

Australian Standard™

**Identification cards—Contactless
integrated circuit(s) cards—
Proximity cards**

Part 1: Physical characteristics

This Australian Standard was prepared by Committee IT-012, Information Systems, Security and Identification Technology. It was approved on behalf of the Council of Standards Australia on 4 March 2003 and published on 31 March 2003.

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First published as AS 14443.1—2003.

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Published by Standards Australia International Ltd
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 5114 8

PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee IT-012, Information Systems, Security and Identification Technology. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian, rather than an Australian/New Zealand Standard.

It is identical with, and has been reproduced, from ISO/IEC 14443-1:2000, *Identification cards—Contactless integrated circuit(s) cards—Proximity cards, Part 1: Physical characteristics*.

The objective of this Standard is to specify the physical characteristics of proximity cards (PIC). It applies to identification cards of the card type ID-1 operating in proximity of a coupling device.

This Standard is Part 1 of AS 14443, *Identification cards—Contactless integrated circuit(s) cards—Proximity cards*, which is published in parts as follows:

- Part 1: Physical characteristics (this Standard)
- Part 2: Radio frequency power and signal interface
- Part 3: Initialization and anticollision
- Part 4: Transmission protocol

The terms ‘normative’ and ‘informative’ are used to define the application of the annex to which they apply. A normative annex is an integral part of a standard, whereas an informative annex is only for information and guidance.

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- (a) Its number appears on the cover and title page while the international standard number appears only on the cover.
- (b) In the source text ‘this part of ISO/IEC 14443’ should read ‘this Australian Standard’.
- (c) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

<i>Reference to International Standard</i>	<i>Australian or Australian/New Zealand Standard</i>
IEC	AS/NZS
61000 Electromagnetic compatibility (EMC)	61000 Electromagnetic compatibility (EMC)
61000-4-2 Part 4: Testing and measurement techniques - Section 2: Electrostatic discharge immunity test	61000.4.2 Part 4.2: Testing and measurement techniques—Electrostatic discharge immunity test
ISO/IEC	AS
7810 Identification cards—Physical characteristics	3521 Identification cards—Physical characteristics

INTRODUCTION

ISO/IEC 14443 is one of a series of International Standards describing the parameters for identification cards as defined in ISO/IEC 7810 and the use of such cards for international interchange.

This part of ISO/IEC 14443 describes the physical characteristics of proximity cards.

This part of ISO/IEC 14443 does not preclude the incorporation of other standard technologies on the card, such as those referenced in the informative annex A.

Contactless card Standards cover a variety of types as embodied in ISO/IEC 10536 (Close-coupled cards), ISO/IEC 14443 (Proximity cards), ISO/IEC 15693 (Vicinity cards). These are intended for operation when very near, nearby and at a longer distance from associated coupling devices respectively.

ISO/IEC 14443 is intended to allow operation of Proximity cards in the presence of other contactless cards conforming to ISO/IEC 10536 and ISO/IEC 15693 standards.

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AUSTRALIAN STANDARD

Identification cards — Contactless integrated circuit(s) cards — Proximity cards — Part 1: Physical characteristics

1 Scope

This part of ISO/IEC 14443 specifies the physical characteristics of proximity cards (PICC). It applies to identification cards of the card type ID-1 operating in proximity of a coupling device.

This part of ISO/IEC 14443 shall be used in conjunction with later parts of ISO/IEC 14443.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 14443. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO/IEC 14443 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO/IEC 7810, *Identification cards - Physical characteristics*.

ISO/IEC 10373, *Identification cards - Test methods*.

IEC 61000-4-2, *Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 2: Electrostatic discharge immunity test*.

3 Terms and definitions

For the purposes of this part of ISO/IEC 14443, the following definitions apply.

3.1

integrated circuit(s) (IC)

Electronic component(s), designed to perform processing and/or memory functions.

3.2

contactless

Pertaining to the achievement of signal exchange with and supplying power to the card without the use of galvanic elements (i.e., the absence of an ohmic path from the external interfacing equipment to the integrated circuit(s) contained within the card).

3.3

contactless integrated circuit(s) card

A card of the card type ID-1 (as specified in ISO/IEC 7810) into which integrated circuit(s) have been placed and in which communication to such integrated circuit(s) is done in a contactless manner.