

Ultrasonic Sensor Module

Model: ME007V2



1-Product Synopsis:

- BLJ-ME007 ultrasonic sensor is non-contact
- distance measurement module, which
- is also compatible with electronic brick.
- It's designed for easy modular project
- usage with industrial performance.

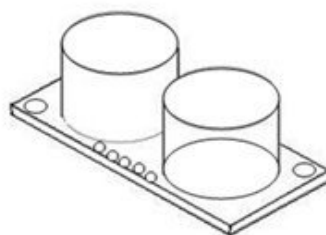
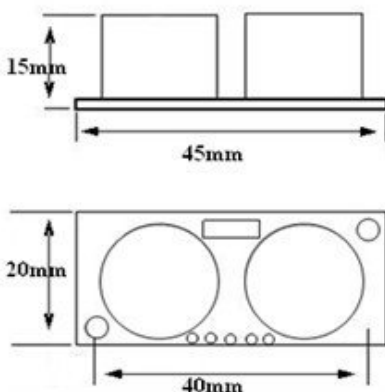
2-Product principle:

ultrasonic distance sensor module BLJ-ME007 provides 3cm - 400cm non-contact measurement function, the ranging accuracy can reach to 3mm. The modules includes ultrasonic transmitters, receiver and control circuit.

The basic principle of work:

- Using IO trigger for at least 10us high level signal,
- The Module automatically sends eight 40 kHz and detect whether there is a pulse signal back.
- IF the signal back, through high level , time of high output IO duration is the time from sending ultrasonic to returning. Test distance = (high level time $\times$ velocity of sound (340M/S) / 2

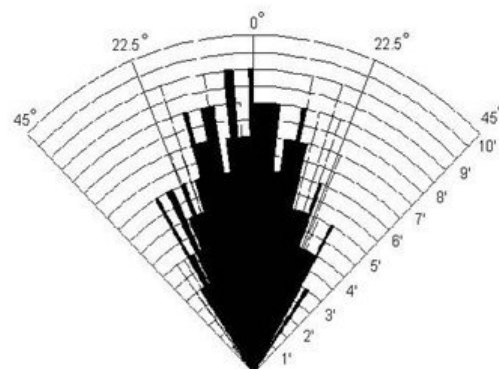
3-Features:



- Detecting range: 3cm-4cm
- Best in 30 degree angle
- Electronic brick compatible interface
- 5VDC power supply
- Breadboard friendly
- Dual transducer
- Arduino library ready

4-Specifications:

Supply voltage	5 v
Global Current Consumption	15 mA
Ultrasonic Frequency	40k Hz
<i>Maximal Range</i>	<i>400 cm</i>
Minimal Range	3 cm
Resolution	1 cm
Trigger Pulse Width	10 μ s
Outline Dimension	43x20x15 mm



Practical test of performance,
Best in 30 degree angle

5-Sequence Chart:

The BLJ-ME007 Timing diagram is shown below. You only need to supply a short 10uS pulse to the trigger input to start the ranging. The BLJ-ME007 will send out an 8 cycle burst of ultrasound at 40khz and raise its echo line high. It then listens for an echo, and as soon as it detects one it lowers the echo line again. The echo line is therefore a pulse whose width is proportional to the distance to the object. By timing the pulse it is possible to calculate the range in inches/centimeters or anything else. If nothing is detected then the BLJ-ME007 will lower its echo line anyway after about 36mS

