AS 62054.21:2018

Australian STANDARD

Electricity metering (AC)—Tariff and load control

Part 21: Particular requirements for time switches (IEC 62054-21:2017 (ED.1.1), MOD)

STANDARDS Australia

AS 62054.21:2018

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Australian Chamber of Commerce and Industry
Australian Energy Council
Australian Energy Market Operator
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Consumers' Federation of Australia
Electrical Regulatory Authorities Council
Energy Networks Australia
National Electrical and Communications Association
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Part 21: Particular requirements for time switches (IEC 62054-21:2017 (ED.1.1), MOD)

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Preface

This Standard was prepared by the Standards Australia Committee EL-011, Electricity Metering Equipment to supersede AS 62054.21—2006, *Electricity metering (ac) —Tariff and load control, Part 21: Particular requirements for time switches.*

The objective of this Standard is to specify 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.

This Standard is an adoption with national modifications, and has been reproduced from, IEC 62054-21:2004+AMD1:2017 CSV (ED.1.1), *Electricity metering (AC) — Tariff and load control — Part 21: Particular requirements for time switches.*

Appendix ZZ lists the variations for the application of this Standard in Australia.

As this document has been reproduced from an International Standard, the following applies:

(a) In the source text "this part of IEC 62054" should read "this Australian Standard".

(b) A full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms "normative" and "informative" are used in Standards to define the application of the appendices or annexes to which they apply. A "normative" appendix or annex is an integral part of a Standard, whereas an "informative" appendix or annex is only for information and guidance.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ELECTRICITY METERING (AC) – TARIFF AND LOAD CONTROL –

Part 21: Particular requirements for time switches

FOREWORD

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This Consolidated version is not an official IEC Standard and has been prepared for user convenience. Only the current versions of the standard and its amendment(s) are to be considered the official documents.

This Consolidated version of IEC 62054-21 bears the edition number 1.1. It consists of the first edition (2004-05) [documents 13/1308/FDIS and 13/1317/RVD] and its amendment 1 (2017-01) [documents 13/1705A/FDIS and 13/1728/RVD]. The technical content is identical to the base edition and its amendment.

This Final version does not show where the technical content is modified by amendment 1. A separate Redline version with all changes highlighted is available in this publication.

International Standard IEC 62054-21 has been prepared by IEC technical committee 13: Equipment for electrical energy measurement and load control.

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 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 the base publication and its amendment will remain unchanged until the stability 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.

NOTE The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests.

It is the recommendation of the committee that the content of this publication be adopted for implementation nationally not earlier than 4 years from the date of publication.

The contents of the corrigendum of March 2018 have been included in this copy.

INTRODUCTION

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 62052-21:2004, *Electricity metering equipment (a.c.) – General requirements, tests and test conditions – Part 21: Tariff and load control equipment*
Amendment 1 (2016)
(Replaces the general requirements of IEC 61037 and IEC 61038.)

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

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*[1]

INTRODUCTION TO AMENDMENT 1

The purpose of this amendment is to identify and remove all safety related requirements and tests of IEC 62054-21:2004 that are replaced and extended by the complete set of requirements and tests in IEC 62052-31:2015.

[1] 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.

The safety aspect is covered by IEC 62052-31:2015.

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 62052-21:2004 *Electricity metering equipment (a.c.) – General requirements, tests and test conditions – Part 21: Tariff and load control equipment*
Amendment 1 (2016)

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