भारतीय मानक
Indian Standard

IS 14173 (Part 1) : 2022
ISO/IEC 7812-1 : 2017

पहचान पत्र — जारीकर्ता की पहचान
भाग 1 संख्यांकन तंत्र
(तीसरा पुनरीक्षण)

Identification cards — Identification of issuers

Part 1 Numbering system
(Third Revision)

ICS 35.240.15

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Identification & Data Capture Techniques, Cards and Security Devices Sectional Committee, LITD 16

NATIONAL FOREWORD

This Indian Standard (Part 1)(Third Revision) which is identical with ISO/IEC 7812-1:2017 'Identification cards Identification of issuers — Part 1: Numbering system' issued by the International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) jointly was adopted by the Bureau of Indian Standards on the recommendation of the Identification & Data Capture Techniques, Cards and Security Devices Sectional Committee and approval of the Electronics and Information Technology Division Council.

This standard was originally published in 1994 which was identical to ISO/IEC 7812:1987. This standard was revised and published in two parts in 2003 to align it with ISO/IEC 7812-1:2000 and ISO/IEC 7812-2:2000. The standard was revised again in 2012 to align it with ISO/IEC 7812-1:2006. The third revision aligns this Indian standard with ISO/IEC 7812-1:2017.

The text of ISO/IEC Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are however not identical to those used in Indian Standards. Attention is particularly drawn to the following:

a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
b) Comma (,) has been used as a decimal marker while in Indian Standards, the current Practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their places, are listed below along with their degree of equivalence for editions indicated:

International Standard	Corresponding Indian Standard	Degree of Equivalence
ISO/IEC 7812-2, Identification cards — Identification of issuers — Part 2: Application and registration procedures	IS 14173 (Part 2):2022 Identification cards — Identification of issuers: Part 2 Application and registration procedures (third revision) (under development)	Identical with ISO/IEC 7812-2:2015
ISO 3166-1 Codes for the representation of names of countries and their subdivisions — Part 1: Country codes	IS 14836 (Part 1) : 2020 Codes for the Representation of names of countries and their subdivisions Part 1 Country codes (second revision)	Identical with ISO 3166-1: 2013
ISO 8583-1 Financial transaction card originated messages — Interchange message specifications — Part 1: Messages, data elements and code values	IS 14943 (Part 1) : 2014 Financial transaction cards originated Messages - Interchange message specifications Part 1 Message, data elements and code values	Identical with ISO 8583 -1 : 2003

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Introduction

This document is one of a series of International Standards specifying:

— a numbering system for the identification of card issuers operating within an interchange environment, the format of the issuer identification number and the primary account number;

— application and registration procedures for card issuers who operate a card program in an international interchange environment.

Card issuers not operating in an international interchange environment are encouraged to contact their sponsoring authorities for a number assigned by that national standards body, or the Registration Authority (RA) if no Sponsoring Authority (SA) exists. Use of a national IIN will avoid conflicts if the cards are used in an international interchange environment.

Indian Standard

IDENTIFICATION CARDS — IDENTIFICATION OF ISSUERS
PART 1 NUMBERING SYSTEM

1 Scope

This document specifies a numbering system for the identification of the card issuers, the format of the issuer identification number (IIN) and the primary account number (PAN).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3166-1, *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes*

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

ISO 8583-1, *Financial transaction card originated messages — Interchange message specifications — Part 1: Messages, data elements and code values*

ITU-T Recommendation E. 118,*The international telecommunication charge card*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
acquirer
institution (or its agent) which acquires from the card acceptor the data relating to the transaction and initiates the data into an interchange system

3.2
card
form factor (physical or virtual) provided by a card issuer

Note 1 to entry: For this document, this definition is not limited to ISO/IEC 7810 ID-1 card. Some examples of other card types include but are not limited to virtual, thin flexible, single-use, integrated-circuit or mobile devices.

