

Australian Standard[®]

**Electricity metering—Data exchange for
meter reading, tariff and load control**

Part 21: Direct local data exchange

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- Australian Chamber of Commerce and Industry
 - Australian Electrical and Electronic Manufacturers Association
 - Electrical Regulatory Authorities Council
 - Energy Networks Association
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-

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Australian Standard[®]

**Electricity metering—Data exchange for
meter reading, tariff and load control**

Part 21: Direct local data exchange

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PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand committee EL-011, Electricity Metering, to supersede AS 1284.10.1, *Electricity metering, Part 10.1: Data exchange for meter reading, tariff and load control—Direct local data exchange via hand-held unit (HHU)—IEC standard interface*. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard, rather than an Australian/New Zealand Standard.

The objective of this Standard is to provide electricity utilities and manufacturers with minimum requirements for hardware and protocols for local exchange of data between electricity meters and hand-held units.

This Standard is identical with, and has been reproduced from IEC 62056-21, Ed. 0 (2002), *Electricity metering—Data exchange for meter reading, tariff and load control Part 21: Direct local data exchange*.

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Australian Standard**Electricity metering—Data exchange for meter reading, tariff and load control****Part 21: Direct local data exchange**

1 Scope

This part of IEC 62056 describes hardware and protocol specifications for local meter data exchange. In such systems, a hand-held unit (HHU) or a unit with equivalent functions is connected to a tariff device or a group of devices.

The connection can be permanent or disconnectable using an optical or electrical coupling. An electrical interface is proposed for use with a permanent connection, or when more than one tariff device needs to be read at one site. The optical coupler should be easily disconnectable to enable data collection via an HHU.

The protocol permits reading and programming of tariff devices. It is designed to be particularly suitable for the environment of electricity metering, especially as regards electrical isolation and data security. While the protocol is well-defined, its use and application are left to the user.

This standard is based on the reference model for communication in open systems. It is enhanced by further elements such as an optical interface, protocol controlled baud rate switchover, data transmission without acknowledgement of receipt. The protocol offers several modes for implementation in the tariff device. The HHU or equivalent unit acts as a master while the tariff device acts as a slave in protocol modes A to D. In protocol mode E, the HHU acts as a client and the tariff device acts as a server.

As several systems are in practical use already, particular care was taken to maintain compatibility with existing systems and/or system components and their relevant protocols.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

References to international standards that are struck through in this clause are replaced by references to Australian or Australian/New Zealand Standards that are listed immediately thereafter and identified by shading. Any Australian or Australian/New Zealand Standard that is identical to the International Standard it replaces is identified as such.

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*