

Australian Standard[®]

**Customer/utility information
exchange**

**Part 3: Customer premises
interfaces**

This Australian Standard was prepared by Committee TE/18, Customer Metering and Services Interfaces. It was approved on behalf of the Council of Standards Australia on 17 January 1995 and published on 5 May 1995.

The following interests are represented on Committee TE/18:

Agriculture and Resource Management Council of Australia and New Zealand
Association of Metering and Customer Services
Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Australian Gas Association
Australian Information Industry Association
Electricity Supply Association of Australia
Telecom Australia
University of Ballarat

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which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.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.

Australian Standard[®]

**Customer/utility information
exchange**

**Part 3: Customer premises
interfaces**

PREFACE

This Standard was prepared by the Standards Australia Committee on Customer Metering and Services Interfaces to supersede AS 4141.3 (Int)—1993.

The objective of this Standard is to provide the utility metering industry with details of interfaces at customer premises that will provide for ready interconnection of the various elements in a system of information exchange between utilities and customers, including provision for automatic meter reading, load control, value-added customer services and system control automation.

In this edition reference to CEBus (EIA IS-60) has been dropped and minor editorial improvements made.

This Standard is Part 3 of AS 4141, *Customer/utility information exchange*, which is published in Parts as follows:

Part 1: System architecture and functionality

Part 2: Applications and performance

Part 3: Customer premises interfaces

Other Parts are under consideration.

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

CONTENTS

	<i>Page</i>
1 SCOPE	4
2 APPLICATION	4
3 REFERENCED DOCUMENTS	4
4 DEFINITIONS	4
5 INTERFACES—GENERAL	7
6 SIMPLE MEASURING INTERFACE (SMI)	7
7 SIMPLE CONTROL INTERFACE (SCI)	10
8 COMPLEX TRANSDUCER INTERFACE (CTI)	11
9 UTILITIES BUS (UBus)	12
10 HAND-HELD INTERFACE (HHI)	12
11 HOME AUTOMATION INTERFACE (HAI)	13
12 COMMUNICATIONS NETWORK INTERFACE (CNI)	13

FIGURES

1 INTERFACES BETWEEN CUSTOMERS AND UTILITIES	5
2 INTERFACES AT CUSTOMER PREMISES	6
3 SIMPLE MEASURING INTERFACE (SMI)	8
4 SMI—TIMING DIAGRAM	8
5 SMT—REED RELAY REALIZATION	9
6 SMT—TAMPER DETECTION	9
7 SIMPLE CONTROL INTERFACE (SCI)	10
8 SCI—TIMING DIAGRAM	11
9 SCT—RELAY REALIZATION	11

STANDARDS AUSTRALIA

Australian Standard**Customer/utility information exchange****Part 3: Customer premises interfaces**

1 SCOPE This Standard specifies requirements for interfaces at the customer premises between elements in a customer/utility information exchange (CUIE) system.

2 APPLICATION This Standard shall be read in conjunction with AS 4140 and AS 4141.1.

3 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

- | | |
|-----------|---|
| 1284 | Electricity metering |
| 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 |
| 2777 | Information processing systems—Open Systems Interconnection—Basic reference model |
| 3100 | Approval and test specification—General requirements for electrical equipment |
| 4140 | Metering and utility information exchange—Glossary of terms |
| 4141 | Customer/utility information exchange |
| 4141.1 | Part 1: System architecture and functionality |

Electronic Industries Association**EIA/TIA**

- | | |
|-------|---|
| 232-E | Interface Between Data Terminal Equipment and Data Circuit-Terminating Equipment Employing Serial Binary Data Interchange |
| 422-A | Electrical Characteristics of Balanced Voltage Digital Interface Circuits |

4 DEFINITIONS For the purpose of this Standard, the definitions given in AS 4140 apply.