3.3
card acceptor
party accepting the card for the purpose of presenting transaction data to an acquirer or intermediary facilitating the transaction flow

3.4
cardholder
customer associated with the primary account number

3.5
card issuer
institution (or its agent) that issues the card to the cardholder

Note 1 to entry: For institutions in the financial services industry and regulatory community, a legal entity as defined in ISO 17442, or its agent, that issues the card to the cardholder

3.6
individual account number
number assigned by the card issuer for the purpose of identifying an individual account

3.7
interchange
exchange of transaction data between two or more participants

3.8
issuer identification number
IIN
number that identifies the card issuer and that forms the first part of the primary account number

3.9
primary account number
PAN
number consisting of a maximum of 19 digits that identifies the card issuer and the cardholder

Note 1 to entry: See 4.1 and Figure 1.

3.10
registration authority
RA
organization appointed by the ISO Council, responsible for assigning IINs and maintaining the *ISO Register of Card Issuer Identification Numbers*

4 Numbering system

4.1 PAN format

The PAN of a card (see 3.9) is made up of three main components:

a)   the IIN, 8 numeric digits in length (see 4.2);

b)   the individual account number (see 4.3); and

c)   a check digit (see 4.4).

See Figure 1 for number format.

NOTE   For national numbering systems, refer to Annex A.
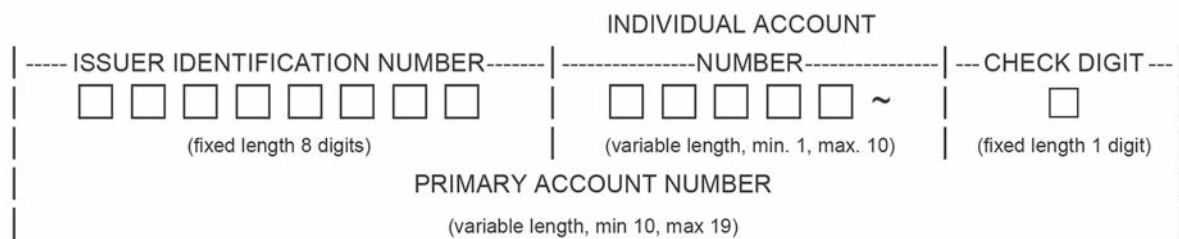
Figure 1 — Composition of the Primary Account Number

4.2 IIN

All IINs issued in accordance with this document shall be applied for and registered as specified in ISO/IEC 7812-2.

Applicants whose applications fulfil the criteria for approval specified in ISO/IEC 7812-2 will be assigned an IIN or, in the case of a block assignment, a block of IINs.

4.2.1 IINs beginning with "00"

IINs in the range "00" have been allocated for assignment to institutions other than card issuers in order to accommodate requirements in ISO 8583-1. Applicants applying for IINs commencing with "00" shall refer to ISO 8583-1, where application procedures and an application form are provided.

4.2.2 IINs beginning with "80"

IINs beginning with "80" are for use by healthcare institutions. These IINs are managed by individual national registration authorities. Each national registration authority shall register with the RA so that they can be identified in the *ISO Register of Card Issuer Identification Numbers*. The format of the entry for the national registration authorities shall be "80[CCC]", where "80" denotes healthcare and "CCC" is the three-digit numeric country code, as specified in ISO 3166-1. The formatting and coding of the digits following "80[CCC]" is at the discretion of the regional healthcare authorities. Enquiries for details of national healthcare registration authorities may be made to the RA. See http://www.iso.org/iso/maintenance_agencies

4.2.3 IINs beginning with "89"

IINs beginning with "89" are for use by telecommunications administrations and recognized private operating agencies in accordance with ITU-T/Rec. E.118. These IINs are maintained by the International Telecommunication Union, and applicants applying for IINs for use on telecommunications cards shall apply for an IIN commencing with "89". Enquiries for IINs starting with "89" shall be made to:

International Telecommunication Union, Place des Nations,

1211 Geneva 20, Switzerland,

Telephone: +41 227 305 211, Fax: + 41 227 337 256.

http://www.itu.int/en/Pages/default.aspx

4.2.4 IINs beginning with "9"

IINs beginning with "9" are reserved for use by national standards bodies, where they exist, or by the RA in the absence of a national standards body. The format of the entry for the national standards bodies shall be "9[CCC]", where "9" denotes national use and "CCC" is the three-digit numeric country code, as specified in ISO 3166-1.

