

INTERNATIONAL STANDARD

ISO/IEC 7812-1

Third edition
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Identification cards — Identification of issuers —

Part 1: Numbering system

*Cartes d'identification — Identification des émetteurs —
Partie 1: Système de numérotation*



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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 organization 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 7812-1 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 17, *Identification cards and related devices*.

This third edition cancels and replaces the second edition (ISO 7812:1987), which has been technically revised.

ISO/IEC 7812 consists of the following parts, under the general title *Identification cards — Identification of issuers*:

- *Part 1: Numbering system*
- *Part 2: Application and registration procedures*

Annex B forms an integral part of this part of ISO/IEC 7812. Annex A is for information only.

Introduction

This International Standard is one of a series of standards describing the parameters for identification cards and the use of such cards for international interchange.

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Identification cards - Identification of issuers -

Part 1 : Numbering system

1 Scope

This part of ISO/IEC 7812 specifies a numbering system for the identification of issuers of identification cards used in international interchange.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of ISO/IEC 7812. 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 7812 are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 3166:1988, *Codes for the representation of names of countries*.

ISO 4909:1987, *Bank cards - Magnetic stripe data content for track 3*.

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

ISO 7811-3:1985, *Identification cards - Recording technique - Part 3: Location of embossed characters on ID-1 cards*.

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

ISO 8583:1987, *Bank card originated messages - Interchange message specifications - Content for financial transactions*.

International Telegraph and Telephone Consultative Committee (CCITT) Recommendation E.118, *The international telecommunication charge card*.

3 Definitions

For the purposes of this part of ISO/IEC 7812, the definitions given in ISO 7810 and the following definitions apply.

3.1 card issuer: Institution (or its agent) that issues the identification card to the cardholder.

3.2 cardholder: Customer associated with the identification number.

3.3 identification number: The number that identifies the cardholder and card issuer.

NOTE 1 Equivalent to Primary Account Number (PAN) as defined in ISO 4909.

3.4 individual account identification: The number assigned by the card issuing institution for the purpose of identifying an individual account.

3.5 interchange: The exchange of (card originated/activated) transaction data between two or more different entities/institutions based on an agreement between the participants.

3.6 Issuer Identification Number (IIN): The number that identifies the major industry and the card issuer and that forms the first part of the identification number.

3.7 issuer identifier: Together with the Major Industry Identifier the number that identifies the card issuing institution.

3.8 Major Industry Identifier (MII): The first digit of the IIN. It identifies the major industry of the card issuer.

3.9 Registration Authority: The Registration Authority is appointed by the ISO Council and is a qualified and internationally responsible organization. The Registration Authority is responsible for assigning IINs and maintaining the ISO register of card issuer identification numbers.

3.10 Registration Management Group (RMG): A group established by ISO/IEC JTC1/SC17 to act on its behalf in managing the administration of the register of card issuer identification numbers.

4 Numbering system

4.1 General

The identification number on an identification card, (the maximum length of which is defined in ISO 7811-3), is made up of two main components. These are:

- a) the IIN (see 4.2); and
- b) the individual account identification (see 4.3).

(See figure 1 for number format.)

This International Standard is concerned primarily with the first of these components, the IIN.

4.2 IIN

All Issuer Identification Numbers (IINs) issued in accordance

with this part of ISO/IEC 7812 shall be applied for and registered as described in ISO/IEC 7812-2.

The IIN is made up of 2 elements (see figure 1)

- a) the MII (see 4.2.1); and
- b) the issuer identifier (see 4.2.6).

Applicants whose applications fulfill the criteria for approval described in ISO/IEC 7812-2 will be assigned a six digit IIN or, in the case of a block assignment, a block of 6 digit IINs.

4.2.1 MII

There are ten single-digit MIIs as follows:

0 - for assignment by ISO/TC 68 and for other future industry assignments

- 1 - airlines
- 2 - airlines and other future industry assignments
- 3 - travel and entertainment
- 4 - banking/financial
- 5 - banking/financial
- 6 - merchandizing and banking
- 7 - petroleum
- 8 - telecommunications and other future industry assignments
- 9 - for assignment by national standards bodies

New industry assignments shall be approved by the RMG.

The MII does not in any way reflect or limit the application in which the card is usable. Single digit MIIs are assigned using the applicants' description of their main area of business on the application form (see annex A of ISO/IEC 7812-2).

4.2.2 Numbers beginning with "00"

Ten thousand numbers in the range "00" have been allocated to ISO/TC 68 for assignment to institutions other than card issuers in order to accommodate requirements in ISO 8583.

4.2.3 Numbers beginning with "59"

IINs beginning with "59" are issued by financial institutions and not by the Registration Authority under ISO/IEC 7812. Numbers prefixed by "59" are used with, and identify the

presence of, a national system of financial institution identification. They have no fixed length and do not appear on the ISO register of card issuer identification numbers.

4.2.4 Numbers beginning with "89"

IINs beginning with "89" are used on cards issued by telecommunications administrations and recognized private operating agencies in accordance with CCITT Recommendation E.118. These IINs are maintained by the International Telecommunication Union.

