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INTERNATIONAL STANDARD

Electricity metering – Payment systems – Part 31: Particular requirements – Static payment meters for active energy (classes 0,5, 1 and 2)

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ELECTRICITY METERING – PAYMENT SYSTEMS –

Part 31: Particular requirements – Static payment meters for active energy (classes 0,5 1, 1 and 2)

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This commented version (CMV) of the official standard IEC 62055-31:2022 edition 2.0 allows the user to identify the changes made to the previous IEC 62055-31:2005 edition 1.0. Furthermore, comments from IEC TC 13 experts are provided to explain the reasons of the most relevant changes, or to clarify any part of the content.

A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text. Experts' comments are identified by a blue-background number. Mouse over a number to display a pop-up note with the comment.

This publication contains the CMV and the official standard. The full list of comments is available at the end of the CMV.

IEC 62055-31 has been prepared by IEC technical committee 13: Electrical energy measurement and control. It is an International Standard.

This second edition cancels and replaces the first edition published in 2005. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) Title modified.
b) Removal of the contents of Annex C relating to the requirements for the supply control switch, and added reference to IEC 62052-31:2015 which contains the relevant requirements.

The text of this International Standard is based on the following documents:

Draft	Report on voting
13/1864/FDIS	13/1866/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

A list of all parts in the IEC 62055 series, published under the general title *Electricity metering – Payment systems*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

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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 primary reason for this edition is to align it with the requirements introduced in IEC 62052-31:2015 metering safety standard. **2**

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 62051:1999, Clause 17 provides some details of payment metering terminology.

ELECTRICITY METERING – PAYMENT SYSTEMS –

Part 31: Particular requirements – Static payment meters for active energy (classes 0,5, 1 and 2)

1 Scope

This part of IEC 62055 applies to newly manufactured, static watt-hour payment meters of accuracy classes 0,5, 1 and 2 for direct connection, for the measurement of alternating current electrical energy consumption of a frequency in the range 45 Hz to 65 Hz that include a ~~load~~ supply control **3** switch for the purpose of interruption or restoration of the electricity supply to the load in accordance with the current value of the available credit maintained in the payment meter. It does not apply to static watt-hour payment meters where the voltage across the connection terminals exceeds ~~600~~ 1 000 V **4** (line-to-line voltage for meters for polyphase systems).

It applies to payment meters for indoor application ~~only~~, operating under normal climatic conditions **5** where the payment meter ~~shall be~~ is mounted as for normal service (i.e. together with a specified matching socket where applicable).

Payment meters are implementations where all the main functional elements are incorporated in a single enclosure, together with any specified matching socket. There are also ~~multi-part~~ multi-device **6** payment metering installations where the various main functional elements, such as the measuring element, the user interface unit, token carrier interface, and the ~~load~~ supply control switch are implemented in more than one enclosure, involving additional interfaces. ~~This part of IEC 62055 does not apply to multi-part payment metering installations.~~

Functional requirements that apply to payment meters are also defined in this document, and include informative basic functional requirements and tests for the prepayment mode of operation in Annex A. Allowances are made for the relatively wide range of features, options, alternatives, and implementations that may be found in practice. The diverse nature and functionality of payment meters prevent the comprehensive specification of detailed test methods for all of these requirements. However, in this case, the requirements are stated in such a way that tests can then be formulated to respect and validate the specific functionality of the payment meter being tested.

This document does not cover specific functionality or performance requirements for ~~safety,~~ circuit protection, isolation or similar purposes that may be specified through reference to other specifications or standards. Safety requirements removed from Edition 1.0 have been replaced with references to the safety requirements now contained in IEC 62052-31:2015, the product safety standard for newly manufactured electricity meters. In-service safety testing (ISST) is not covered by IEC 62052-31:2015 and is left to national best practice usually as an extension of existing in-service testing (IST) of metrology stability.

This document does not cover software requirements. ~~Software requirements for basic energy meter metrology are under consideration for the IEC 62059 series of standards, and in other organisations.~~

This document covers type-testing requirements only. For acceptance testing, the ~~concepts~~ requirements given in ~~IEC 61358~~ IEC 62058-11:2008 and IEC 62058-31:2008 may be used ~~as a basic guideline~~.

