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Identification cards — ICC-managed devices —

Part 2: Physical characteristics and test methods for cards with devices

Cartes d'identification — Dispositifs contrôlés par carte à circuit intégré (ICC) —

Partie 2: Caractéristiques physiques et méthodes d'essai des cartes avec les dispositifs



Reference number
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Contents

Page

Foreword ... **iv**

1 Scope ... **1**

2 Normative references ... **1**

3 Terms and definitions ... **1**

4 Abbreviated terms ... **2**

5 Requirements ... **2**

5.1 General requirements ... 2

5.1.1 Integrated circuit cards (ICCs) ... 2

5.1.2 ICCs with contacts ... 3

5.1.3 Contactless ICCs ... 3

5.2 Requirements for ICCs containing displays ... 3

5.2.1 General requirements ... 3

5.2.2 Requirements for matrix displays ... 3

5.2.3 Requirements for segmented displays ... 3

5.3 Requirements for cards containing biometric capture devices ... 3

Annex A (normative) **ID-T size card** ... **4**

Annex B (normative) **ID-B size card** ... **6**

Annex C (informative) **Applicability of ISO/IEC 10373-1 test methods for ID-T and ID-B size cards** ... **8**

Annex D (informative) **Further test methods** ... **9**

Annex E (informative) **Coexistence of new devices with existing technologies** ... **17**

Annex F (informative) **Display and input element technologies** ... **23**

Bibliography ... **25**

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives or www.iec.ch/members_experts/refdocs).

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This document was prepared by Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 17, *Cards and security devices for personal identification*.

This second edition cancels and replaces the first edition (ISO/IEC 18328-2:2015), which has been technically revised.

The main changes are as follows:

— updated Annex A and changed status to normative: ID-T size card;

— added a new normative Annex B: ID-B size card;

— added a new informative Annex C: Applicability of ISO/IEC 10373-1 test methods for ID-T and ID-B size cards;

— added a new informative Annex D: Further test methods.

A list of all parts in the ISO 18328 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html and www.iec.ch/national-committees.

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Identification cards — ICC-managed devices —

Part 2: Physical characteristics and test methods for cards with devices

1 Scope

This document defines physical characteristics and test methods for cards with devices, including but not limited to, power supplying devices, displays, sensors, microphones, loudspeakers, buttons or keypads. This document also covers aspects of coexistence of technologies of devices on the card and other machine-readable card technologies.

Additional requirements related to biometric capture devices are defined in ISO/IEC 17839-2. Such requirements can be applied in addition to the ones defined in this document. ISO/IEC 17839-2 defines a type S2 card; the physical dimensions of the type S2 card are specified in Annex A.

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/IEC 7810, *Identification cards — Physical characteristics*

ISO/IEC 7816-1, *Identification cards — Integrated circuit cards — Part 1: Cards with contacts — Physical characteristics*

ISO/IEC 10373-1, *Cards and security devices for personal identification — Test methods — Part 1: General characteristics*

ISO/IEC 14443-1, *Cards and security devices for personal identification — Contactless proximity objects — Part 1: Physical characteristics*

ISO/IEC 18328-1, *Identification cards — ICC-managed devices — Part 1: General framework*

ISO/IEC 18745-1:2018, *Test methods for machine readable travel documents (MRTD) and associated devices — Part 1: Physical test methods for passport books (durability)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 7810, ISO/IEC 18328-1 and the following apply.

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

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

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

3.1
active display area
area of the display that has active dots or segments

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3.2
ID-B
nominally 85,60 mm (3.370 in) wide by 53,98 mm (2.125 in) high with a thickness between 0,84 mm and 2,25 mm (between 0.033 in and 0.089 in)

3.3
ID-T
nominally 85,60 mm (3.370 in) wide by 53,98 mm (2.125 in) high with a thickness between 2,25 mm and 3,25 mm (between 0.089 in and 0.128 in)

3.4
machine-readable zone
MRZ
fixed dimensional area located on an identity card, containing mandatory and optional data formatted for machine reading using optical character recognition (OCR) methods

3.5
new device
device to be integrated in the card, except for existing technology, e.g. displays, sensors, microphones, loudspeaker, buttons and keypads

3.6
total display area
total area of the ICC related to the display

Note 1 to entry: The total display area typically extends beyond the *active display area* (3.1).

3.7
zone 1
<zones of a display> *total display area* (3.6) excluding the *active display area* (3.1)

3.8
zone 2
<zones of a display> *active display area* (3.1)

4 Abbreviated terms

ICC integrated circuit card

LED light-emitting diode

MSA mechanically sensitive area

OLED organic light-emitting diode

5 Requirements

5.1 General requirements

5.1.1 Integrated circuit cards (ICCs)

ICCs with integrated devices shall be in accordance with the requirements defined for ID-1 cards as specified in ISO/IEC 7810. Note that for ID-T cards the requirements specified differently from ISO/IEC 7810 in Annex A and for ID-B cards the requirements specified differently from ISO/IEC 7810 in Annex B shall apply. Annex C summarizes the applicability of test methods for characteristics of identification cards specified in ISO/IEC 10373-1 for ID-T and ID-B size cards.

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