SLOVENSKI STANDARD
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Ļrtno kodiranje - Simbologķke specifikacije - Opis formata

Bar coding - Symbology specifications - Format Description

Strichcodierung - Symbologiespezifikationen - Beschreibung von Formaten

Codes a barres - Spécifications des symbologies - Description des formats

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English version

Bar coding - Symbology specifications - Format Description

Codes à barres - Spécifications des symbologies - Description des formats

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This European Standard was approved by CEN on 1995-06-22. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

This European Standard has been prepared by the Technical Committee CEN/TC 225 "Bar coding" of which the secretariat is held by NNI.

Organisations contributing to the development of the standard include:

- AIM Europe (Automatic Identification Manufacturers)

NOTE: Not all of the symbologies which appear in this document are defined in European Standards; for information on current European Standards contact the CEN Central Secretariat or National Standards Organisations.

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of an identical text or by endorsement, at the latest by February 1996, and conflicting national standards shall be withdrawn at the latest by February 1996.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

The technology of bar coding is based on the recognition of patterns encoded in bars and spaces of defined dimensions. There is a number of methods of encoding information in bar code form, known as symbologies, and the rules defining the translation of characters into bar and space patterns and other essential features are known as the symbology specification.

Previously symbology specifications have been developed and published by a number of organisations resulting in certain instances in conflicting requirements for certain symbologies.

Manufacturers of bar code equipment and users of bar code technology require standard symbology specifications to which they can refer when developing equipment and application standards.

In order to provide a common framework for symbology specifications and to allow for future development it is therefore desirable to standardise the format for these.

1 Scope

This standard

- specifies the format for bar code symbology specifications.
- specifies the characteristics of the symbology which need to be defined.

The standard is applicable as the basis for European Standards for bar code symbologies.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

prEN 1556	Bar coding - Terminology
EN 796	Bar coding - Symbology identifiers

3 Definitions

For the purposes of this standard the definitions in prEN 1556 apply.

4 Requirements

A European Standard specification for a bar code symbology shall define the following details:

4.1 Symbology characteristics

A description of the general characteristics of the symbology, which shall include:

a) the encodable character set;
b) the classes into which the symbology falls, including an indication of whether it is a single row or multi-row symbology, discrete or continuous, fixed or variable length;
c) whether a symbol check character is mandatory or optional;
d) whether character self checking is inherent.

The description may also include:

e) minimum nominal element dimension;
f) range of permissible data character densities;
g) summary of optional additional features;
h) expression of non-data overhead;
i) other characteristics which need to be identified in order to describe the symbology adequately;
j) details of any restrictions as to the use of the symbology for specified applications.

4.2 Symbol structure

In this clause the overall structure of a symbol shall be described.

4.3 Character encodation

The principles of the encodation of characters shall be set out together with a table showing the bar and space pattern for each character in the encodable character set.
This description shall also cover any specially coded characters such as start and stop characters, check characters (optional or mandatory) including the formula or algorithm for their calculation and verification, quiet zones and the data to be transmitted by a decoder.

4.4 Dimensions and tolerances

In this clause the dimensions of elements and other features of symbols shall be defined. A formula which can be used to calculate the overall symbol length shall be given. The dimensional tolerances, both for printed symbols and for film masters, shall be indicated, either as a function of a specific dimension of the symbol or as an absolute measurement.

4.5 Reference decode algorithm

The specified printing tolerances for any symbology are based on a defined decode algorithm. The standard shall define the algorithm used for the derivation of the tolerances. The algorithm shall not be mandatory for use in decoding equipment.

4.6 Application-defined parameters

The standard shall specify which of the symbology characteristics (see 4.1) shall have parameters defined by the application standard.

NOTE: To facilitate comprehension of the standard, informative and normative annexes may be incorporated covering additional aspects of the symbology such as, for example, human readable interpretations of the encoded information, optional features, rules for optimisation of overall symbol size, and the symbology identifier (see EN 796).