AS 1284.1—2004
Reconfirmed 2019

Australian Standard™

Electricity metering

Part 1: General purpose induction watthour meters

STANDARDS AUSTRALIA

This Australian Standard was prepared by Committee EL-011, Electricity Metering. It was approved on behalf of the Council of Standards Australia on 10 May 2004 and published on 3 June 2004.

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Australian Electrical and Electronic Manufacturers Association

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This Standard was issued in draft form for comment as DR 97234.

STANDARDS AUSTRALIA

RECONFIRMATION

OF
AS 1284.1—2004
Electricity metering
Part 1: General purpose induction watthour meters

RECONFIRMATION NOTICE

Technical Committee EL-011 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

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Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 26 August 2019.

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NOTES

Australian Standard™

Electricity metering

Part 1: General purpose induction watthour meters

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PREFACE

This Standard was prepared by the Standards Australia Committee on Electricity Metering Equipment to supersede AS 1284.1—1991.

Changes to the 1991 edition are as follows:

(a) Removal of requirements for adjusting devices.

(b) Simplification of requirements for termination for bottom-connected meters.

(c) Removal of requirements for pointer registers.

(d) Removal of requirements for basic torque.

(e) Removal of requirements for an internal sighting strip.

This Standard is Part One of a series covering electricity meters. The series consists of the following Standards.

AS		
1284	Electricity metering	
1284.1	Part 1:	General purpose induction watthour meters (this Standard)
1284.4	Part 4:	Socket mounting system
1284.5	Part 5:	General purpose electronic watthour meters
1284.6	Part 6:	Ripple control receivers for tariff and load control
1284.7	Part 7:	Internal clocks for meters and load control devices
1284.9	Part 9:	Electronic watthour meters (Classes 0.2 S and 0.5 S)
1284.10.1	Part 10.1:	Data exchange for meter reading, tariff and load control—Direct local data exchange via hand-held unit (HHU)—IEC Standard interface
1284.10.2	Part 10.2:	Data exchange for meter reading, tariff and load control—Direct local data exchange via hand-held unit (HHU)—ANSI Standard interface
1284.11	Part 11:	Single-phase multifunction watthour meters
1284.12	Part 12:	Polyphase multifunction (non-demand) watthour meters (Class 1)
1284.13	Part 13:	In-service compliance testing

The Standard specifies requirements for meters with the objective of ensuring that they will generally be accurate to within 2 percent for periods in excess of 20 years under harsh environmental conditions. To allow for drift in calibration known to occur over long periods of service, some of the limits specified in this Standard are more stringent than those for IEC 62053-11, Class 2.

The Standard adopts the single classification ‘general purpose’ for meters intended for domestic, commercial and general industrial use and thus avoids confusion with the IEC accuracy classifications for which the criteria are different.

Need is recognized for limited numbers of meters of higher accuracy for use in much less onerous field conditions. It is considered that this can be adequately covered by specifying compliance with IEC 62053-11, *Electricity metering equipment (a.c.)—Particular requirements,* Part 11: *Electromechanical meters for active energy (classes 0,5, 1 and 2)* or with IEC 62053-22, *Electricity metering equipment (a.c.)—Particular requirements,* Part 22: *Static meters for active energy (classes 0,2 S and 0,5 S)*.

CONTENTS

Page

STANDARDS AUSTRALIA

Australian Standard
Electricity metering

Part 1: General purpose induction watthour meters

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for general purpose single-rate and multi-rate induction watthour meters (hereinafter referred to as 'meters') for the measurement of 50 Hz a.c. electrical energy in domestic, industrial or commercial premises.

The Standard specifies terminal arrangements and connections for bottom-connected meters, also contact blade arrangements and connections for single-element single-phase 2-wire plug-in meters by cross-reference to AS 1284.4.

NOTE: This Standard includes guidance to purchasers of meters. Appendix A provides information which should be supplied with enquiry and order to facilitate the specification and purchase of meters.

1.2 APPLICATION

For plug-in meters, this Standard shall be read in conjunction with AS 1284.4.

1.3 REFERENCED DOCUMENTS

The documents referred to in this Standard are listed in Appendix B.

1.4 DEFINITIONS

For the purpose of this Standard the definitions below apply.

1.4.1 Definitions related to the meter

1.4.1.1 *Bottom-connected meter*

A meter intended for mounting on a panel with external wiring connected directly to its terminals.

1.4.1.2 *CT-operated meter*

A meter intended for use with an external current transformer (CT), as indicated on the rating plate.

1.4.1.3 *Direct-connected meter*

A meter intended for use without an external measurement transformer, i.e., for direct connection to the circuit being metered.

1.4.1.4 *Induction meter*

A meter in which currents in fixed coils react with the currents induced in the moving element, generally a disc or discs, causing movement.