Dependability aspects are addressed in the IEC 62059 series of standards. Additional reliability, availability, maintenance and life cycle aspects are provided by IEC TC 56.

This document does not cover conformity tests and system compliance tests that may be required in connection with legal or other requirements of some markets.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050-300:2001, *International Electrotechnical Vocabulary (IEV) – Part 300: 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 60050-300:2001/AMD1:2015
IEC 60050-300:2001/AMD2:2016
IEC 60050-300:2001/AMD3:2017
IEC 60050-300:2001/AMD4:2020

~~IEC 61000-4-5:1995, *Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Surge immunity test*~~

~~IEC 61008-1:1996, *Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) – Part 1: General rules*~~
~~Amendment 1 (2002)~~

~~IEC 61358:1996, *Acceptance inspection for direct connected alternating current static watt-hour meters for active energy (classes 1 and 2)*~~

IEC TR 62051:1999, *Electricity metering – Glossary of terms*

IEC 62052-11:~~2003~~2020, *Electricity metering equipment ~~(AC)~~ – General requirements, tests and test conditions – Part 11: Metering equipment*

IEC 62052-31:2015, *Electricity metering equipment (AC) – General requirements, tests and test conditions – Part 31: Product safety requirements and tests* **7**

IEC 62053-21:~~2003~~2020, *Electricity metering equipment ~~(AC)~~ – Particular requirements – Part 21: Static meters for AC active energy (classes 0,5, 1 and 2)*

IEC 62054-21:2004, *Electricity metering (a.c.) – Tariff and load control – Part 21: Particular requirements for time switches*
IEC 62054-21:2004/AMD1:2017

IEC TR 62055-21:2005, *Electricity metering – Payment systems – Part 21: Framework for standardisation*

IEC 62058-11:2008, *Electricity metering equipment (AC) – Acceptance inspection – Part 11: General acceptance inspection methods*

IEC 62058-31:2008, *Electricity metering equipment (AC) – Acceptance inspection – Part 31: Particular requirements for static meters for active energy (classes 0,2 S, 0,5 S, 1 and 2)*

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Electricity metering – Payment systems –
Part 31: Particular requirements – Static payment meters for active energy (classes 0,5, 1 and 2)

Équipements de comptage de l'électricité – Systèmes à paiement –
Partie 31: Exigences particulières – Compteurs statiques à paiement d'énergie active (classes 0,5, 1 et 2)



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ELECTRICITY METERING – PAYMENT SYSTEMS –

Part 31: Particular requirements – Static payment meters for active energy (classes 0,5, 1 and 2)

FOREWORD

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The language used for the development of this International Standard is English.

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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 primary reason for this edition is to align it with the requirements introduced in IEC 62052-31:2015 metering safety standard.

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 62051:1999, Clause 17 provides some details of payment metering terminology.

ELECTRICITY METERING – PAYMENT SYSTEMS –

Part 31: Particular requirements – Static payment meters for active energy (classes 0,5, 1 and 2)

1 Scope

This part of IEC 62055 applies to newly manufactured, static watt-hour payment meters of accuracy classes 0,5, 1 and 2 for direct connection, for the measurement of alternating current electrical energy consumption of a frequency in the range 45 Hz to 65 Hz that include a supply control switch for the purpose of interruption or restoration of the electricity supply to the load in accordance with the current value of the available credit maintained in the payment meter. It does not apply to static watt-hour payment meters where the voltage across the connection terminals exceeds 1 000 V (line-to-line voltage for meters for polyphase systems).

It applies to payment meters for indoor application, operating under normal climatic conditions where the payment meter is mounted as for normal service (i.e. together with a specified matching socket where applicable).

Payment meters are implementations where all the main functional elements are incorporated in a single enclosure, together with any specified matching socket. There are also multi-device payment metering installations where the various main functional elements, such as the measuring element, the user interface unit, token carrier interface, and the supply control switch are implemented in more than one enclosure, involving additional interfaces.

Functional requirements that apply to payment meters are also defined in this document, and include informative basic functional requirements and tests for the prepayment mode of operation in Annex A. Allowances are made for the relatively wide range of features, options, alternatives, and implementations that may be found in practice. The diverse nature and functionality of payment meters prevent the comprehensive specification of detailed test methods for all of these requirements. However, in this case, the requirements are stated in such a way that tests can then be formulated to respect and validate the specific functionality of the payment meter being tested.

