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Bar Codes 101

Introduction to Linear Bar Codes

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Linear bar codes defined

- A single row of parallel bars and spaces of varying widths that represent data. The bars and spaces are arranged in a predetermined pattern defined by the symbology



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Narrow bar

- The nominal dimension of the smallest bars and spaces in a bar code symbol
- Other terms commonly used for narrow bar: x-dimension, mil size, module width
- MIL. = .001" = .0254mm
- Used as a reference for determining the size scale of the bar code



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Quiet zone

- The “no print” zone at each end of the bar code. The minimum zone needs to be 10 times the narrow bar dimension.



Quiet Zone

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Start and stop character

- Characters that determine the beginning and ending of the data set; also tell scanning direction



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Bar height

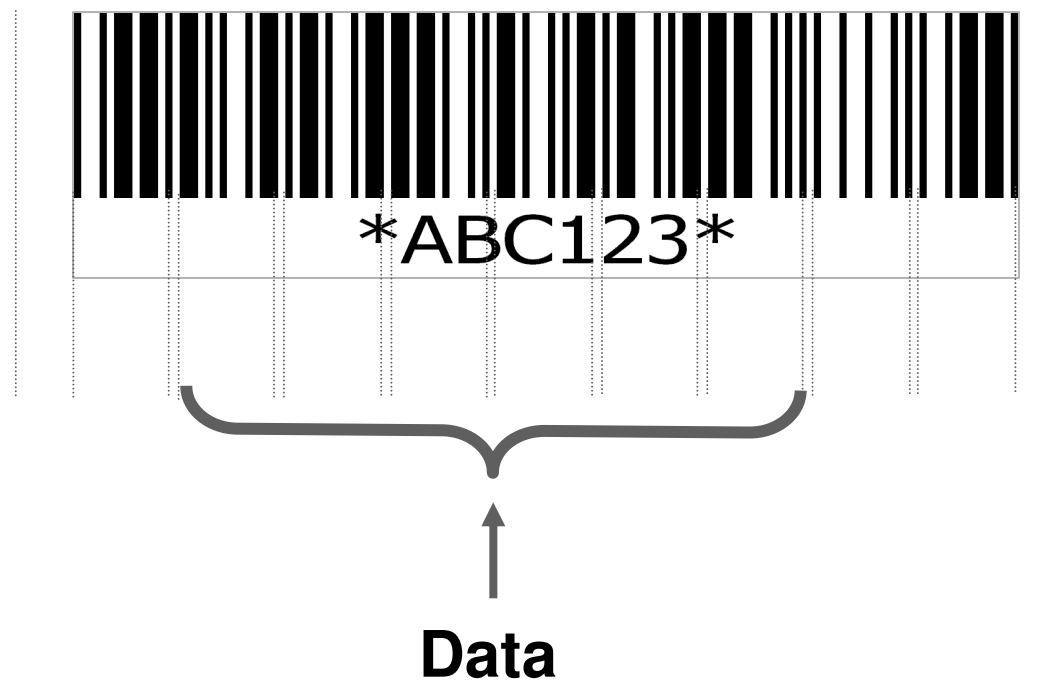
- The measurement of the height of the bars in the bar code



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Code words

- A basic unit of encoding a character



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Check digit/character

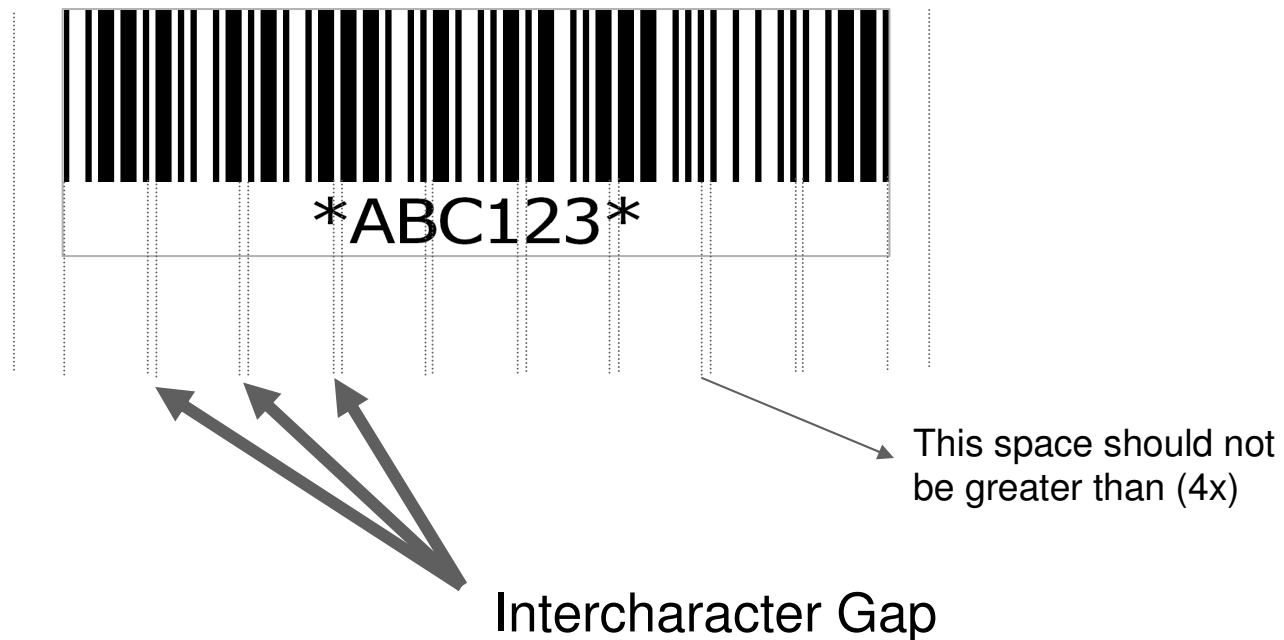
- A character with a symbol that performs a mathematical check when decoded to make sure the data is correct



