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Cards and security devices for personal identification — Test methods —

Part 1: General characteristics

Cartes et dispositifs de sécurité pour l'identification personnelle — Méthodes d'essai —

Partie 1: Caractéristiques générales

Reference number
ISO/IEC 10373-1:2020(E)

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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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents) or the IEC list of patent declarations received (see http://patents.iec.ch).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

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

This third edition cancels and replaces the second edition (ISO/IEC 10373-1:2006), which has been technically revised. It also incorporates the Amendment ISO/IEC 10373-1:2006/Amd.1:2012. The main changes compared to the previous edition are as follows:

— three electrostatic discharge tests and the mechanical strength of contacts have been added;

— the ultraviolet light and static magnetic fields tests have been removed;

— the peel strength including the edge of the card test has been added; this test differs from the peel strength test by allowing layer bond strength measurement at the card edge and the middle area of the card;

— chemical lists have been revised into tables, which now include the base chemicals for Fuel B and artificial perspiration solutions (a normative reference was provided in the second edition);

— technical changes have been made to the dynamic bending stress calibration method and opacity measurement reporting;

— figures, tables and NOTEs have been revised to facilitate understanding of the tests;

— address for availability of optical reference (ORM7810) media has been changed;

— test methods have been refined and relaxed where technically appropriate.

A list of all parts in the ISO/IEC 10373 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.

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Introduction

The changes to the last version are a result of industry feedback, harmonisation of standards, and inter-laboratory studies (round robin studies) performed by experts from SC 17's Working Group 1. Additional information has been provided as NOTEs within the test methods

This document defines the ISO/IEC test methods for physical requirements of cards and security devices for personal identification and is utilised by other requirements and test methods. For example, the following ISO/IEC standards refer to this document for one or more test methods.

— ISO/IEC 7501 (all parts)

— ISO/IEC 7811 (all parts)

— ISO/IEC 7812 (all parts)

— ISO/IEC 7813

— ISO/IEC 7816 (all parts)

— ISO/IEC 10373 (all parts)

— ISO/IEC 10536 (all parts)

— ISO/IEC 11693 (all parts)

— ISO/IEC 11694 (all parts)

— ISO/IEC 11695 (all parts)

— ISO/IEC 14443 (all parts)

— ISO/IEC 15693 (all parts)

— ISO/IEC 18013 (all parts)

— ISO/IEC 18328 (all parts)

— ISO/IEC 18745 (all parts)

— ISO/IEC 24789 (all parts)

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Cards and security devices for personal identification — Test methods —

Part 1: General characteristics

1 Scope

This document describes the test methods for characteristics of identification cards according to ISO/IEC 7810 and other standards, such as those listed in the Introduction.

NOTE 1 Criteria for acceptability do not form part of this document but are found in other International Standards including those mentioned in the introduction.

NOTE 2 Test methods described in this document are intended to be performed separately. A given card is not required to pass through all the tests sequentially.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 7816-2, *Identification cards — Integrated circuit cards — Part 2: Cards with contacts — Dimensions and location of the contacts*

ISO/IEC 10373-2, *Identification cards — Test methods — Part 2: Cards with magnetic stripes*

ISO 3696, *Water for analytical laboratory use — Specification and test methods*

ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests*

IEC 61000-4-2, *Electromagnetic compatibility (EMC) — Part 4-2: Testing and measurement techniques — Electrostatic discharge immunity test*

IEC 60749-26, *Semiconductor devices — Mechanical and climatic test methods — Part 26: Electrostatic discharge (ESD) sensitivity testing — Human body model (HBM)*

ANSI/ESDA/JEDEC JS-002, *ESDA/JEDEC Joint Standard For Electrostatic Discharge Sensitivity Testing - Charged Device Model (CDM) - Device Level*

3 Terms, definitions and abbreviated terms

3.1 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:

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

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

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