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STANDARD

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**10536-3**

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

**Part 3:**

Electronic signals and reset procedures

*Cartes d'identification — Cartes à circuit(s) intégré(s) sans contact —  
Partie 3: Signaux électroniques et procédures de réinitialisation*



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## Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organizations to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75% of the national bodies casting a vote.

International Standard ISO/IEC 10536-3 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 17, *Identification cards and related devices*.

ISO/IEC 10536 consists of the following parts, under the general title *Identification cards - Contactless integrated circuit(s) cards*:

- *Part 1: Physical characteristics*
- *Part 2: Dimensions and locations of coupling areas*
- *Part 3: Electronic signals and reset procedures*

Annexes A to D form an integral part of this part of ISO/IEC 10536.

## Introduction

ISO/IEC 10536 is one of a series of International Standards describing the parameters for identification cards as defined in ISO 7810 and the use of such cards for international interchange.

This part of ISO/IEC 10536 describes the electronic characteristics of the contactless interface between a contactless integrated circuit(s) card and a card-coupling device. The interfaces include power and bi-directional communications.

# Identification cards — Contactless integrated circuit(s) cards —

## Part 3:

### Electronic signals and reset procedures

#### 1 Scope

This part of ISO/IEC 10536 specifies the nature and characteristics of the fields to be provided for power and bi-directional communications between card coupling devices (CCDs) and contactless integrated circuit(s) cards (CICCs) of the ID-1 card type in slot or surface operation.

This part of ISO/IEC 10536 does not specify the means of generating coupling fields, nor the means of compliance with electromagnetic radiation regulations.

This part of ISO/IEC 10536 is to be used in conjunction with ISO/IEC 10536-1 and ISO/IEC 10536-2.

NOTE 1 Other types of contactless integrated circuit(s) cards, formats or interfaces, which operate at various distances, may be developed in the future, which may call for additions to be made to this part of ISO/IEC 10536 or may require other International Standards to be written.

#### 2 Normative references

The following standards 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 standards are subject to revision, and parties to agreements based on this part of ISO/IEC 10536 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1177: 1985, *Information processing - Character structure for start/stop and synchronous character oriented transmission*.

ISO 7810: 1985, *Identification cards - Physical characteristics*.

ISO/IEC 7811-1: 1995, *Identification cards - Recording technique - Part 1: Embossing*.

ISO/IEC 7811-2: 1995, *Identification cards - Recording technique - Part 2: Magnetic Stripe*.

ISO/IEC 7811-3: 1995, *Identification cards - Recording technique - Part 3: Location of embossed characters on ID-1 cards*.

ISO/IEC 7811-4: 1995, *Identification cards - Recording technique - Part 4: Location of read-only magnetic tracks - Tracks 1 and 2*.

ISO/IEC 7811-5: 1995, *Identification cards - Recording technique - Part 5: Location of read-write magnetic track - Track 3*.

ISO/IEC 7812-1: 1993, *Identification cards - Identification of issuers - Part 1: Numbering system*.

ISO/IEC 7812-2: 1993, *Identification cards - Identification of issuers - Part 2: Application and registration procedures*.

ISO 7813: 1985, *Identification cards - Financial transaction cards*.

ISO 7816-1: 1987, *Identification cards - Integrated circuit(s) cards with contacts - Part 1: Physical characteristics*.

ISO 7816-2: 1988, *Identification cards - Integrated circuit(s) cards with contacts - Part 2: Dimensions and location of contacts*.

ISO 7816-3: 1989, *Identification cards - Integrated circuit(s) cards with contacts - Part 3: Electronic signals and transmission protocols*.

ISO/IEC 10536-1: 1992, *Identification cards - Contactless integrated circuit(s) cards - Part 1: Physical characteristics*.

ISO/IEC 10536-2: 1995, *Identification cards - Contactless integrated circuit(s) cards - Part 2: Dimensions and locations of coupling areas*.