This document does not cover specific functionality or performance requirements for circuit protection, isolation or similar purposes that may be specified through reference to other specifications or standards. Safety requirements removed from Edition 1.0 have been replaced with references to the safety requirements now contained in IEC 62052-31:2015, the product safety standard for newly manufactured electricity meters. In-service safety testing (ISST) is not covered by IEC 62052-31:2015 and is left to national best practice usually as an extension of existing in-service testing (IST) of metrology stability.

This document does not cover software requirements. This document covers type-testing requirements only. For acceptance testing, the requirements given in IEC 62058-11:2008 and IEC 62058-31:2008 may be used.

Dependability aspects are addressed in the IEC 62059 series of standards. Additional reliability, availability, maintenance and life cycle aspects are provided by IEC TC 56.

This document does not cover conformity tests and system compliance tests that may be required in connection with legal or other requirements of some markets.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050-300:2001, *International Electrotechnical Vocabulary (IEV) – Part 300: 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 60050-300:2001/AMD1:2015
IEC 60050-300:2001/AMD2:2016
IEC 60050-300:2001/AMD3:2017
IEC 60050-300:2001/AMD4:2020

IEC TR 62051:1999, *Electricity metering – Glossary of terms*

IEC 62052-11:2020, *Electricity metering equipment – General requirements, tests and test conditions – Part 11: Metering equipment*

IEC 62052-31:2015, *Electricity metering equipment (AC) – General requirements, tests and test conditions – Part 31: Product safety requirements and tests*

IEC 62053-21:2020, *Electricity metering equipment – Particular requirements – Part 21: Static meters for AC active energy (classes 0,5, 1 and 2)*

IEC 62054-21:2004, *Electricity metering (a.c.) – Tariff and load control – Part 21: Particular requirements for time switches*
IEC 62054-21:2004/AMD1:2017

IEC TR 62055-21:2005, *Electricity metering – Payment systems – Part 21: Framework for standardisation*

IEC 62058-11:2008, *Electricity metering equipment (AC) – Acceptance inspection – Part 11: General acceptance inspection methods*

IEC 62058-31:2008, *Electricity metering equipment (AC) – Acceptance inspection – Part 31: Particular requirements for static meters for active energy (classes 0,2 S, 0,5 S, 1 and 2)*

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COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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ÉQUIPEMENTS DE COMPTAGE DE L'ÉLECTRICITÉ – SYSTÈMES À PAIEMENT –

Partie 31: Exigences particulières – Compteurs statiques à paiement d'énergie active (classes 0,5, 1 et 2)

AVANT-PROPOS

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L'IEC 62055-31 a été établie par le comité d'études 13 de l'IEC: Comptage et pilotage de l'énergie électrique. Il s'agit d'une Norme internationale.

Cette seconde édition annule et remplace la première édition parue en 2005. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

a) modification du titre;

b) suppression du contenu de l'Annexe C concernant les exigences relatives à l'interrupteur de commande de l'alimentation et ajout de la référence à l'IEC 62052-31:2015 qui contient les exigences pertinentes.

Le texte de cette Norme internationale est issu des documents suivants:

Projet	Rapport de vote
13/1864/FDIS	13/1866/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Le présent document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous www.iec.ch/members_experts/refdocs. Les principaux types de documents développés par l'IEC sont décrits plus en détail sous www.iec.ch/standardsdev/publications.

Une liste de toutes les parties de la série IEC 62055, publiées sous le titre général *Equipements de comptage de l'électricité – Systèmes à paiement*, peut être consultée sur le site web de l'IEC.

Le comité a décidé que le contenu du présent document ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous webstore.iec.ch dans les données relatives au document recherché. A cette date, le document sera:

- reconduit,
- supprimé,
- remplacé par une édition révisée, ou
- amendé.

