

**Information technology - Automatic identification and
data capture techniques - Bar code scanner and
decoder performance testing**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 15423:2010 sisaldab Euroopa standardi EN ISO 15423:2010 ingliskeelset teksti.

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English Version

Information technology - Automatic identification and data
capture techniques - Bar code scanner and decoder
performance testing (ISO/IEC 15423:2009)

Technologies de l'information - Techniques automatiques
d'identification et de capture des données - Contrôle de
scanner de code à barres et de performance du décodeur
(ISO/IEC 15423:2009)

Informationstechnik - Automatische Identifikation und
Datenerfassungsverfahren - Leistungsanforderungen an
Strichcode-Scanner und -Decoder (ISO/IEC 15423:2009)

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Foreword

The text of ISO/IEC 15423:2009 has been prepared by Technical Committee ISO/IEC/JTC 1 "Information technology" of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) and has been taken over as EN ISO/IEC 15423:2010 by Technical Committee CEN/TC 225 "AIDC technologies" the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2011, and conflicting national standards shall be withdrawn at the latest by March 2011.

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Endorsement notice

The text of ISO/IEC 15423:2009 has been approved by CEN as a EN ISO/IEC 15423:2010 without any modification.

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Introduction

The technology of bar coding is based on the recognition of patterns encoded in bars and spaces of defined dimensions or arrangements of marks in matrix patterns both of which are constructed according to rules defining the translation of characters into such patterns, known as the symbology specification.

Bar code symbols can be produced with a wide variety of printing and other techniques, and the overall symbol dimensions can be uniformly scaled to suit particular requirements.

There is a wide range of bar code reading equipment using various scanning techniques, which enable bar code symbols to be read under many different conditions.

Bar code symbols may be

- a) “linear” i.e. read in a single dimension, where the height of the bars provides redundancy of information, or
- b) “two dimensional”, either in stacked rows to be read unidimensionally with multiple scans, or as a matrix of elements requiring two dimensional reading.

Bar code reading equipment must be capable of reliably converting the information represented as a bar code symbol into a form meaningful to the host computer system or otherwise to the user.

Manufacturers of bar code equipment, the producers of bar code symbols and the users of bar code technology require publicly available standard test specifications for bar code reading equipment to ensure the accuracy and consistency of performance of this equipment.

Information technology — Automatic identification and data capture techniques — Bar code scanner and decoder performance testing

1 Scope

This International Standard defines the test equipment and procedures to be used to determine the performance of bar code scanning and decoding equipment. It deals with bar code scanning and decoding equipment both as integrated reading systems and as discrete units. It defines performance of the equipment in a particular configuration (e.g. a specific model) irrespective of the individual components used. It also defines in a normative annex operational parameters for the test equipment, and describes, in an informative annex, a means of classifying scanners.

2 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 15415, *Information technology — Automatic identification and data capture techniques — Bar code print quality test specification — Two-dimensional symbols*

ISO/IEC 15416, *Information technology — Automatic identification and data capture techniques — Bar code print quality test specification — Linear symbols*

ISO/IEC 15417, *Information technology — Automatic identification and data capture techniques — Code 128 bar code symbology specification*

ISO/IEC 15424, *Information technology — Automatic identification and data capture techniques — Data Carrier Identifiers (including Symbology Identifiers)*

ISO/IEC 15426-1, *Information technology — Automatic identification and data capture techniques — Bar code verifier conformance specifications — Part 1: Linear symbols*

ISO/IEC 15426-2, *Information technology — Automatic identification and data capture techniques — Bar code verifier conformance specification — Part 2: Two-dimensional symbols*

ISO/IEC 15438, *Information technology — Automatic identification and data capture techniques — PDF417 bar code symbology specification*

ISO/IEC 16022, *Information technology — Automatic identification and data capture techniques — Data Matrix bar code symbology specification*

ISO/IEC 16388, *Information technology — Automatic identification and data capture techniques — Code 39 bar code symbology specification*

ISO/IEC 19762-1, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary — Part 1: General terms relating to AIDC*

ISO/IEC 19762-2, *Information technology — Automatic identification and data capture (AIDC) techniques — Harmonized vocabulary — Part 2: Optically readable media (ORM)*

ISO/IEC 24723, *Information technology — Automatic identification and data capture techniques — EAN.UCC Composite bar code symbology specification*

ISO/IEC 24724, *Information technology — Automatic identification and data capture techniques — Reduced Space Symbology (RSS) bar code symbology specification*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 19762 and the following apply.

3.1
contact scanner
particular type of scanner in which the scanning action takes place with the scanner in actual or near contact with the symbol, e.g. wand or light pen

3.2
decode redundancy
acquisition of a predetermined number of identical decodes before acceptance by a decoder of a valid decode

EXAMPLE Decode redundancy of 2 requires two identical decodes.

3.3
exit window
datum point from which the reading diagram is measured, positioned on the beam midpoint and closest to the reading end of the scanner

3.4
maximum reading distance
distance from the exit window to the end of the depth of field

NOTE See R in Figure 2.

3.5
minimum reading distance
distance from the exit window to the beginning of the depth of field

NOTE See A in Figure 2.

3.6
raster distance
distance between the two most widely spaced adjacent scan lines projected on a plane at a defined distance from the scanner exit window

NOTE See E in Figure B.3.

3.7
raster width
distance between the two outermost scan lines projected on a plane at a defined distance from the scanner exit window

NOTE This covers a reading field which depends on the construction of the scanner and on the reading distance. See D in Figure B.3.