Code 39 Bar Code QwikTip™

Code 39 or Code 3 of 9 is one of the easiest bar codes to encode. This bar code contains a full alphanumeric character set, a unique START and STOP character, seven special characters, and a variable length. In its simplest form START with the "*" or asterisk character, place your data, and STOP with an "*" asterisk. The bar code font includes the following characters:

0 1 2 3 4 5 6 7 8 9 * . - / $ + % (space character)
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

To encode "CODE39", data is formatted like so – *CODE39*

Utilization of Check Character
For applications requiring enhanced data security, a check character may be used. When used, the check character is positioned immediately following the final data character, before the stop character. The encoding of the check character is determined as follows:

Character	Value	Character	Value	Character	Value	Character	Value
0	0	B	11	M	22	X	33
1	1	C	12	N	23	Y	34
2	2	D	13	O	24	Z	35
3	3	E	14	P	25	Minus	36
4	4	F	15	Q	26	Period	37
5	5	G	16	R	27	Space	38
6	6	H	17	S	28	$	39
7	7	I	18	T	29	/	40
8	8	J	19	U	30	Plus	41
9	9	K	20	V	31	Percent	42
A	10	L	21	W	32		

1. Each data character is assigned a numerical value as per the table above.

2. The sum of the numerical values for all data characters is taken, Modulo 43 is then applied.

3. The character whose value is the sum calculated in Step 2 is used as the check character.

Example: For the data string "TEST"
T = 29, E = 14, S = 28, T = 29
29 + 14 + 28 + 29 = 100
100 / 43 = 2.32 (take the whole number)
2 x 43 = 86
100 – 86 = 14
14 = "E"
The data with check character looks like this – "TESTE"