# RCWL-0516

RCWL-0516 microwave radar sensor module Human body induction switch module Intelligent sensor

#### Features:

- 1. Transmission signal processing control chip RCWL-9196
- 2. Wide operating voltage range: 4.0 ~ 24V
- 3. Compared with the traditional infrared feeling PIR, with the penetrating detection capability.
- 4. Block time and distance adjustable.
- 5. Output 3.3V power supply.

## **Application Design Note:**

- 1. The sensing face in front of the gold without any shelter.
- 2. Front and rear sensing surface space to set aside more than 1CM
- 3. The module carrier plane and install as flat line
- 4. A certain application of effective detection area
- 5. The component side of the module is positive sensing face, the opposite is negative sensing surface. Negative sensing surface sensing less effective
- 6. Microwave modules can not be large-scale applications in the same area, otherwise there will be mutual interference. Between single individuals over distance greater than 1M

## Parameters:

- 1. Operating Voltage: 4-24V
- 2. Operating Current: 2.8mA (typical);3mA (max)
- 3. Detection Distance: 5-7m
- 4. Transmitting Power: 20mW (typical);30mW (max)
- 5. Output Voltage: 3.2-3.4V
- 6. Output Voltage Driving Capacity: 30mA
- 7. Trigger Way: repeat trigger
- 8. Output Control Low Level: 0V
- 9. Output Control High Level: 3.3V
- 10. Operating Temperature: -20~80 celsius
- 11. Size: 36 x 17mm

## Adjustment Part Introduction on back:

#### 1. C-TM

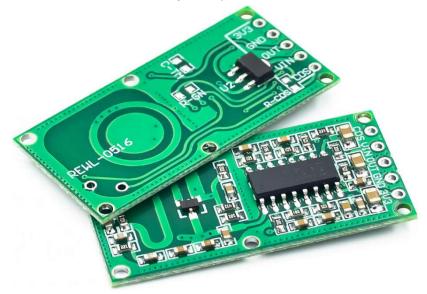
Adjust repeat trigger time, default trigger time is 2s; increasing capacitor's capacity will make repeat trigger time longer; and actual counting trigger time can operate as below: Stick capacitor on C-TM, test 9196 3-pin frequency F, repeat trigger time  $T=(1/f)^*32768$ 

## 2. R-GN

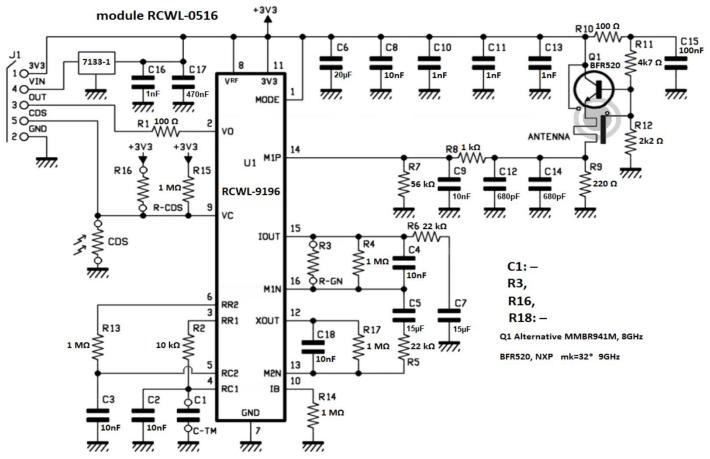
Detection distance adjustment; connect with resistor and detection distance will become shorter; if not connect, detection distance is 7m; if connect with 1M ohm resistor, detection distance is 5m

## 3. R-CDS

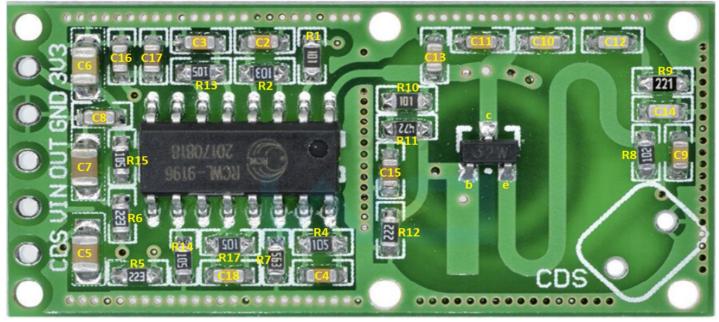
Internal VCC parallel connect with internal 1M ohm resistor to CDS pin (that is 196 9-pin) by R-CDS, CDS connects with photoresistor "LDR", you can close detection function during the day.



Schematic:



#### **PCB Parts Identification:**



**Referance:**