

EV-DW319C door sensor Operational Description

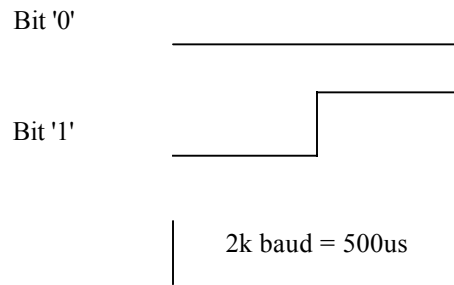
The EV-DW319C door sensor is a low powered, which is installed in house to detect door/window for home security and other features. See the function descriptions in attached. The sensor is powered by a 3.3 volt battery. It is designed to operate on a single fixed frequency at 319.5 MHz. See the attached block diagram and schematic.

There are 3 switches trigger the integrated circuit (IC1) which produces the digital control signals and will modulate the carrier signal (ASK). The carrier signal is generated by a I C (IC1) oscillator/amplifier circuit comprised of a 9.98 MHz crystal (X1) . The modulated output of the RF stage is coupled to the strip antenna. The antenna is off-board soldered, around 160mm.

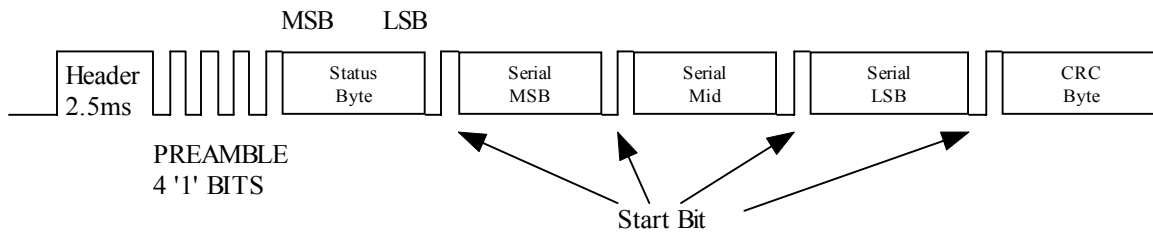
The sensor is operated by the triggered momentarily within 0.2 second and will automatically deactivate send signal to receiver. This feature is incorporated by the IC1 internally.

All tuning and verification are performed by the manufacture and there are no adjustments can be made by user.

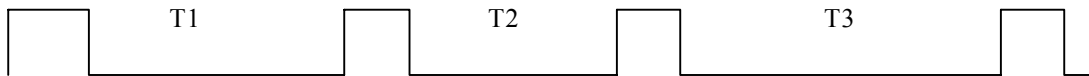
DSC Communication



Transmission Format: A complete transmission consists of a header, 4 sync bits, status byte, 24bit serial number, and 8 bit CRC.



A complete transmission consists of 4 packets of data. The timing between packets is defined as follows:



$$T1 = 100ms + (50ms * \text{Serial Number LSB bit } 1,0)$$

$$T2 = 100ms + (50ms * \text{Serial Number LSB bit } 3,2)$$

$$T3 = 100ms + (50ms * \text{Serial Number LSB bit } 5,4)$$

Example: If Serial Number LSB is 00110010. Then T1 = 200ms, T2 = 100ms, and T3 = 250ms.