4.2.5 Major Industry Identifier 9 (MII 9)

MII 9 has been assigned to national standards bodies for national use; it shall be presented as the primary or first digit followed by the three digit numeric country code as specified in ISO 3166.

NOTE 2 In the interest of international conformity, national standards bodies are advised to assign numbers in accordance with the recommendations given in annex A.

4.2.6 Issuer identifier

The issuer identifier is normally a fixed length five digit number.

NOTE 3 While historic exceptions exist, only six digit IINs are now assigned. In some specific instances the second digit defines the length of the IIN or indicates a responsibility for issue of the IIN outside of ISO/IEC 7812.

4.3 Individual account identification

The individual account identification number (see figure 1) shall be assigned by the card issuing institution. It immediately follows the IIN and is variable in length with a maximum of 12 digits (see ISO 7811-3).

4.4 Check digit

The individual account identification (see 4.3) shall be followed by a check digit. This digit shall be calculated on all the preceding digits of the identification number (see figure 1) and shall be computed according to the Luhn formula for modulus 10 check-digit (see annex B).

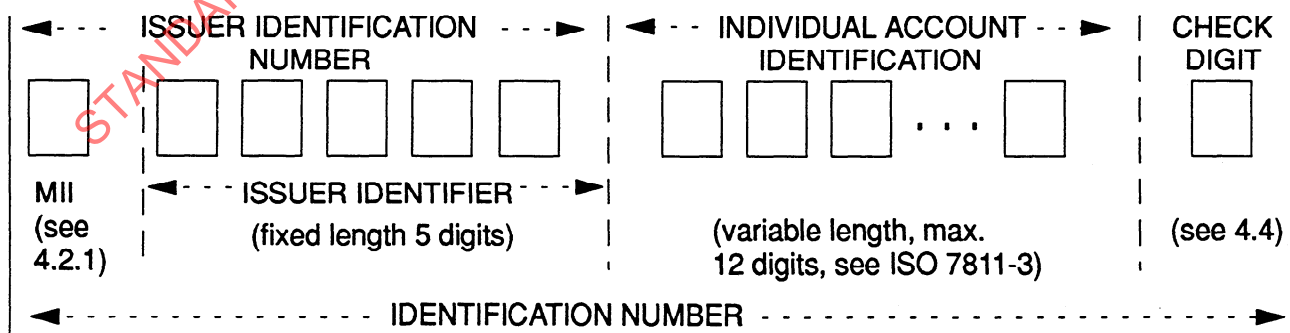


Figure 1 - Composition of the identification number on identification cards

Annex A

(informative)

National numbering systems for identification cards

A.1 Introduction

Major Industry Identifier 9, (MII 9) has been assigned for use by national standards bodies in order to establish national numbering systems for identification cards.

A.2 Role of the Registration Management Group (RMG)

The RMG (see 3.10) acting on behalf of the ISO technical body responsible for this International Standard shall, on request, provide advice and counsel to any national standards body on the establishment and operation of a national numbering system.

A.3 Contact with the RMG

National standards bodies that intend to set up national numbering systems for identification cards are asked to supply the RMG with details of the national procedures for the assignment of numbers, the method used to identify issuers, and the name of the organization administering the system. The RMG believes that this information may be helpful to countries that are considering the establishment of a national numbering system.

A.4 Operation of national numbering systems

National standards bodies are advised to establish rules by means of national standards or other methods for identifying card issuers and individual cardholders (or accounts) in a national numbering system (see 4.2.5). They are also advised to make arrangements for the administration of the system, for application and assignment of issuer identifiers and the maintenance of a register of assigned IINs (copies of national standards or other systems should be supplied to the secretariat of the RMG [see ISO/IEC 7812-2] at no cost). To this end, national standards bodies may wish to appoint a responsible organization to act as their agent in the administration and maintenance of the system within their countries.

NOTE 4 - Where no national standards body exists, or if the national standards body is unable to establish a national numbering system, card issuers in that country may apply to the secretariat of the ISO technical body responsible for ISO/IEC 7812 for assistance.

Annex B
(Normative)

Luhn formula for computing modulus 10 "double-add-double" check digit

The following steps are involved in this calculation:

- Step 1: Double the value of alternate digits beginning with the first right-hand digit (low order).
- Step 2: Add the individual digits comprising the products obtained in Step 1 to each of the unaffected digits in the original number.
- Step 3: Subtract the total obtained in Step 2 from the next higher number ending in 0 [this is the equivalent of calculating the "tens complement" of the low order digit (unit digit) of the total]. If the total obtained in Step 2 is a number ending in zero (30,40, etc.), the check digit is 0.

Example:

Account number without check digit 4992 73 9871										
4	9	9	2	7	3	9	8	7	1	Steps
	x2		x2		x2		x2		x2	1
18		4		6		16		2		
4 + 1 + 8 + 9 + 4 + 7 + 6 + 9 + 1 + 6 + 7 + 2 = 64										2
70 - 64 = 6										3
Account number with check digit 4992 73 9871 6										

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