Dup Superseded by AS 1284.4-1994

Under Revision Doc DR 94181

AS 1284.4—1991

Australian Standard®

Electricity metering

Part 4: Socket mounting system

STANDARDS AUSTRALIA

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 Australia Industry
Electricity Supply Association of Australia

Review of Australian Standards. *To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up-to-date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.*

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

This Standard was issued in draft form for comment as DR 88201.

Australian Standard®

Electricity metering

Part 4: Socket mounting system

First published as AS 1284.4—1991.

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
STANDARDS HOUSE, 80 ARTHUR ST, NORTH SYDNEY NSW
ISBN 0 7262 6605 1

PREFACE

This Standard was prepared by the Standards Australia Committee on Electricity Metering Equipment as a means of ensuring, by its use, that the various components of the socket mounting system produced by different manufacturers are directly interchangeable without any adverse effect.

Certain performance aspects of sockets are specified to ensure they are adequate for their intended purpose.

This Standard specifies all the requirements that are considered necessary for safety, performance, and interchangeability of components from different manufacturers. Details which would restrict design or innovation have not been included. However, detailed drawings of certain components shown herein are available, on request, from:

The General Manager
The Sydney County Council
GPO Box 4009
SYDNEY NSW 2001

This Standard is a Part of AS 1284, (retitled) *Electricity Metering*, which 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
1284.4 Part 4: Socket mounting system (this Standard)

Other Parts of AS 1284 are being drafted.

CONTENTS

FOREWORD

The socket mounting system for single-element electricity meters specified herein was developed in Australia in the mid-1970s. It was based on the North American plug-in system of the 1930s. (That system is complicated by the three-wire 120 V–0–120 V supply system and the need for two-element meters.)

The basic design involves a single-element meter with three blades, and a socket with three jaws, A, N, L; the heavy current jaws (A and L) are arranged at an angle of 90° to each other in order to facilitate self-alignment of the blades and to avoid the application of torque to the current coil of the meter during insertion.

The positions of the three jaws are staggered in order that disconnection of supply through a direct-connected meter may be carried out simply and safely by removing and reinstalling the meter 90° anticlockwise from its normal position and resealing the installation, all without touching the associated circuit wiring. No meter can be inserted 'upside-down' or in any position other than 'normal' or 'disconnected'. Staggering of jaws also facilitates factory connection of multiple sockets with straight sealed busbars, thereby achieving a significant reduction in space and in installation cost. The system allows for surface connection or back connection of wiring according to requirement.

Two additional jaws are provided to allow the system to accept current transformer-operated meters and meters with two-rate (mechanical changeover) registers. Bridging facilities are provided for a shorting bridge for use in changing a meter without interrupting supply (or open-circuiting a current transformer).

The same jaw arrangement will also accept other devices for metering and load control purposes. A load control socket can be located adjacent to a meter socket and the two conveniently interconnected.

The system is rated at 500 V, 125 A, and is thus capable of accommodating all likely requirements: above 100 A or 125 A, CT metering is employed; above 500 V, VT (and CT) metering is employed.

STANDARDS AUSTRALIA

Australian Standard
Electricity metering

Part 4: Socket mounting system

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard specifies safety, performance and interchangeability requirements for sockets, rated 500 V, 125 A, for plug-in devices, for retaining covers, and for blanking plates. This Standard also specifies standard connection arrangements (see Appendix A), and standard arrangements for multiple sockets (see Appendix B).

NOTES:

1 Where a socket is to be used with a device rated at more than 100 A, the socket should be wired with a minimum of 35 mm^2 copper cable to terminals A and L.

2 To facilitate the specification and purchase of sockets and other components, the Standard lists information which should be supplied with enquiry and order (see Appendix C).

1.2 APPLICATION This Standard is intended to be read in conjunction with AS 1284.1.

1.3 REFERENCED DOCUMENTS The documents referred to in this Standard are listed in Appendix D.

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

1.4.1 Blanking plate—a component intended to prevent access to live parts of a socket in the absence of any plug-in device, and held by a retaining cover.

1.4.2 Dust membrane—a component of a socket intended to provide protection against ingress of dust to a socket pending installation of a plug-in device or blanking plate.

1.4.3 Plug-in base—the base of a device fitted with contact blades and intended for insertion in a socket.

1.4.4 Plug-in device—a watthour meter or control device having a plug-in base.

1.4.5 Retaining cover—a component for retaining a plug-in device in a socket.

1.4.6 Safety plate—a component of a socket intended to provide protection of the fingers of a person installing a plug-in device in a live socket.

1.4.7 Socket—a device for fixing at the metering location of an electrical installation, having jaws intended for making a detachable connection with the blades of a plug-in meter or plug-in load control device.

1.4.8 Socket housing assembly—a socket without its safety plate and dust membrane.