In the interest of international conformity, national standards bodies are advised to assign IINs in accordance with the recommendations given in Annex A.

The RA will oversee the assignment of any 9 series IINs in any country where a national standards body does not exist, or has not implemented an IIN management function. Any 9 series IIN assigned by the RA is 9 digits in length, and will conform to the structure of '9' followed by the three-digit numeric country code, as specified in ISO 3166-1.

4.3 Individual account number

The individual account number (see Figure 1) shall be assigned by the card issuer. It immediately follows the IIN and is variable in length with a minimum of 1 and maximum of 10 digits.

4.4 Check digit

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

Annex A
(informative)

National numbering systems for card issuers

A.1 Introduction

IINs beginning with 9 have been assigned for use by national standards bodies in order to establish numbering systems for card issuers. If no national numbering system exists, or if the national standards body is unable to establish a national numbering system, applicants for IINs in that country may apply through the RA.

NOTE   ISO maintains a listing on national numbering registries, refer to www.iso.org

A.2 Contact with the Registration Authority (RA)

The RA acting on behalf of ISO/IEC JTC 1/SC 17 shall, on request, provide advice and counsel to any national standards body on the establishment and operation of a national numbering system. National standards bodies that intend to set up national numbering systems are asked to supply the RA with details of the national procedures for the assignment of IINs, the method used to identify card issuers, and the name of the organization administering the system.

A.3 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 (See 4.2.4). They are also advised to make arrangements for the administration of the system, for application and assignment of IINs and the maintenance of a register of assigned IINs. For these reasons, national standards bodies may wish to appoint an organization to act as their agent in the administration and maintenance of the system within their countries.

Any national standards body, or designate, who manages a national numbering system is required to report all assignments to the RA on a monthly basis.

A.4 Structure of IINs used for National schemes

National standards bodies are required to implement national numbering systems in the format of 9CCCxxxx, where "CCC" is the three-digit numeric country code in accordance with ISO 3166-1. IINs assigned under a national numbering system should be minimum 8 digits in length. National standards bodies developing national numbering systems shall consider using an IIN greater than 8 digits to support a larger number of card issuers.

Any 9 series IINs under the management of the RA will be assigned as 9 digits in length.

It is recommended that national standards bodies comply with ISO/IEC 7812-1 and PAN length as defined in Figure 1.

Annex B
(normative)

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

The check digit is calculated on all eight digits of the IIN and all of the digits of the individual account number (variable up to 10 digits).

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

Issuer identification number and individual account number without check digit: 6123 4512 3456 789

6		1	2	3	4	5	1		2	3	4	5	6	7	8	9		PAN
X2			X2		X2		X2			X2		X2		X2		X2		Step 1
1+2+		1+	4+	3+	8+	5+	2+		2+	6+	4+	1+0+	6+	1+4+	8+	1+8	= 67	Step 2

Next higher number ending in 0 = 70
70 – 67 = 3

Step 3

Issuer Identification Number and Individual Account Number with check digit: 6123 4512 3456 7893

Bibliography

[1]   ISO 17442, *Financial services — Legal Entity Identifier (LEI)*

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The technical committee has reviewed the provisions of the following International Standards referred in this adopted standard and has decided that they are acceptable for use in conjunction with this standard. For Undated references, the latest edition of the referenced document applies, including any corrigenda and amendment:

International Standard	*Title*
ITU-T Recommendation E. 118	The international telecommunication charge card

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2:2022 'Rules for rounding off numerical values (Second Revision)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Bureau of Indian Standards

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Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the website-www.bis.gov.in or www.standardsbis.in.

This Indian Standard has been developed from Doc No.: LITD 16 (18916)

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected