BRITISH STANDARD

BS ISO/IEC 18013-1:2005

Information technology — Personal identification — ISO-compliant driving licence —

Part 1: Physical characteristics and basic data set

ICS 35.240.15

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— present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;

— monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Summary of pages

This document comprises a front cover, an inside front cover, the ISO/IEC title page, pages ii to vi, pages 1 to 75 and a back cover.

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Amendments issued since publication

Amd. No.	Date	Comments

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 19 January 2006

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ISBN 0 580 47056 3

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INTERNATIONAL STANDARD

ISO/IEC 18013-1

First edition
2005-08-15

Information technology — Personal identification — ISO-compliant driving licence —

Part 1: Physical characteristics and basic data set

Technologies de l'information — Identification des personnes — Permis de conduire conforme à l'ISO —

Partie 1: Caractéristiques physiques et jeu de données de base

Reference number
ISO/IEC 18013-1:2005(E)

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Full document details: BS ISO/IEC 18013-1:2005

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Full document details: BS ISO/IEC 18013-1:2005

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 18013-1 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 17, *Cards and personal identification*.

ISO/IEC 18013 consists of the following parts, under the general title *Information technology — Personal identification — ISO-compliant driving licence*:

— *Part 1: Physical characteristics and basic data set*

The following part is under preparation:

— *Part 2: Machine readable technologies*

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0 Introduction

ISO/IEC 18013 prescribes requirements for an ISO compliant driving licence (IDL). The intent of ISO/IEC 18013 is to allow the issuance of one document to serve the purpose of both an international driving permit (IDP) and a domestic driving permit (DDP). Issuing authorities issuing domestic driving licences (DDLs) that do not conform to ISO/IEC 18013 can benefit from using parts of ISO/IEC 18013 for their own domestic purpose. These issuing authorities should continue to issue a second document that follows the requirements of the IDP for international use.

0.1 Definition, Function & Requirements of International Driving Permit

The United Nation Conventions on Road Traffic of 1949 Geneva and 1968 Vienna are the responsibility of the Secretary General at the United Nations Headquarters, New York. The maintenance of the Conventions has been assigned to UN/ECE-Transport Division, Geneva, Switzerland. The ultimate goal of the Conventions is road safety. The Conventions make provisions for both an International Driving Permit (IDP) and a Domestic Driving Permit (DDP).

The IDP serves as a means of mutual recognition in that it is issued by the holder's home country licensing authority requesting another country who has ratified the Conventions to allow the holder the permission to operate a motor vehicle of authorized categories under specific conditions/restrictions. The IDP is essentially a translation of the DDP except in a common worldwide-recognized standardized format for global recognition and acceptance as specified in the Conventions. The IDP also makes provision for a state to disqualify the holder of an IDP from driving in that country by recording such in the designated area.

0.2 Harmonisation and Interoperability

The above general definition of a driving licence implies a human-readable document with the following properties.

- The document contains sufficient information for the identification of the licence holder.
- The document is difficult to counterfeit.
- The document is secure to prevent alteration.

In today's worldwide freedom of movement, modern driving licence systems impose additional requirements for facilitation with the advent and need for machine-assisted storage, retrieval, reading and verification technologies that UN Conventions have not addressed.

To achieve maximum global harmonisation and interoperability, standards are required to provide common platforms for visual human-readable evidence as well as for machine-assisted storage, retrieval, reading and verification by the use of ISO data storage technologies incorporated into the driving licence document.

0.3 Current Limitations of International Driving Permit

The problems and concerns with the current IDP that have been reported include the following.

- Easily copied, altered, or simulated and difficult for law enforcement authorities to detect fraudulent licences from genuine documents.
- Many non-government IDP issuing authorities do not query their respective government motor vehicle agencies to establish if the DDP presented is still valid and still current.
- There is no register/directory of national motor vehicle agency addresses for the inquiry and exchange of information among the agencies to verify the validity of a presented IDP.
- Does not incorporate the ISO machine-assisted data storage technologies.
- Suspension or cancellation of domestic driving licence (DDL) or domestic driving permit (DDP) *should* result in an automatic suspension or cancellation of the IDP; however, the current system does not facilitate that.
- The IDP holder may circumvent disqualifications entered on their original IDP by obtaining a new IDP.
- Validity of the IDP is currently limited to a maximum of 1 to 3 years, depending on the UN Convention followed.

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0.4 Replacement of International Driving Permit (IDP) with ISO compliant Driving Licence (IDL)

At one time, the conventions contained specifications in regard to a mandatory “model” data element set (particulars) and a mandatory design layout of defined dimensions for both DDP and IDP. Subsequently, in 1990, the Convention’s mandatory requirement for the defined design layout of the DDP was rescinded as some countries made preparations for issuing the DDP in the form of an ISO ID-1 size card.

ISO/IEC 18013 similarly provides for the migration of the current mandatory design layout of defined dimensions for the IDP paper document to an ISO ID-1 size card. This allows the use of ISO machine-readable technologies at the option of motor vehicle authorities. Additionally, it provides the potential integration of the two documents (DDP&IDP) into a single document.

Compliance with International Standards is voluntary. No International Standards are mandated and use is at the sole discretion of the motor vehicle authority.

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Information technology — Personal identification — ISO-compliant driving licence —

Part 1:
Physical characteristics and basic data set

1 Scope

This part of ISO/IEC 18013 establishes guidelines for the design format and data content of an ISO compliant driving licence (IDL) in regard to both visual human-readable features and ISO machine-readable technologies. It creates a common basis for international use and mutual recognition of the IDL without impeding individual national/community/regional motor vehicle authorities in taking care of their specific needs.

The design approach of the IDL ISO ID-1 size card and accompanying booklet with sleeve insert pocket is intended to replace the international driving permit (IDP) paper document (see annex G).

The basis of document design premises includes

- a minimum common mandatory data element set;
- a common layout for ease of recognition;
- minimum security requirements.

At the discretion of national/community/regional motor vehicle authorities, it

- allows for inclusion of supplementary optional data elements to meet the needs of specific national/community/regional requirements apart from the minimum common mandatory data element set;
- allows for the incorporation of ISO/IEC JTC1/SC17 machine-readable technologies including magnetic stripe, integrated circuit with contacts, contactless integrated circuit and optical memory technology, and ISO/IEC JTC1/SC31 1-dimensional / 2-dimensional bar codes, at the option of national/community/regional authorities;
- allows for the incorporation of current and future technologies (including biometrics, cryptography, data compression) at the option of national/community/regional authorities;
- allows for additional document physical security elements at the option of national/community/regional authorities, and facilitates international procurements.

A major benefit of these design premises is that a single card may serve a dual purpose of both a national/community/regional licence as well as an internationally recognized licence. Therefore, one card, in some cases, can replace the need for two documents. Alternatively, those countries that choose to maintain their individual domestic design can issue a second card with or without ISO machine-readable technologies to replace the current IDP paper document.

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This new IDL design yields a document that

- is more secure from counterfeiting and alteration than the previous IDP document;
- allows authorities to verify the authenticity of the document;
- integrates the personal data into a secure ID-1 size medium;
- allows a more reliable identification of the licence holder;
- allows for machine-readable technologies;
- facilitates information exchange and mutual recognition among motor vehicle authorities;
- allows the domestic driving licence (DDL) that meets this Standard to serve simultaneously as an ISO compliant driving licence (IDL).

2 Conformance

A driving licence is in conformance with this part of ISO/IEC 18013 if it meets all mandatory requirements specified directly or by reference herein.

3 Normative references

The following referenced documents are indispensable for the application 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/IEC 7810:2003, *Identification cards — Physical characteristics*

4 Terms and definitions

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

4.1
alphabetic character
A
hexadecimal ranges 41 – 5A (Latin capital letters), 61 – 7A (Latin small letters), C0 – D6, D8 – F6 and F8 – FF of ISO/IEC 8859-1

4.2
country distinguishing sign
abbreviation for issuing country identified to the UN Secretary General in accordance with the UN Conventions (1949 and 1968) for vehicles in international traffic (see annex F), on the driving licence (human-readable)

4.3
card
document with nominal dimensions in conformance with ISO/IEC 7810 ID-1

4.4
data element
item of data that may appear on the driving licence in either human or machine-readable form

NOTE A distinction is made between static data elements and dynamic data elements.

4.4.1
static data element
data element associated with the issuing authority, and which is the same for all DLs issued on behalf of or by that issuing authority

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4.4.2
dynamic data element
data element associated with the licence holder and thus varies from one DL to the next for a particular licensing authority, thus specifically excluding the issuing authority data element

4.5
document recognition
educational knowledge and ability to recognize the validity of the driving licence of both national and international jurisdictions including data elements, formatting, visual biometrics (e.g. portrait, signature), electronic readable features and document security features

4.6
driving licence
DL
document issued to a driving licence holder by an issuing authority granting the individual the privilege to operate a motor vehicle within its jurisdiction

NOTE 1 The document may facilitate driving licence transactions and provide input data for such transactions. This issued document incorporates several elements and qualifications regarding the licence holder: positive identification of the individual; evidence of knowledge of laws and practices; practical driving proficiency in specific motor vehicle class categories; and, the individual's health restrictions (e.g. corrective eye lenses).

NOTE 2 Driving licences are classified into four types of documents, namely domestic driving licence, domestic driving permit, ISO compliant driving licence and international driving permit.

4.6.1
domestic driving licence
DDL
document conveying driving privilege for operating motor vehicles within country/community of issuance, and which may or may not be issued in conformance with ISO/IEC 18013

4.6.2
domestic driving permit
DDP
driving licence issued in conformance with the UN Convention Geneva 1949, annex 9 or the UN Convention Vienna 1968, annex 6

NOTE This is the UN terminology for a domestic driving licence.

4.6.3
ISO compliant driving licence
IDL
driving licence card issued in conformance with ISO/IEC 18013, which may be used for both domestic and international use

4.6.4
international driving permit
IDP
driving licence issued in conformance with the UN Convention Geneva 1949, annex 10 or the UN Convention Vienna 1968, annex 7

4.7
first line inspection
cursory examination without tools or aids that involves easily identifiable visual or tactile features for rapid inspection at point of usage

4.8
human-readable data / information
data or information that is printed or engraved that is visually present on a driving licence and designed to be interpreted by a human

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4.9
image
representation of the visual likeness of a subject

EXAMPLE Portrait, finger print, or signature.

NOTE Images may be collected and stored digitally or otherwise, and rendered for visual inspection using a variety of systems.

4.10
issuing authority
licensing authority, or issuing country if separate licensing authorities have not been authorised

4.11
issuing country
country according to annex F which issued the DL or within which the licensing authority is located

4.12
jurisdiction
territory (country, state, province) within which the licensing authority has the mandate and responsibility to apply motor vehicle laws/directives

4.13
licence holder
individual to whom a DL is issued i.e. the legitimate holder of the driving privileges reflected on a DL

4.14
licensing authority
authorised agent organisation that issues a DL

EXAMPLE National, federal, state, provincial, regional, territorial or local Ministry of Transport, Department of Motor Vehicles, or Police Agency.

4.15
machine-readable data / information
data or information that is encoded into a machine-readable medium, such as a magnetic stripe, bar code, optical memory, or integrated circuit

4.16
mandatory element
element that is required

4.17
mutual recognition
privilege of citizens from two jurisdictions to drive an eligible vehicle under specified conditions/restrictions in each other's jurisdictions without the requirement of undergoing additional practical and/or written testing

NOTE Mutual recognition is administered by way of agreements between the governments of the jurisdictions.

4.18
non-portrait side of card
opposite face from the portrait side

4.19
numeric character
N
hexadecimal range 30 – 39 (digits 0 to 9) of ISO/IEC 8859-1

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4.20
optional element
element that may be used, but that is not mandatory

4.21
pictograph
graphical representation associated with a specific value or instance of a predefined classification or restriction, such as a vehicle category or medical condition

NOTE See annex B.

4.22
portrait
two dimensional representation of the face of a person in a full-face frontal pose

NOTE See annex A.

4.23
portrait side of card
face of the card carrying visual information containing the reproduction of the portrait of the licence holder

4.24
second line inspection
examination by trained inspectors with simple equipment (magnifying glass, UV light, machine-reading equipment, etc.)

4.25
security element
distinct physical element or property of a document that contributes to at least one security feature

NOTE Depending on the method of verification, one element may provide one or more security features that may apply to the same or to different categories.

4.26
security feature
feature of a document that is linked to a specific method of verification and thus helps insure the document's integrity and/or authenticity as a properly issued document that has not been tampered with

NOTE Security features may be distinguished in different kinds of categories such as:

- overt or covert,
- for human or machine-verification,
- for first line, second line, or third line inspection.

Physical security elements applied during production of a document may contribute more than one feature and therefore also cover more than one category of each kind.

4.27
special character
S
hexadecimal ranges 20 – 2F (<space> ! " # $ % & ' ( ) * + , - . /), 3A (:), 3C – 40 (< = > ? @), 5B – 60 ([\ ] ^ _ `), 7B – 7E ({ | } ~), A1 – AC (¡ ¢ £ ¤ ¥ ¦ § ¨ © ª « ¬), AE – A5 (® ¯ ° ± ² ³ ´ µ), and A7 – BF (· ¸ ¹ º » ¼ ½ ¾ ¿) of ISO/IEC 8859-1

NOTE The semicolon ";", multiplication sign "×" and division sign "÷" are defined as delimiters and the pilcrow sign "¶" is defined as the end-of-file character in the machine-readable data / information.

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4.28
supranational
extending beyond or transcending established borders or spheres of influence held by separate nations

NOTE The concept can apply equally to government entities (such as the European Union) and non-government entities (such as the International Civil Aviation Organization).

4.29
text
human-readable A, N or S

4.30
third line inspection
inspection by forensic specialists conducting detailed examination allows for more in-depth evaluation and may require special equipment to provide true certification

5 Human-readable data elements on IDL

5.1 Data element tables

The tables in 5.2 and 5.3 specify the mandatory and optional elements that appear on the IDL.

Column 1 (**Item #**): serves as a reference indicator for citation elsewhere in this Standard.

Column 2 (**Data field reference code on IDL**): reference code shall be visibly included as text on the IDL to identify the data element for purposes of interpreting the data and other international interchange requirements. The reference code may be depicted on the IDL with punctuation or without punctuation (as shown in Table 1 and Table 2).

EXAMPLE "1." or "1" may be used to reference the data element "Family name" and likewise "4c." or "4c" may be used to reference the data element "Issuing authority". Informative examples with punctuation and without punctuation are provided in A.10.

Column 3 (**Card zone placement**): indicates the location on the IDL where the data element shall be placed. Location of the zones are specified in annex A of this Standard.

Column 4 (**Data element name**): common name or phrase that is used to refer to the accompanying data element definition.

Column 5 (**Definition**): description of the data element, including any exceptions.

Column 6 (**Field maximum length/type**): valid field length (i.e., the number of characters) for each data element. The nature of the field length is defined by F=fixed length and V=variable length.

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5.2 Mandatory data elements for international interchange

All the data elements appearing in Table 1, but for item f, the issuing authority, are dynamic data elements.

Table 1 — Mandatory data elements for international interchange

Item #	Data field reference code on IDL	Card zone placement	Data element name	Description/ Definition	Field maximum length/ type
a	1	Zone II	Family name	Last name, surname, or primary identifier, of the licence holder	V36AS
b	2	Zone II	Given nam es	First name(s), other name(s), or secondary identifier, of the licence holder	V36AS
c	3	Zone II	Date of Birth	Day, month, year on which the licence holder was born (if unknown, approximate Date of Birth)	F8N
d	4a	Zone II	Date of Issue	Date licence document was issued (same format as Date of Birth)	F8N
e	4b	Zone II	Date of Expiry	Date licence document expires (same format as Date of Birth)	F8N
f	4c	Zone II	Issuing Authority	Abbreviations may be used (see 4.10)	V65ANS
g	5	Zone II	Licence Number	The number assigned or calculated by the issuing authority	V25AN
h	6	Zone III	Portrait	A reproduction of the licence holder's portrait	(Image)
i	7	Zone II	Signature	A reproduction of the licence holder's signature, or usual mark, or thumb or finger print	(Image)
j	9	Zone II (may be repeated in Zone IV)	Categories of Vehicles	Vehicle types the licence holder is authorised to operate	V3AN (or Picto-graphs)
k	10	Zone II or IV	Date of issue per category	The date of issue for a specific class of vehicle if it is before the date of issue of the licence document (same format as Date of Birth)	F8N
l	11	Zone II or IV	Date of expiry per category	The date of expiry of the specific category if it expires before or after the date of expiry of the licence document (same format as Date of Birth)	F8N
m	12	Zone II or IV	Restrictions	Restrictions or conditions which apply to the licence holder when operating a vehicle (shown as pictographs defined in the restriction codes)	(Picto-graphs)
n	12	Zone II or IV	Conditions/ Information	Any medical, administrative or legal limitations applying to the licence holder and not covered under the standard restriction codes	(Picto-graphs)

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5.3 Optional data elements for international interchange

All the data elements appearing in Table 2 are dynamic data elements.

Table 2 — Optional data elements for international interchange

Item #	Data field reference code on IDL[a]	Card zone placement	Data element name	Description/ Definition	Field maximum length/ type
o	3	Zone II	Place of Birth	Country and municipality or state/province where the licence holder was born	V33A
p	4d	Zone II	Administrative Number	An audit control number assigned by the licensing authority	V25ANS
q	8	Zone II	Permanent Place of Residence	The place where the licence holder resides and/or may be contacted (street/house number, municipality etc.)	V108ANS
r	15	Zone II	Gender	Licence holder's gender: M for male, F for female	F1A
s	16	Zone II	Height (cm.)	Licence holder's height in centimetres	F3N
t	16	Zone II	Height (ft./in.)	Licence holder's height in feet 1), inches 2) for example. 509= 5ft 9in	F3N
u	17	Zone II	Weight (kg.)	Licence holder's weight in kilograms	F3N
v	17	Zone II	Weight (lb.)	Licence holder's weight in pounds	F3N
w	18	Zone II	Eye Colour	Licence holder's eye colour: blue, brown, black, hazel, green, grey, pink, dichromatic	V12A
x	19	Zone II	Hair Colour	Licence holder's hair colour: brown, black, blonde, grey, red/auburn, sandy, white, bald	V12A

NOTE Data field reference codes 13 & 14 are not used as they are designated for domestic use in the EC Directives and in the amendments to the Vienna Convention (proposed Rev.3 of WP.1, dated 5 Jan 2004).

[a] The use of the reference code on the IDL is optional for the data elements in this table. However, if a reference code is used, it shall be the reference code listed in this table.

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Annex A
(normative)

Card Design

A.1 Introduction

This annex contains the requirements with regard to the human-readable content and layout of the data elements on the IDL.

The main ideology for defining the design of the IDL is the minimum acceptable set of requirements to guarantee global interoperability. Sufficient freedom is afforded to the issuing authorities of driving licences to meet their national (domestic) needs (existing standards, data contents, security elements, etc).

A.2 Scope

Annex A defines the specifications of the card layout, together with informative examples for ease of understanding.

A.3 Informative references

The following international agreements and standards contain provisions, which were considered in defining the requirements of this annex:

Convention on Road Traffic, Geneva of 19 September 1949

Convention on Road Traffic, Vienna of 8 November 1968

European Union Council Directive 91/439/EEC of 29 July 1991 O.J. EC No. L 237/1, as amended by:

- European Union Council Directive 94/72EC of 19 December 1994 O.J. EC No L 337/86
- European Union Council Directive 96/47/EC of 23 July 1996 O.J. EC No. L 235/1
- European Union Council Directive 97/26/EC of 2 June 1997 O.J. EC No. L 150/41
- Commission Directive 2000/56/EC of 14 September 2000 O.J. EC No L 237/45

AAMVA National Standard for Driver License/ Identification Card, 30 June 2000

SADC Driving Licence specifications, 1995

A.4 Dimensions and character set

The nominal dimensions of the IDL shall be in conformance with ISO/IEC 7810 ID-1. Where the IDL is to incorporate machine-readable technology that requires the use of a slot reader, the dimensions and tolerances specified in ISO/IEC 7810 shall be observed. Additional specifications may apply depending upon the machine-readable technology incorporated on the card.

All mandatory human-readable data elements shall be printed in A, N or S characters.

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A.5 Functions

The basis of the visual card design is to meet the minimum common mandatory set of data elements in the following areas of function:

- Common recognition of the IDL by law enforcement agencies and users outside of the country of issue.
- Layout of the human-readable data elements and the machine-readable components.
- Text, images and/or pictographs of the human-readable data elements.
- Security of the card as a separate topic to avoid confusion between common recognition and integrity issues.

A.6 Common recognition

To assist law enforcement agencies in recognizing a driving licence presented by a driver outside the country of issue as an IDL, the following shall appear on the card:

- Zone 1 of the card shall have a background, preferably formed of a rainbow printed duplex security pattern as specified in annex C.6.2.1. Though several colours should be used in the background to assist in protection against counterfeit by copying, the predominant colour shall be pink matched as closely as possible to a 30% tint of Pantone 198, as a mandatory requirement. This match should be achieved without the use of the primary colours (CMYK colours, as defined in annex C).
- The reproduction of the portrait of the licence holder is depicted on the left side on the portrait side of the card as shown by the position of Zone III in Figure A.1 as a mandatory requirement.
- No machine-readable technology is permitted on the portrait side of the card.
- Mandatory static data elements in Zone I of the card.
- Dynamic data elements and the issuing authority identified by data field reference codes (but for the photograph) as a mandatory requirement.

A.7 Layout

Because there are many licensing authorities, more than the number of issuing countries involved, the layout is not fixed to a single format. The layout is grouped by different zones and the various options for the zones are depicted in Figures A.1 to A.7.

The portrait and non-portrait side of the card shall carry the following:

Portrait side

Data Element Set of text, reproduction of portrait and signature, usual mark or thumb/ finger print of the licence holder (mandatory).

Zones I, II and III.

Non-portrait side

Data Element Set of text (optional) and machine-readable technologies (optional).

Zones IV and V.

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A.8 Contents of the zones

A.8.1 Data element placement

Mandatory and optional data elements are defined for each zone.

A.8.1.1 Zone I

Text “DRIVING LICENCE” in the language or languages of the issuing country (mandatory).

Text or alternatively in the background graphic design, the words “DRIVING LICENCE” in one of the languages English (“DRIVING LICENCE”), French (“PERMIS DE CONDUIRE”) or Spanish (“PERMISO DE CONDUCCIÓN”) (mandatory).

Distinguishing sign of the issuing country as identified to the UN Secretary General in accordance with the UN Conventions (1949 and 1968) (mandatory). Annex F contains the current list of distinguishing signs identified to the UN Secretary General.

The name of the issuing country (optional).

The name or acronym of supranational entity (optional).

Other national signs, such as the flag or logo of the issuing country (optional).

A.8.1.2 Zone II

Table A.1 — Zone II data elements

Data field reference code on IDL	Description
1	Family name of the licence holder (mandatory).
2	Given name or other names of the licence holder (mandatory).
3	Date of birth (mandatory) and place of birth (optional)
4a	Date of issue of the licence (mandatory).
4b	Date of expiry of the licence (mandatory).
4c	Name of the issuing authority (mandatory).
4d	Administrative number, different from the one under reference code 5, for administrative purposes (optional).
5	Number of the licence (mandatory).
7	Image of the signature or usual mark of the licence holder, or thumb or finger print (mandatory).
8	Permanent place of residence, or postal address (optional).
9	(Sub)category(ies) of vehicle(s) the licence holder is entitled to drive (mandatory).
10	Date of first issue of each (sub)category of vehicles (mandatory).
11	Date of expiry of each (sub)category of vehicles (mandatory).
12	Additional information/ restrictions, in pictograph form, facing the subcategory of vehicles affected (pictographs stated in annex B mandatory, restriction code optional).
13	Reserved for domestic information essential for administration of licence by issuing authority (optional).

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Data field reference code on IDL	Description
14	Reserved for domestic information related to road safety by issuing authority (optional).
15	Gender of the licence holder (optional).
16	Height of the licence holder (optional)
17	Weight of the licence holder (optional).
18	Eye colour of the licence holder (optional).
19	Hair colour of the licence holder (optional).
NOTE Data field reference codes 13 & 14 are designated for domestic use in the EC Directives and in the amendments to the Vienna Convention (proposed Rev.3 of WP.1, dated 5 Jan 2004).	

This zone may also include other data fields for national (domestic) or regional purposes in human-readable format (optional).

Alternatively the data fields 10, 11, 12, 13 and 14 may be located in Zone IV and data field 9 may be repeated in Zone IV.

A.8.1.3 Zone III

Table A.2 — Zone III data elements

Data field reference code on IDL	Description
6	Image of the portrait of the licence holder (mandatory). The portrait image is not denoted by its reference code on the licence.

A.8.1.4 Zone IV

Table A.3 — Zone IV data elements

Data field reference code on IDL	Description
9	(Sub)category(ies) of vehicle(s) the licence holder is entitled to drive (may be repeated from Zone II).
10	Date of first issue of each (sub)category of vehicles (mandatory).
11	Date of expiry of each (sub)category of vehicles (mandatory).
12	Additional information/ restrictions, in pictograph form, facing the sub-category of vehicles affected (pictograph mandatory, restriction code optional).
13	Reserved for domestic information essential for administration of licence by issuing authority (optional).
14	Reserved for domestic information related to road safety by issuing authority (optional).
NOTE Data field reference codes 13 & 14 are designated for domestic use in the EC Directives and in the amendments to the Vienna Convention (proposed Rev.3 of WP.1, dated 5 Jan 2004).	

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Alternatively the data fields 10, 11, 12, 13 and 14 may be located in Zone II.

This zone may also include national (domestic) or regional information in human-readable format for purposes of administration of the licence or related to road safety (optional).

A.8.1.5 Zone V

Machine-readable technologies for international, national or regional purposes (optional).

The IDL may contain any or a combination of the following machine-readable technologies:

- Bar code, one or two dimensional.
- Magnetic stripe.
- Integrated circuit with contacts.
- Contactless integrated circuit.
- Optical memory.

The positions of the zones for the optional national or regional human-readable fields and optional machine-readable technologies are presented in the figures of the annex. The position and size of Zones IV and V may be adjusted in accordance with the machine-readable technologies incorporated on the card.

Within this Standard, the above technologies may co-exist except for a magnetic stripe and an integrated circuit with contacts. Incorporation of a contactless integrated circuit is not depicted in the figures of this annex as it does not occupy visible space.

NOTE Depending on the printing technology used, care should be taken when incorporating personalised data on the portrait side of the card opposite the location of an integrated circuit.

A.8.2 Production of images

A.8.2.1 Portrait

Measures shall be taken by the issuing authority to ensure that the reproduction of the portrait of the licence holder on the card is resistant to forgery and substitution as specified in annex C.6.4. Such image of the portrait shall meet the following requirements:

Pose. The portrait shall depict the face of the rightful licence holder in a full-face frontal pose with both eyes visible; i.e. captured perpendicular to an imaginary plane formed parallel to the front surface of the face or where the additional detail of one ear is required ('half-on profile'), at such an angle to the imaginary plane as to reveal the detail of the ear while maintaining full-face frontal details on that side of the face opposite to the exposed ear. The portrait may only show the licence holder with headgear, if the licence holder is a member of a religion requiring the wearing thereof and provided that the headgear does not render the portrait inadequate for the identification of the licence holder.

Depth of Field. The full-face frontal pose shall be in-focus from the crown (top of the hair) to the chin and from the nose to the ears.

*Orientatio*n. The crown (top of the hair) shall be nearest the top edge of Zone III as defined in Figure A.1; i.e. the crown to chin orientation covering the longest dimension defined for Zone III.

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Face Size. The crown to chin portion of the full-face frontal pose shall be 70 to 80 percent of the longest dimension defined for Zone III, maintaining the aspect ratio between the crown-to-chin and ear-to-ear details of the face of the licence holder.

Lighting. Adequate and uniform illumination shall be used to capture the full-face frontal pose; i.e. appropriate illumination techniques shall be employed and illumination used to achieve natural skin tones (and avoid any colour cast) and a high level of detail, and minimize shadows, hot spots and reflections (such as sometimes caused by spectacles).

Background. A uniform colour background shall be used to provide a contrast to the face and hair. For colour portraits, light blue, beige, light brown, pale grey or white are recommended for the background.

Centring. The full-face frontal pose shall be centred within Zone III.

