AS 62052.21:2018

Australian STANDARD

Electricity metering equipment (ac)—General requirements, tests and test conditions

Part 21: Tariff and load control equipment (IEC 62052-21:2016 (ED.1.1) MOD)

STANDARDS Australia

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- Australian Chamber of Commerce and Industry
- Australian Energy Council
- Australian Energy Market Operator
- Australian Industry Group
- Consumers Federation of Australia
- Electrical Regulatory Authorities Council
- Energy Networks Australia
- National Electrical and Communications Association
- National Measurement Institute

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Australian Standard®

Electricity metering equipment (ac)—General requirements, tests and test conditions

Part 21: Tariff and load control equipment (IEC 62052-21:2016 (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 62052.21—2006, *Electricity metering equipment (AC)—General requirements, tests and test conditions*, Part 21: *Tariff and load control equipment (IEC 62052-21, Ed. 1.0 (2004) MOD)*.

The objective of this Standard is to communicate to users, and also provide manufacturers with the general requirements, tests and test conditions for tariff and load control equipment intended for use in Australia.

The most significant change in this revision of Part 21 has been the transfer of its product safety components into AS 62052.31:2017, *Electricity metering equipment (AC)—General requirements, tests and test conditions*, Part 31: *Product safety requirements and tests* (IEC 62052-31:2015 (ED.1.0) MOD). As such, this Part 21 should be read in conjunction with AS 62052.31. Other changes to the 2006 edition include revision of the variations in Appendix ZZ.

This Standard is an adoption with national modifications and has been reproduced from IEC 62052-21:2004 + AMD1:2016 CSV (ED.1.1), *Electricity metering equipment (a.c)—General requirements, tests and test conditions—Part 21: Tariff and load control equipment*. 'CSV' stands for 'consolidated version' whereby IEC Amendment 1:2016 has been incorporated into the source text.

This Standard has been varied and appended from the IEC Standard to take account of Australian conditions. The Australian variations to the IEC source text are listed in Appendix ZZ.

This Standard is structured as follows:

(a) Preface.

(b) IEC 62052-21:2016, (ED.1.1) (unedited from the Contents page to the final clause of the source document).

(c) Appendix ZZ, Variations to IEC 62052-21, ED.1.1 (2016) for application in Australia, addressing the following:

  (i) Updating of references.

  (ii) Nominating insulation protection class.

  (iii) Nominating acceptable temperature range.

  (iv) The requirement to label the purchaser-nominated property number with the same obligation as the serial number.

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

(A) In the source text 'this part of IEC 62052' should read 'this Australian Standard'.

(B) A full point should be substituted 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' have been used in this Standard to define the application of the annex or appendix to which they apply. A 'normative' annex or appendix is an integral part of a Standard, whereas an 'informative' annex or appendix is for information and guidance only.

This Standard belongs to the programme of adoptions of IEC 62052 and IEC 62053 series Standards on electricity metering equipment. Existing adoptions have been updated and a new Part (AS 62053.24) in the series has been added. The current adoptions comprise the following:

AS 62052.11 (Metering equipment). Modified adoption of IEC 62052-11:2016 (ED.1.1).

AS 62052.21 (Tariff and load control). Modified adoption of IEC 62052-21:2016 (ED.1.1) (this Standard).

AS 62052.31 (Product safety). Modified adoption of IEC 62052-31:2016 (ED.1.0).

AS 62053.21 (Class 1/2 kWh). Modified adoption of IEC 62053-21:2016 (ED.1.1).

AS 62053.22 (Class 0.2/0.5 kWh). Modified adoption of IEC 62053-22:2016 (ED.1.1).

AS 62053.23 (Class 2/3 kvarh). Modified adoption of IEC 62053-23:2016 (ED.1.1).

AS 62053.24 (Class 1.0/0.5 kvarh). Modified adoption of IEC 62053-24:2016 (ED.1.1).

CONTENTS

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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This Consolidated version of IEC 62052-21 bears the edition number 1.1. It consists of the first edition (2004-05) [documents 13/1307/FDIS and 13/1316/RVD] and its amendment 1 (2016-11) [documents 13/1702/FDIS and 13/1716/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 62052-21 has been prepared by IEC technical committee 13: Equipment for electrical energy measurement and load control.

This standard is to be used in conjunction with the relevant parts of the IEC 62054 and the IEC 62059 series.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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 2 years from the date of publication.

INTRODUCTION

This standard distinguishes between protective class I and protective class II tariff and load control 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:

IEC 62052-21, *Electricity metering (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 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*[1] (Replaces the particular requirements of IEC 61038.)

IEC 62059-11, *Electricity metering equipment (a.c.) – Dependability – Part 11: General concepts*

IEC 62059-21, *Electricity metering equipment (a.c.) – Dependability – Part 21: Collection of meter dependability data from the field*

IEC 62059-41, *Electricity metering equipment (a.c.) – 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 62052-21:2004 that are replaced and extended by the complete set of requirements and tests in IEC 62052-31:2015.

In addition, Annex F has been amended to refer to IEC 62058-11:2008 instead of IEC 60410 which has been withdrawn.

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[1] To be published.

AUSTRALIAN STANDARD

Electricity metering equipment (ac)—General requirements, tests and test conditions

Part 21:
Tariff and load control equipment (IEC 62052-21:2016 (ED.1.1) MOD)

1 Scope

This part of IEC 62052 specifies general requirements for the type test of newly manufactured indoor tariff and load control equipment, like electronic ripple control receivers and time switches that are used to control electrical loads, multi-tariff registers and maximum demand indicator devices.

This standard gives no requirements for constructional details internal to the tariff and load control equipment.

In the case where tariff and load control functionality is integrated into multifunction electricity metering equipment, the relevant parts of this standard apply.

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 F.

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

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

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 60050-300:2001, *International Electrotechnical Vocabulary (IEV) – 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 60068-2-1:1990, *Environmental testing – Part 2: Tests – Tests A: Cold*

IEC 60068-2-2:1974, *Environmental testing – Part 2: Tests – Tests B: Dry heat*

IEC 60068-2-6:1995, *Environmental testing – Part 2: Tests – Test Fc: Vibration (sinusoidal)*

IEC 60068-2-27:1987, *Environmental testing – Part 2: Tests – Test Ea and guidance: Shock*

IEC 60068-2-30:1980, *Environmental testing – Part 2: Tests – Test Db and guidance: Damp heat, cyclic (12 + 12-hour cycle)*

IEC 60269-3-1:1994, *Low-voltage fuses – Part 3-1: Supplementary requirements for fuses for use by unskilled persons (fuses mainly for household and similar applications) – Sections I to IV*