INTRODUCTION

Les compteurs à paiement sont utilisés dans des situations où la fourniture d'énergie électrique à une charge peut être coupée ou son rétablissement activé par le compteur à paiement en fonction d'un tarif de paiement ayant fait l'objet d'un accord entre le client et le fournisseur. Le compteur à paiement fait partie d'un système utilisant des supports de jeton pour transmettre les informations de paiement sous forme de jetons entre le réseau d'un fournisseur et les compteurs à paiement comprenant le processus de comptabilité du compteur.

Le principal objectif de la présente édition est de s'aligner sur les exigences introduites dans l'IEC 62052-31:2015 relative à la sécurité des compteurs.

Les fonctions d'un compteur à paiement sont la mesure de l'énergie électrique consommée et la diminution de la valeur de crédit disponible en fonction de la consommation mesurée, et en principe en fonction du temps passé. La valeur de crédit disponible est augmentée à la suite des paiements effectués au fournisseur d'électricité, le processus de comptabilité du compteur calcule en permanence le solde du crédit disponible du client. Lorsque la valeur de crédit disponible a diminué jusqu'à une valeur prédéterminée qui est associée au mode de paiement utilisé, un interrupteur est utilisé pour interrompre l'alimentation de la charge du client. Toutefois, des caractéristiques supplémentaires peuvent exister dans le compteur à paiement, empêchant ou retardant l'ouverture de l'interrupteur, ou limitant toute prochaine consommation à un faible niveau de charge. Ces dispositions "sociales" peuvent inclure la fourniture de dispositions de crédit d'urgence, la possibilité de fonctionnement dans un mode de paiement fixe et l'inhibition des interruptions pendant certaines périodes de temps.

En réponse au paiement (habituellement en numéraire) et en fonction du type de système particulier, le client peut recevoir un jeton à usage unique sur un support de jeton jetable de valeur équivalente, ou bien un support de jeton réutilisable peut être crédité de la valeur du jeton ou le jeton peut être directement transmis au compteur par l'intermédiaire d'un réseau de communication (appelé support de jeton virtuel). Des systèmes de transfert de données "unidirectionnel" et "bidirectionnel" peuvent être utilisés et les supports de jeton peuvent être des dispositifs physiques tels que des cartes à puce ou d'autres dispositifs électroniques ou des cartes magnétiques, des supports de jeton virtuels où les informations de jeton sont transférées par un système de communication distant ou des supports de jeton numériques où des séries de chiffres sont fournies sur un reçu papier et saisies sur le compteur au moyen d'un clavier.

L'IEC 62051:1999, Article 17, donne certains détails de la terminologie du comptage à paiement.

ÉQUIPEMENTS DE COMPTAGE DE L'ÉLECTRICITÉ – SYSTÈMES À PAIEMENT –

Partie 31: Exigences particulières – Compteurs statiques à paiement d'énergie active (classes 0,5, 1 et 2)

1 Domaine d'application

La présente partie de l'IEC 62055 s'applique à des compteurs à paiement statiques de wattheures nouvellement fabriqués de classe de précision 0,5, 1 et 2 pour raccordement direct, pour la mesure de la consommation d'énergie électrique en courant alternatif d'une fréquence allant de 45 Hz à 65 Hz, incluant un interrupteur de commande de l'alimentation ayant pour but d'interrompre ou de rétablir la fourniture d'électricité à la charge en fonction de la valeur courante du crédit disponible maintenu dans le compteur à paiement. Elle ne s'applique pas aux compteurs à paiement statiques de wattheures dont la tension entre bornes de raccordement dépasse 1 000 V (tension entre phases pour les compteurs de systèmes polyphasés).

Elle s'applique aux compteurs à paiement pour applications intérieures utilisées dans des conditions climatiques normales, là où le compteur à paiement est monté comme en service normal (c'est-à-dire avec un socle correspondant spécifié, le cas échéant).

Les compteurs à paiement constituent des mises en œuvre de tous les éléments fonctionnels principaux incorporés dans une enceinte unique, avec un socle correspondant spécifié. Il existe également des installations de comptage à paiement à dispositifs multiples, dans lesquelles les divers éléments fonctionnels principaux, par exemple l'élément de mesure, l'unité d'interface utilisateur, l'interface de support de jeton et l'interrupteur de commande de l'alimentation, sont mis en œuvre dans plusieurs enceintes, ce qui implique des interfaces supplémentaires.