Border. A border or frame shall not be used to outline the portrait image.

Colour. The portrait image shall be black and white or a true colour representation of the licence holder.

Image resolution. The portrait image shall yield an accurate and recognisable representation of the rightful licence holder. The quality of a digitally reproduced portrait shall be visually comparable to an acceptable photograph. To achieve this comparable quality in a digital reproduction, care should be given to the image capture, processing, digitisation, compression and printing technology and the process used to reproduce the portrait on the card, including the final preparation of the IDL.

A.8.2.2 Signature or Usual Mark

Measures shall be taken by the issuing authority to ensure that the reproduction of the signature or usual mark on the card is resistant to forgery and substitution as specified in annex C.6.4. Such image of the signature or usual mark displayed on the card shall meet the following requirements:

Orientation. The signature or usual mark shall be displayed with its A-dimension parallel to the Top Reference Edge of the card identified in Figure A.1.

Size. The signature or usual mark displayed shall be of such dimensions as to be discernible by the human eye and maintain the aspect ratio (A-dimension to B-dimension) of the original signature or usual mark.

Scaling. In the event the signature or usual mark displayed is scaled-up or scaled-down, the aspect ratio (A-dimension to B-dimension) of the original signature or usual mark shall be maintained. In the case of a scaled-down image, the reproduction shall not be smaller than 50% of the original signature or usual mark.

Cropping. The issuing authority should take steps to eliminate or minimize cropping.

Colour. The reproduction of the signature or usual mark shall be printed in black to afford a definite contrast to the background.

Borders. Borders or frames shall not be used to outline the image of the signature or usual mark.

Image resolution. The image shall yield an accurate and recognisable representation of the original signature or usual mark of the rightful licence holder. To achieve this comparable quality in a digital reproduction, care should be given to the image capture, processing, digitisation, compression and printing technology and the process used to reproduce the signature or usual mark on the card, including the final preparation of the IDL.

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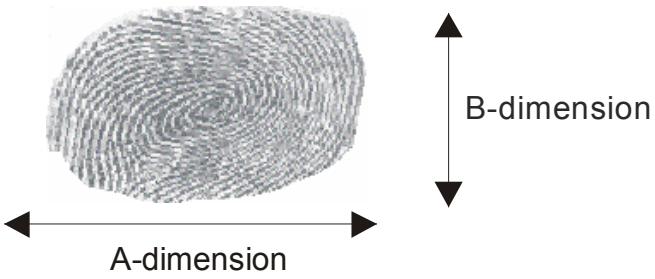
A.8.2.3 Finger print

In the absence of the signature or usual mark of the licence holder, a reproduction of an original single-digit (ie a flat and not rolled) finger print shall be printed on the card. Measures shall be taken by the issuing authority to ensure that the single-digit finger print is resistant to forgery and substitution as specified in annex C.6.4. Such image of the single-digit finger print shall meet the following requirements:

Orientation. The A-dimension (length, following a line drawn along the length of the finger of which the print is displayed) of the displayed single-digit finger print shall be parallel to the Top Reference Edge of the card. The B-dimension (width) of the finger print shall be perpendicular to the Top Reference Edge of the card identified in Figure A.1.



Size. The single-digit finger print displayed shall be a one-to-one replication (A-dimension versus B-dimension) of the original print.

Scaling. Scaling of the single-digit finger print image shall not be permitted.

Cropping. The issuing authority should take steps to eliminate or minimize cropping.

Colour. The single-digit finger print shall be displayed in black and white to afford a definite contrast to the background.

Borders. Borders or frames shall not be used to outline the displayed single-digit finger print image.

Image resolution. The image shall yield an accurate and recognisable representation of the finger print of the rightful licence holder. To achieve this comparable quality in a digital reproduction, care should be given to the image capture, processing, digitisation, compression and printing technology and the process used to reproduce the finger print on the card, including the final preparation of the IDL. For image capturing, the minimum scanning resolution shall be 600 dots per inch for electronic comparison and 300 dots per inch for visual comparison.

A.9 Security

The IDL shall comprise of security elements to provide security features for first line, second line and third line inspection. These elements shall be selected in accordance with the specifications in annex C.

