

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Electrical energy meters – Test equipment, techniques and procedures –
Part 3: Automatic meter testing system (AMTS)**

**Compteurs d'énergie électrique – Équipement, techniques et procédures d'essai –
Partie 3: Système d'essai automatisé des compteurs d'énergie électrique (AMTS)**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRICAL ENERGY METERS –
TEST EQUIPMENT, TECHNIQUES AND PROCEDURES –**

Part 3: Automatic meter testing system (AMTS)

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IEC 62057-3 has been prepared by IEC technical committee 13: Electrical energy measurement and control. It is an International Standard.

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

Draft	Report on voting
13/1916/FDIS	13/1919/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/publications.

A list of all parts in the IEC 62057 series, published under the general title *Electrical energy meters – Test equipment, techniques and procedures*, 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

- reconfirmed,
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INTRODUCTION

This document aims to define the basic performance requirements for AMTS, while the construction mode and the technical details depend on agreement between manufacturers and users, so as not to limit or inhibit innovation and technological advancement;

This document refers to the existing standards to the maximum extent so that the consistency in the IEC community can be ensured.

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ELECTRICAL ENERGY METERS – TEST EQUIPMENT, TECHNIQUES AND PROCEDURES –

Part 3: Automatic meter testing system (AMTS)

1 Scope

This part of IEC 62057 applies to an automatic meter testing system (AMTS) permanently installed in a controlled environment. It covers the functions, technical requirements and acceptance methods of an AMTS. It also applies to a newly manufactured AMTS to test static active or reactive energy meters on 50 Hz or 60 Hz networks with an AC voltage up to 100 V (phase to neutral).

NOTE The controlled environment refers to places that meet the test requirements of meters.

This document defines the kind of AMTS that can continuously and automatically carry out all the test items specified in IEC 62058-31, including visual inspection, AC voltage test, no-load condition, starting current, accuracy and meter constant test.

This document does not apply to:

- data interfaces to the meter and test procedures of data interface;
- industrial controllers, industrial personal computers, and servers supplied along with the AMTS.

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 60204-1:2016, *Safety of machinery - Electrical equipment of machines - Part 1: General requirements*

IEC 60204-1:2016/AMD1:2021

IEC 61010-1:2010, *Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements*

IEC 61010-1:2010/AMD1:2016

IEC 61140, *Protection against electric shock – Common aspects for installation and equipment*

IEC 61180:2016, *High-voltage test techniques for low-voltage equipment – Definitions, test and procedure requirements, test equipment*

IEC 61326-1:2020, *Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1: General requirements*

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)*