

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

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**Electricity metering (AC) – Tariff and load control –  
Part 21: Particular requirements for time switches**

**Équipement de comptage d'électricité (C.A.) – Tarification et contrôle  
de charge –  
Partie 21: Exigences particulières pour les horloges de tarification**



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ICS 91.140.50

ISBN 978-2-8322-3789-2

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRICITY METERING (AC) –  
TARIFF AND LOAD CONTROL –****Part 21: Particular requirements for time switches**

## FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 62054-21 has been prepared by IEC technical committee 13: Equipment for electrical energy measurement and load control.

This bilingual version (2016-12) corresponds to the monolingual English version, published in 2004-05.

This standard, in conjunction with IEC 62052-21, cancels and replaces IEC 61038:1990, *Electricity metering – Tariff and load control – Particular requirements for time switches* and all amendments. .

This standard is to be used in conjunction with IEC 62052-21 and the relevant parts of the IEC 62059 series.

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

FDIS	Report on voting
13/1308/FDIS	13/1317/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 62054 consists of the following parts, under the general title: *Electricity metering (a.c.) Tariff and load control*:

IEC 62054-11: Particular requirements for electronic ripple control receivers  
(Replaces the particular requirements of IEC 61037.)

IEC 62054-21: Particular requirements for time switches  
(Replaces the particular requirements of IEC 61038.)

The committee has decided that the contents of this publication will remain unchanged until 2013. At this date, the publication will be

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

## INTRODUCTION

This standard distinguishes between protective class I and protective class II equipment

The test levels are regarded as minimum values to guarantee the proper functioning of the equipment under normal working conditions. For special application, other test levels might be necessary and should be agreed on between the user and the manufacturer.

For information, the relevant parts of IEC 62052, IEC 62054 and IEC 62059 are listed below.

- IEC 62052-21 Electricity metering equipment (a.c.) – General requirements, tests and test conditions – Part 21: Tariff and load control equipment  
*(Replaces the general requirements of IEC 61037 and IEC 61038.)*
- IEC 62054-11 Electricity metering (a.c.) – Tariff and load control – Part 11: Particular requirements for electronic ripple control receivers  
*(Replaces the particular requirements of IEC 61037.)*
- IEC 62054-21 Electricity metering (a.c.) – Tariff and load control – Part 21: Particular requirements for time switches  
*(Replaces the particular requirements of IEC 61038.)*
- IEC 62059-11 Electricity metering equipment – Dependability – Part 11: General concepts
- IEC 62059-21 Electricity metering equipment – Dependability – Part 21: Collection of meter dependability data from the field
- IEC 62059-41 Electricity metering equipment – Dependability – Part 41: Reliability prediction<sup>1</sup>

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<sup>1</sup> To be published.

# ELECTRICITY METERING (AC) – TARIFF AND LOAD CONTROL –

## Part 21: Particular requirements for time switches

### 1 Scope

This part of IEC 62054 specifies particular requirements for the type test of newly manufactured indoor time switches with operation reserve that are used to control electrical loads, multi-tariff registers and maximum demand devices of electricity metering equipment.

The time switch keeps the real time, it may keep the date, it may be capable of handling leap years, it may support daylight saving, i.e. it modifies the deviation of local time to GMT according to the relevant regulations. The time switch may have a synchronization capability. The time switch also holds a schedule of switching actions, which may be specified in terms of time, day of the week, date within a month or a year. The time switch controls the output elements depending on the time and the schedule of switching actions stored.

This standard gives no requirements for constructional details internal to the time switch.

In the case where time switch functionality is integrated into multifunction electricity metering equipment, the relevant parts of this standard apply.

This standard covers time switches with analogue mechanical dials or electronic digital displays that are

- synchronous; or
- crystal-controlled.

This standard does not cover the acceptance tests and the conformity tests. Nevertheless, an example of what could be an acceptance test is given in Annex A .

The dependability aspect is covered by the documents of the IEC 62059 series.

When using this standard in conjunction with IEC 62052-21, the requirements of this standard take precedence over those of IEC 62052-21 with regard to any item already covered in it.

### 2 Normative references

The following referenced documents are indispensable for the application 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 62052-21:200X *Electricity metering equipment (a.c.) – General requirements, tests and test conditions – Part 21: Tariff and load control equipment*<sup>2</sup>

### 3 Terms and definitions

For the purposes of this document, the definitions of IEC 62052-21 apply.

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<sup>2</sup> To be published.