Australian Standard®

Electricity metering

Part 3: Induction watthour meters—Energy demand type

This Australian Standard was prepared by Committee EL/11, Electricity Metering Equipment. It was approved on behalf of the Council of Standards Australia on 27 September 1990 and published on 11 February 1991.

The following interests are represented on Committee EL/11:

Australian Electrical and Electronic Manufacturers' Association

Confederation of Australian Industry

Electricity Supply Association of Australia

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PREFACE

This Standard was prepared by the Standards Australia Committee on Electricity Metering Equipment to supersede in part AS 1284.3—1973, *Electricity Meters*, Part 3: *Alternating current watthour meters of two-rate and energy demand types.*

AS 1284, (retitled) *Electricity Metering*, is published in four Parts as follows:

AS
1284.1 Part 1: General purpose induction watthour meters
1284.2 Part 2: Portable alternating current rotating standard watthour meters
1284.3 Part 3: Induction watthour meters—Energy demand type (this Standard)
1284.4 Part 4: Socket mounting system

Other Parts of AS 1284 are being drafted.

Requirements for two-rate meters formerly included in AS 1284.3—1973 have been revised and transferred to AS 1284.1—1990 where they are to be found among requirements for multi-rate meters.

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STANDARDS AUSTRALIA

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Part 3: Induction watthour meters—Energy demand type

1 SCOPE This Standard specifies requirements for 50 Hz a.c. induction watthour meters provided with a demand register to indicate maximum demand.

This Standard does not apply to meters that record demand or to meters that depend upon thermal effects or are operated by pulses.

2 APPLICATION This Standard shall be read in conjunction with AS 1284.1. A meter shall comply with the appropriate requirements of AS 1284.1 except as they may be modified herein.

3 REFERENCED DOCUMENTS The following Standard is referred to in this Standard:

AS
1284 Electricity metering
1284.1 Part 1: General purpose induction watthour meters

4 DEFINITIONS For the purpose of this Standard, the definitions below apply.

4.1 Energy demand meter—a meter with a demand register in addition to the energy register.

4.2 Demand register—the mechanism which indicates maximum demand (usually combined with the energy register).

4.3 Indicating demand register—a demand register which indicates maximum demand by means of a scale readout, a pointer register, or a digital register.

4.4 Cumulative demand register—a demand register in which the operation of the maximum demand resetting mechanism adds the prevailing maximum demand to the sum of the previous maximum demands.

4.5 Scale readout—a scale over which a single friction pointer is advanced to indicate maximum demand.

4.6 Pointer register—a counting mechanism indicating, by means of pointers and associated dials, the maximum demand.

4.7 Digital register—a counting mechanism indicating, by means of figures (on drums or by other means), the maximum demand.

4.8 Full-scale value (of a demand register)—the maximum scale capacity of the register. If a multiplying constant exists, the full-scale value will be the product of the maximum scale marking and the multiplying constant.

4.9 Demand (Mean power)—the energy divided by the time in which it is produced or absorbed.

4.10 Demand integration period—the interval of time upon which the demand measurement is based (e.g. 30 min).

4.11 Maximum demand—the highest value of the mean power during successive demand integration periods between one operation of the maximum-demand resetting mechanism and the next.

4.12 Maximum-demand resetting mechanism—a mechanism which enables the maximum-demand friction pointer or pointers to be reset to zero manually or by other means. For a cumulative demand register, it also initiates the operation which causes the prevailing maximum demand to be added to the sum of the previous maximum demands.

4.13 Driving mechanism—a mechanism which when operated by the energy meter can drive the maximum-demand pointers or drums.

4.14 Detent time—the interval of time within each demand integration period during which the demand register is disconnected for the purpose of restoring the driving mechanism.

4.15 Timing mechanism—the mechanism which measures and controls the demand-integration period of the demand register. This mechanism may be internal or external to the meter case.