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Replacing GB/T 12905-2000

Bar code terminology

条码术语

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1 Scope

GB/T 12905-2019 is the Chinese national standard on bar code terminology, in the field of information technology. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 25 March 2019 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 October 2019. Classification: ICS 35.040, CCS A24. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard defines the terms and definitions of bar code basis, symbology, bar code reading, bar code symbol production, bar code symbol detection. This standard applies to research and application, which are related to bar code technology.

2 Basic terminology

2.1 Bar code A symbol, which is composed of a set of regularly arranged bars and spaces. It can be read by the machine, to indicate certain information, including one- dimensional bar code (2.2) and two-dimensional bar code (2.3).

2.2 Linear bar code; one-dimensional bar code A bar code symbol, which represents information, in only one dimension.

2.3 Two-dimensional bar code; 2D code Bar code symbols, which represent information, in both dimensions.

2.4 Symbology Provisions regarding the bar code symbol's type, data representation method, encoded volume, bar code character set and other characteristics.

2.5 Bar code system A system, which is composed of design, production, scanning and reading of bar code symbol.

2.6 Bar; dark bar; black bar The part of the bar code symbol, which has a low reflectivity.

3.1 One-dimensional bar code

3.1.1 EAN/UPC code A continuous fixed-length one-dimensional bar code, which is managed and maintained by the International Article Numbering Association (GS1), AND can only represents the numeric characters, including EAN-13, EAN-8, UPC-A, UPC-E bar codes. Represented character set. Number. 0 ~ 9

3.1.2 EAN-13 bar code The bar code symbol, which is used to represent GTIN-13.

3.1.3 EAN-8 bar code The bar code symbol, which is used to represent GTIN-8.

3.1.4 UPC-A bar code The bar code symbol, which is used to represent GTIN-12.

3.1.5 UPC-E bar code The 8-bit coded bar code symbol, which is used to represent the GTIN-12 AND formed through zero removal compression.

4 Bar code reading

4.1 Decode The process of determining the information, which is represented by the bar code symbol.

4.2 Resolution of scanner The indicator, that the instrument can distinguish the width of the narrowest element (module), in the bar code symbol, expressed as a percentage.

4.3 First read rate Under the same conditions, the ratio of the number of times that a bar code symbol is successfully read, when it is scanned for the first time, TO the total number of times that a bar code symbol is read.

4.4 Misread The state, in which the output of the decoder is inconsistent with the data of the bar code symbol.

4.5 Error rate Under the same conditions, the ratio of the number of incorrectly read bar code symbols TO the total number of read bar code symbols.

4.6 Non-read The state, that the decoder does not produce the output, after scanning the bar code symbol.

4.7 Non-readrate Under the same conditions, the ratio of the number of unread bar code symbols TO the total number of bar code symbols.

4.8 Bi-directional read The bar code character characteristics, which can be read in both

front and back directions, using both ends of the bar code symbols as the start point of scan.

4.31 Slot type scanner A scanner, which can realize the reading function, by the carrier with bar code symbols, through the card slot.

4.32 Omni-directional scanner Raster scanner Bar code scanner, which has omnidirectional reading performance.

4.33 Bar code hand-held terminal A device, which combines the functions of a handheld scanner and a handheld computer (handheld terminal) into one.

5 Production of bar code symbol

5.1 Bar width adjustment; BWA In order to compensate for the increase or reduction of the bar width, in the printing process, the reduction or increase of bar width, on the original bar code film, as relative to the design bar width of the corresponding printed bar code symbol. [GB/T 26227-2010, definition 3.13]

5.2 Bar width reduction The amount of reduction, when the bar width is adjusted. [GB/T 26227-2010, definition 3.14]

5.3 Bar code printer A device, which generates and prints bar code symbols.

5.4 Digital barcode image Bar code digital film Bar code electronic film Bar code symbols, which are designed and stored in digital format.

5.5 Direct part marking; DPM A marking technology, which uses dotting, laser etching, inkjet, electrochemical etching, to mark parts and components. It can be used to generate bar code symbols.

6 Detection of bar code symbol

6.1 Bar code verifier A device, which is used to detect the quality of bar code symbols.

6.2 Nominal dimensions The design size of the bar code symbol.

6.3 X dimension The nominal size of the unit module, in the bar code symbol.

Note. In symbology systems, such as ITF-14 and interleaved 2 of 5 bar codes, it refers to the nominal size of the narrow element, in the bar code symbol.

6.4 Z dimension The average value of the actual size of the unit module, in the bar code symbol.

Note. In code systems, such as ITF-14 and interleaved 2 of 5 bar codes, it refers to the average value of the actual size of the narrow element, in the bar code symbol.

6.5 Void The phenomenon of lack of ink, in the bar in the bar code symbol.

6.13 Average background reflectance The average value of the background reflectance, which is expressed as a percentage.

6.14 Average edge line A theoretical edge, which is used to smoothen and determine the boundaries of bars and spaces.

6.15 Edge fog The phenomenon of unclear bar edges.

6.16 Edge-error A deformation, where the edge of the bar does not meet the requirements of the printing quality.

6.17 Bar edge conformance The accuracy of the position of each part of the edge of the bar, based on the corresponding average edge line.

6.51 Codeword read rate; CY A measure of the ability of one-dimensional scanning to read data, from a stacked two-dimensional bar code, that is, the percentage of the number of codewords that can be effectively decoded TO the maximum number of codewords, that shall be able to be decoded, after adjusting the reading angle.

6.52 Unused error correction; UEC The relative value of the error correction codeword and the error correction volume, which is not used in the symbol decoding process.