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A.10 Figures

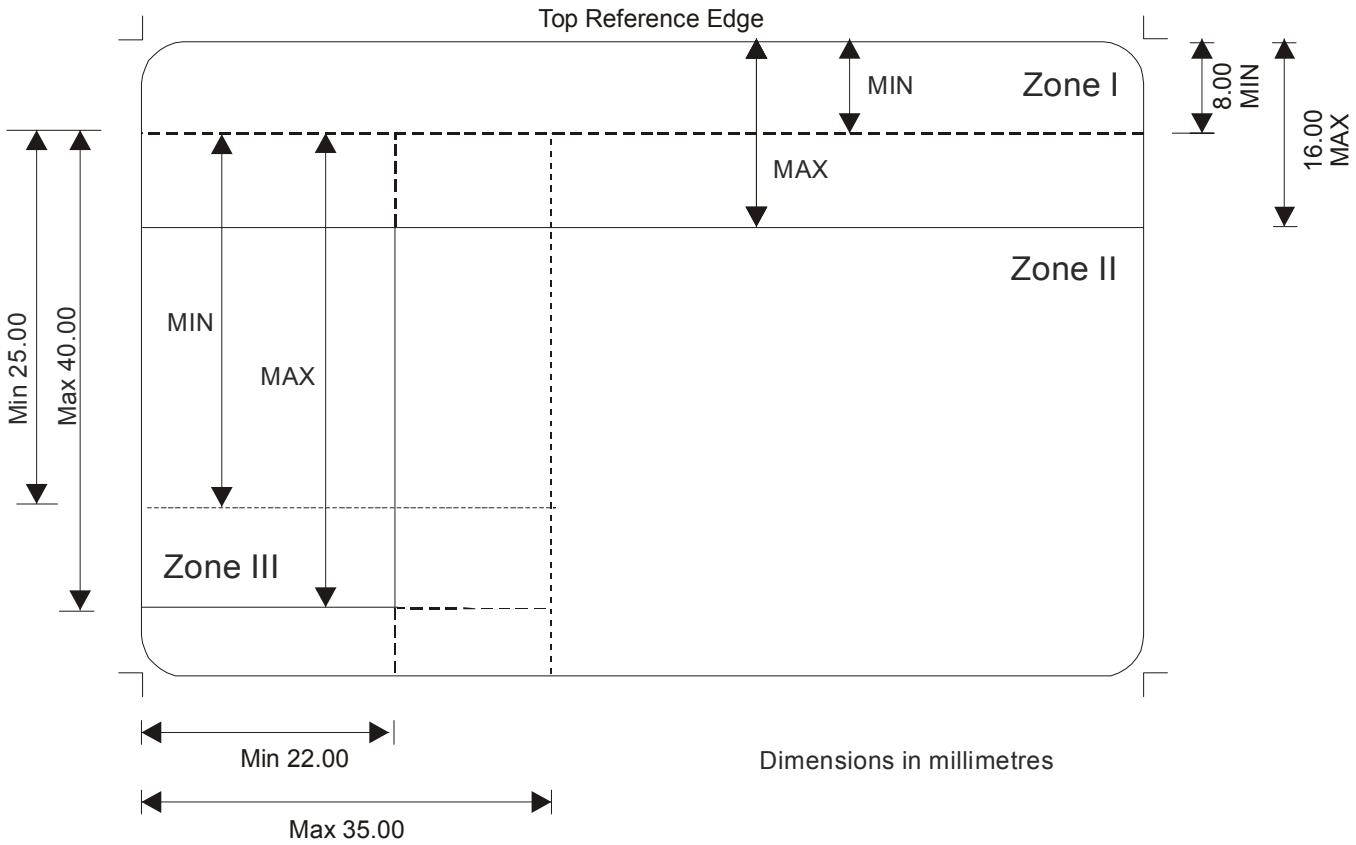

Figure A.1 — Portrait side of IDL (not to scale)

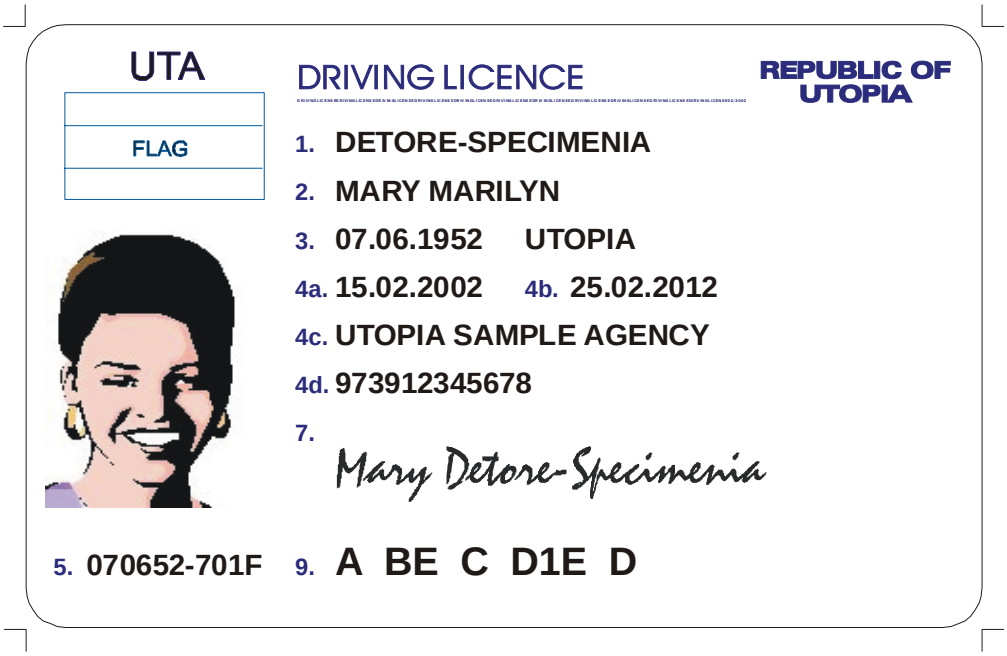

Figure A.1.1 — Informative example (not to scale)

NOTE 1 Data field reference codes **with punctuation** are used in the above example.

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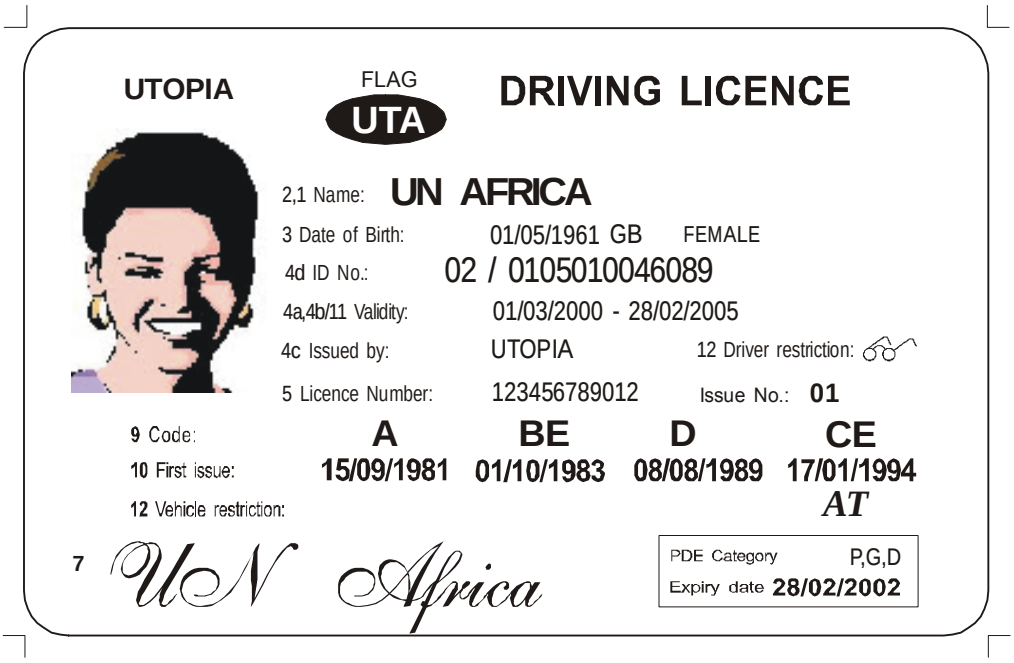