Les exigences fonctionnelles qui s'appliquent aux compteurs à paiement sont également définies dans le présent document, et comprennent des exigences fonctionnelles informatives de base et des essais pour le mode de fonctionnement par prépaiement de l'Annexe A. Des marges sont prévues pour le domaine relativement large de caractéristiques, options, aides actives et mises en œuvre qui peuvent exister en pratique. La nature et les fonctionnalités diverses des compteurs à paiement empêchent une spécification exhaustive de méthodes d'essai détaillées pour toutes ces exigences. Dans ce cas toutefois, les exigences sont mentionnées de telle manière que des essais puissent ensuite être formulés pour respecter et valider la fonctionnalité spécifique du compteur à paiement soumis à essai.

Le présent document ne traite pas de la fonctionnalité spécifique ou des exigences de performance concernant la protection des circuits, l'isolation ou des objectifs similaires qui peuvent être spécifiés en référence à d'autres spécifications ou normes. Les exigences de sécurité supprimées de l'Edition 1.0 ont été remplacées par des références aux exigences de sécurité, qui se trouvent à présent dans l'IEC 62052-31:2015, qui est la norme de sécurité produit des compteurs électriques nouvellement fabriqués. Les essais de sécurité en service (in-service safety testing – ISST) ne sont pas couverts par l'IEC 62052-31:2015 et cèdent la place aux meilleures pratiques du pays, habituellement comme extension des essais en service (in-service testing – IST) existants concernant la stabilité métrologique.

Le présent document ne traite pas des exigences logicielles. Le présent document traite uniquement des exigences d'essai de type. Pour les essais d'acceptation, les exigences données dans l'IEC 62058-11:2008 et l'IEC 62058-31:2008 peuvent être utilisées.

Les aspects de sûreté sont traités dans la série de normes IEC 62059. Les aspects supplémentaires relatifs à la fiabilité, la disponibilité, la maintenance et la durée de vie sont donnés par l'IEC TC 56.

Le présent document ne traite pas des essais de conformité ni des essais de conformité du système qui peuvent être exigés en relation avec des exigences légales ou autres sur certains marchés.

2 Références normatives

Les documents suivants cités dans le texte constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 60050-300:2001, *Vocabulaire Electrotechnique International – Partie 300: Mesures et appareils de mesure électriques et électroniques – Partie 311: Termes généraux concernant les mesures – Partie 312: Termes généraux concernant les mesures électriques – Partie 313: Types d'appareils électriques de mesure – Partie 314: Termes spécifiques selon le type d'appareil*
IEC 60050-300:2001/AMD1:2015
IEC 60050-300:2001/AMD2:2016
IEC 60050-300:2001/AMD3:2017
IEC 60050-300:2001/AMD4:2020

IEC TR 62051:1999, *Electricity metering – Glossary of terms* (disponible en anglais seulement)

IEC 62052-11:2020, *Equipement de comptage de l'électricité – Exigences générales, essais et conditions d'essai – Partie 11: Equipement de comptage*

IEC 62052-31:2015, *Equipement de comptage de l'électricité (CA) – Exigences générales, essais et conditions d'essai – Partie 31: Exigences et essais sur la sécurité de produit*

IEC 62053-21:2020, *Equipement de comptage de l'électricité – Exigences particulières – Partie 21: Compteurs statiques d'énergie active en courant alternatif (classes 0,5, 1 et 2)*

IEC 62054-21:2004, *Equipement de comptage d'électricité (C.A.) – Tarification et contrôle de charge – Partie 21: Exigences particulières pour les horloges de tarification*
IEC 62054-21:2004/AMD1:2017

IEC TR 62055-21:2005, *Electricity metering – Payment systems – Part 21: Framework for standardisation* (disponible en anglais seulement)

IEC 62058-11:2008, *Equipement de comptage de l'électricité (c.a.) – Contrôle de réception – Partie 11: Méthodes générales de contrôle de réception*

IEC 62058-31:2008, *Equipement de comptage de l'électricité (c.a.) – Contrôle de réception – Partie 31: Exigences particulières pour compteurs statiques d'énergie active (de classes 0,2 S, 0,5 S, 1 et 2)*