PIR Motion Detector Module



Item No.: SB412A-01-013

<u>General</u>

SB412A-01 -013 is the latest digital sensor module that based on AM412 digital sensor. It only contain a fresnel lens,PCB,and a few resistance.

Features and Electrical Specification

Compact size: 18*10 mm

Supply Voltage: DC3.5V~12V Quiescent Current : ≤20uA

Voltage Output: High level signal: 3V, Standby output is 0V or Open-Collector Output

Delay time: 2.3S-80min(customized)

Blockade time:2.3S

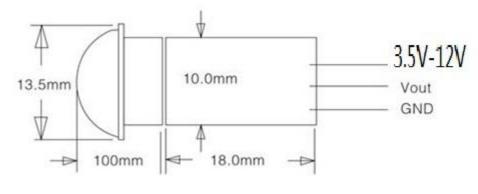
Trigger mode: Repeatable triggered Operation Temperature: $-20^{\circ}\text{C} \sim +55^{\circ}\text{C}$

Infrared sensor: dual element, low noise, high sensitivity

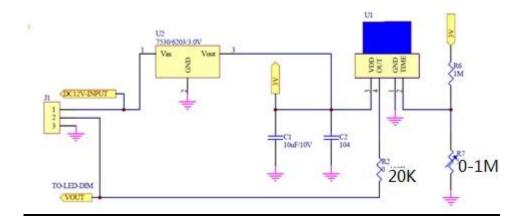
Detecting length: less than $5m(25^{\circ}C)$

Detecting Angle: ≤115°

Lens information



Schematic Diagram



Application Note

Funtions:

- 1. DC-INPUT: working voltage or input supply voltage (range is DC 3.5V~12V)
- 2. VOUT: signal output pin. Output: High level signal 3V; Standby $0V_{\circ}$ Voutput can be as same as DC-Input by adding some components
- 3. Delay time adjustment: factory setting delay time is 2-4s, can be adjusted by changing resistor(see following delay

| CE! | NBA SENSING | |
|-----|-------------|--|
| 9E) | NDA SENSING | |

time adjustment form)

Parameter Setting

1. Input voltage and Quiescent current

According to the input voltage, the current of the Module \leq 20uA:

2. Delay time adjustment

| No | On-time Voltage | On-time center Voltage | Pull-down- Resistor (Ω) | Time (Td) |
|----|-----------------|------------------------|----------------------------------|-----------|
| | (VDD) | (VDD) | (Pull-up=1M) | (sec) |
| 0 | 0~1/32 | 1/64 | 0K | 1.8 |
| 1 | 1/32~2/32 | 3/64 | 51k | 3.6 |
| 2 | 2/32~3/32 | 5/64 | 91k | 5.4 |
| 3 | 3/32~4/32 | 7/64 | 120k | 7.2 |
| 4 | 4/32~5/32 | 9/64 | 180k | 14.4 |
| 5 | 5/32~6/32 | 11/64 | 220k | 29 |
| 6 | 6/32~7/32 | 13/64 | 270k | 43 |
| 7 | 7/32~8/32 | 15/64 | 330k | 58 |
| 8 | 8/32~9/32 | 17/64 | 360k | 115 |
| 9 | 9/32~10/32 | 19/64 | 430k | 230 |
| 10 | 10/32~11/32 | 21/64 | 510k | 346 |
| 11 | 11/32~12/32 | 23/64 | 560k | 461 |
| 12 | 12/32~13/32 | 25/64 | 680k | 922 |
| 13 | 13/32~14/32 | 27/64 | 750k | 1843 |
| 14 | 14/32~15/32 | 29/64 | 910k | 2765 |
| 15 | 15/32~16/32 | 31/64 | 1M | 3686 |

------SENBA SENSING------

Note

Due to the high sensitivity of PIR sensor device, it is not recommended to use the module in the following or similar condition.

- A) in rapid environmental changes
- B) in strong shock or vibration
- C) in a place where there are obstructing material (eg. glass) through which IR cannot pass within detection area.
- D) exposed to direct sun light
- E) exposed to direct wind from a heater or air condition

Add: 2nd Floor, #D Building, Huawan Industry Zone, Gushu, Xixiang Street,

Bao'an Dist., Shen Zhen City China

Website: www.nysenba.com
E-mail: lily@sbcds.com.cn

Tel: 86-755-82591842 **Fax**: 86-755-82594762