

### The RAIN CIN class ranges and its encoding

The RAIN CIN shall be issued as a 1 to 9 digit decimal number. It can be requested as a byte encoding, decimal number and text string.

Class	1	2	3	4
<b>binary</b> <b>by encoding</b> <b>by decimal</b> <b>by text</b>	<b>7-bit</b> 1-byte 2-digit 1-char	<b>14-bit</b> 2-byte 4-digit 2-char	<b>21-bit</b> 3-byte 6-digit 3-char	<b>28-bit</b> 4-byte 8-digit 4-char
<b>Binary encoding</b>	0aaaaaaa	1aaaaaaa 0bbbbbbb	1aaaaaaa 1bbbbbbb 0ccccccc	1aaaaaaa 1bbbbbbb 1ccccccc 0ddddddd
	aaaaaaa shall not be 0000000, i.e. It shall be greater than zero. The bold bit (the first bit) indicates the length encoding. <b>0</b> means it is the last byte of 8 bits.			
<b>Binary encoding range</b> to	0000001 01111111	1000001 0000000 11111111 01111111	1000001 1000000 0000000 11111111 11111111 01111111	1000001 1000000 1000000 0000000 11111111 11111111 11111111 01111111
<b>Hex encoding range</b> to	01 7F	81 00 FF 7F	81 80 00 FF FF 7F	81 80 80 00 FF FF FF 7F
<b>Binary number range</b> <b>note it is 7-bit blocks</b>	0000001 1111111	0000001 0000000 11111111 11111111	0000001 0000000 0000000 11111111 11111111 11111111	0000001 0000000 0000000 0000000 11111111 11111111 11111111 11111111
<b>Decimal number range</b> to	1 127	128 16383	16384 2097151	2097152 268435455
<b>Text range</b>	x	xx	xxx	xxxx
	with x any printable character excluding space, i.e. all the characters on a US keyboard, e.g. "RAIN" or "Ra-". !"#\$%&\'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNopqrstuvwxyz[\]^_`abcdefghijklmnopqrstuvwxyz{ }~			

