMENT SYSTEMS –

Part 31: Particular requirements – Static payment meters for active energy (classes 1 and 2)

FOREWORD

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International Standard IEC 62055-31 has been prepared by IEC technical committee 13: Equipment for electrical energy measurement and load control.

This bilingual version (2013-05) corresponds to the monolingual English version, published in 2005-09.

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

FDIS	Report on voting
13/1344/FDIS	13/1355/RVD

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

The French version of this standard has not been voted upon.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

IEC 62055 consists of the following parts, under the general title *Electricity metering – Payment systems*:

Part 21: Framework for standardization

Part 31: Static payment meters for active energy (Classes 1 and 2)

Part 41: Standard Transfer Specification – Application layer protocol for one-way token carrier systems[1]

Part 51: Standard Transfer Specification – Physical layer protocol for one-way numeric and magnetic card token carriers[1]

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

The contents of the corrigendum of July 2007 have been included in this copy.

1 Under consideration.

INTRODUCTION

Payment meters are used in situations where the supply of electrical energy to the load may be interrupted or its restoration enabled under the control of the payment meter in relation to a payment tariff agreed between the customer and the supplier. The payment meter is part of a system that uses token carriers to pass payment information as tokens between a vending network and the payment meters that include the meter accounting process.

The functions of a payment meter are to measure electrical energy consumed and to decrement the available credit value in accordance with the metered consumption, and possibly in accordance with the passing of time. This available credit value is incremented as the result of payments made to the electricity supplier, and the meter accounting process continuously calculates the balance of available credit held by the customer. When the available credit value has been decremented to a predetermined value that is related to the payment mode in use, a switch is used to interrupt the supply to the customer's load. However, additional features may be present in the payment meter, which prevent or delay the opening of the switch, or limit further consumption to a low load level. Such "social" features may include the provision of an emergency credit facility, the possibility of operation in a fixed-payment mode, and the inhibiting of interruptions for certain periods of time.

In return for the payment (usually in cash) and depending on the particular type of system, the customer may be issued with a single-use token on a disposable token carrier for the equivalent value, or a reusable token carrier may be credited with that value, or the token may be transmitted directly to the meter via a communications network (a so-called virtual token carrier). "One-way" and "two-way" data transfer systems may be used, and the token carriers may be: physical devices such as smart cards, or other electronic devices, or magnetic cards; virtual token carriers where the token information is transferred by a remote communications system; or numeric token carriers where sequences of digits are issued on a paper receipt and entered via a keypad on the meter.

IEC 62051 provides some details of payment metering terminology in Clause 17.