Australian Standard™

Electricity metering (ac)— Tariff and load control

Part 21: Particular requirements for time switches

This Australian Standard was prepared by Committee EL-011, Electricity Metering Equipment. It was approved on behalf of the Council of Standards Australia on 19 January 2006.
This Standard was published on 10 February 2006.

The following are represented on Committee EL-011:

Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Electrical Regulatory Authorities Council
Electricity Engineers Association (New Zealand)
Energy Networks Association
Engineers Australia
Ministry of Economic Development (New Zealand)
NEMMCO
National Measurement Institute

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Web Shop at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Global Standard*, has a full listing of revisions and amendments published each month.

Australian Standards™ and other products and services developed by Standards Australia are published and distributed under contract by SAI Global, which operates the Standards Web Shop.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to the Chief Executive, Standards Australia, GPO Box 476, Sydney, NSW 2001.

This Standard was issued in draft form for comment as DR 05138.

Australian Standard™

Electricity metering (ac)—Tariff and load control

Part 21: Particular requirements for time switches

Originally as AS 1284.7—1994.
Revised and redesignated as AS 62054.21—2006.

Published by Standards Australia GPO Box 476, Sydney, NSW 2001, Australia

ISBN 0 7337 7242 0

PREFACE

This Standard was prepared by the joint Standards Australia/Standards New Zealand Committee EL-011, Electricity Metering Equipment to supersede AS 1284.7, *Electricity metering—Internal clocks for meters and load control devices.* After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian, rather than an Australian/New Zealand Standard.

The objective of this Standard is to provide electricity utilities and manufacturers with requirements and tests for internal clocks for electricity meters.

This Standard is identical with, and has been reproduced from IEC 62054-21, Ed.1.0 (2004), *Electricity metering (ac)—Tariff and load control—Part 21: Particular requirements for time switches (including internal clocks for meters)*.

As this Standard is reproduced from an International Standard, the following applies:

(a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.

(b) In the source text 'this part of IEC 62054' should read 'AS 62054.21'.

(c) A full point should be substituted for a comma when referring to a decimal marker.

The terms 'normative' and 'informative' are used to define the application of the annex to which they apply. A normative annex is an integral part of a standard, whereas an informative annex is only for information and guidance.

CONTENTS

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 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[1]

[1] To be published.

STANDARDS AUSTRALIA

Australian Standard

Electricity metering (ac)—Tariff and load control
Part 21: Particular requirements for time switches

Any table, figure or text of the international standard that is struck through is not part of this standard. Any Australian/New Zealand table, figure or text that is added is part of this standard and is identified by shading.

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.

References to international standards that are struck through in this clause are replaced by references to Australian or Australian/New Zealand Standards that are listed immediately thereafter and identified by shading. Any Australian or Australian/New Zealand Standard that is identical to the International Standard it replaces is identified as such.