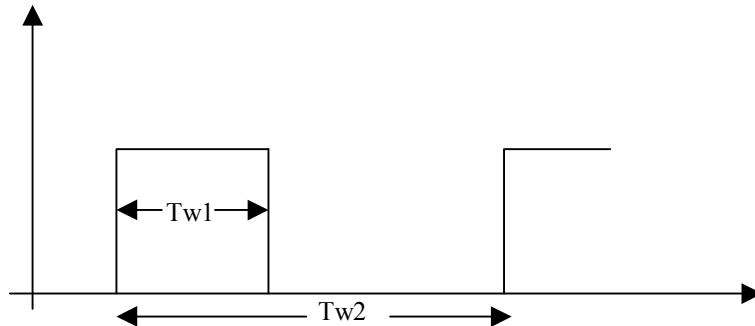


Duty cycle:

Data type:



Data Format:

Pri.header (150bit)	Frame1 (45bit)	Frame2 (45bit)	Stop (1bit)
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Frame format:

header (1bit)	Function code (4bit)	ID code (24bit)	Counter (16bit)
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Data time:

	T_{w1}	T_{w2}
Pri.header pulse	0.6 msec	1.2 msec
Header pulse	0.6 msec	3.24 msec
1 pulse	0.6 msec	2.0 msec
0 pulse	0.6 msec	1.2 msec
Stop pulse	0.6 msec	0.6 msec

Calculation of the duty factor:

Pulse on time = Priheader + Frame1 + Frame2 + Stop = Priheader + 2* (Header + Function code + ID code + Counter) + Stop
 $= 150 * 0.6 \text{ msec} + 2 * (0.6 \text{ msec} + 4 * 0.6 \text{ msec} + 24 * 0.6 \text{ msec} + 16 * 0.6 \text{ msec}) + 0.6 \text{ msec}$
 $= 144.6 \text{ msec}$

The pulse time will be the shortest, when the 0 pulse will be transmitted.

Data length = Priheader + Frame1 + Frame2 + Stop = Priheader + 2* (Header + Function code + ID code + Counter) + Stop
 $= 150 * 1.2 \text{ msec} + 2 * (3.24 \text{ msec} + 4 * 1.2 \text{ msec} + 24 * 1.2 \text{ msec} + 16 * 1.2 \text{ msec}) + 0.6 \text{ msec}$
 $= 292.68 \text{ msec}$

Duty factor = $20 \log (\text{pulse on time} / \text{data length}) = 20 \log (144.6 \text{ msec} / 292.68 \text{ msec}) = -6.12$