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Intercharacter gap

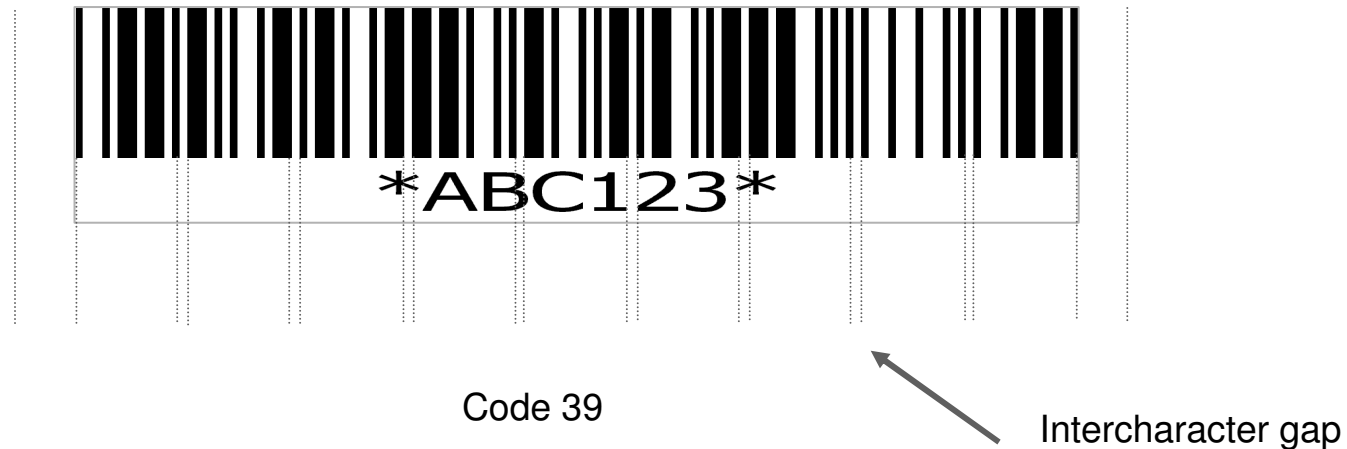
- The space between code words used in discrete codes
- Discrete codes start and end with a bar



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Discrete code

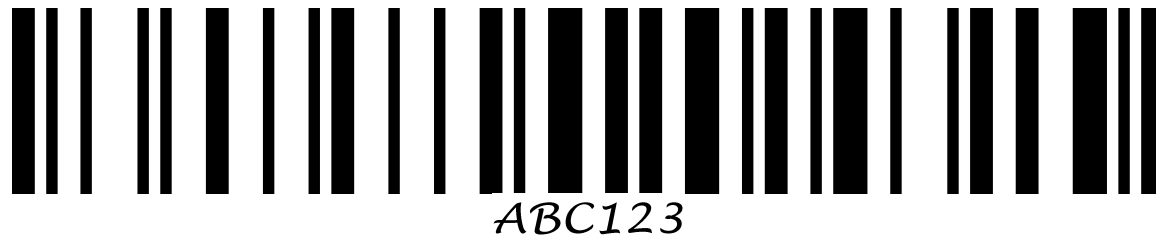
- A bar code symbology where the spaces between characters (intercharacter gap) are not part of the code



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Continuous code

- A bar code symbology where all spaces within the symbol are parts of characters. There is no intercharacter gap in a continuous code.



Code 128

No Intercharacter gap

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Common linear symbologies

Symbology	Continuous/ Discrete	Check Characters	Data	Key Benefits
Code 39	Discrete	- Optional - Module 43	- Alpha Numeric - Numeric	- Good Security - Widely Used
Code 128	Continuous	- Mandatory - Module 103	- Alpha Numeric - Numeric	- Good Density - Good Security
UPC/EAN	Discrete	- Mandatory	- Numeric	- World-wide Standard for Point- of-Sale
Interleaved 2 of 5	Continuous	- Optional - Module 10	- Numeric	- Good Density
Codabar	Discrete	- Optional - Module 16 - NW-7	- Numeric - Special Characters	

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More information

- If you have questions regarding this topic, send us an e-mail to training@microscan.com
- If you would like further information about bar code symbologies, we recommend you view **Intro to PDF417** or **Intro to Data Matrix**