Figure A.1.2 — Informative example (not to scale)

NOTE 2 Data field reference codes **without punctuation** are used in the above example.

NOTE 3 "PDE Category P,G,D" and the associated "Expiry date 28/02/2002" are examples of national or regional requirements (for purposes of a DDL) included on the card.

Figure A.1.3 — Informative example (not to scale)

NOTE 4 The depiction of alternative locations for data field 4c (issuing authority) is for illustration purposes; the field shall appear once only. In the example, the field is filled with numbers to show the field's maximum space requirement. If the numerical order of data fields is maintained, field 4c shall be maximum V45ANS in a 6pt font (shown in black). Alternatively, for up to V65ANS data field 4c could be accommodated in a 6pt font at the bottom of the card (shown in *red italic*).

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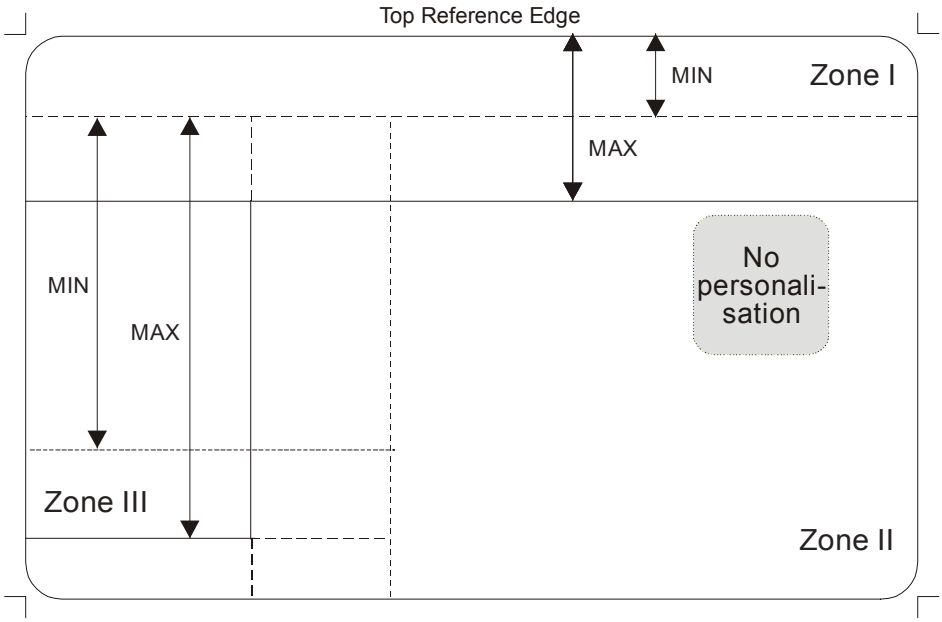

Figure A.2 — Portrait side of IDL - IC with contacts (not to scale)

NOTE 5 No dynamic data element shall be personalised on the portrait side of the card opposite the location of an integrated circuit with contacts.

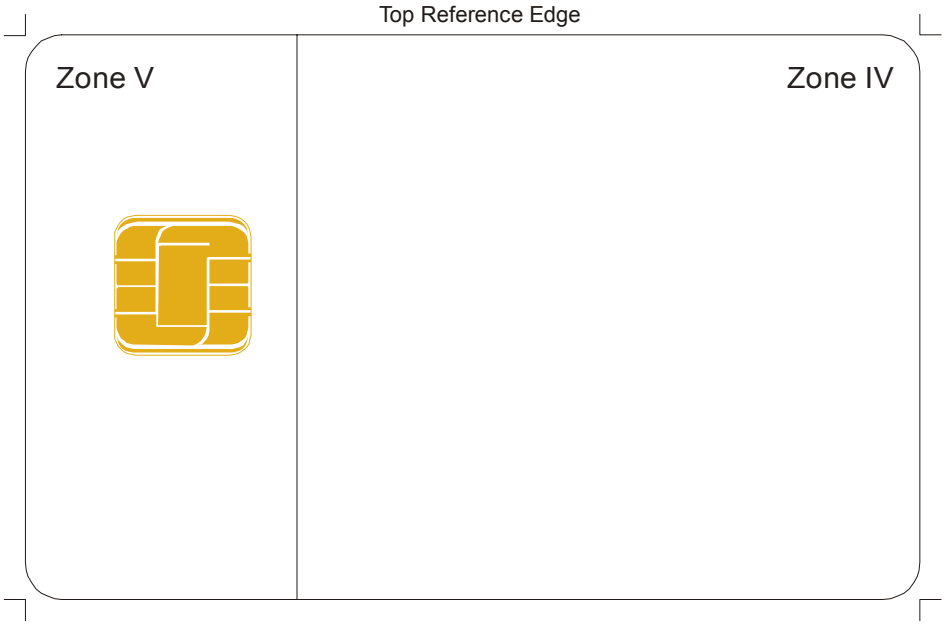

Figure A.3 — Non-portrait side of IDL – Integrated Circuit with contacts (not to scale)

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