PIR Motion Detector Module   [   ]

Item No.: SB412A-01-012

General

 SB412A-01-012   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: DC3～12V
 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℃～+55℃
 Infrared sensor: dual element, low noise, high sensitivity
 Detecting length: 3～5m
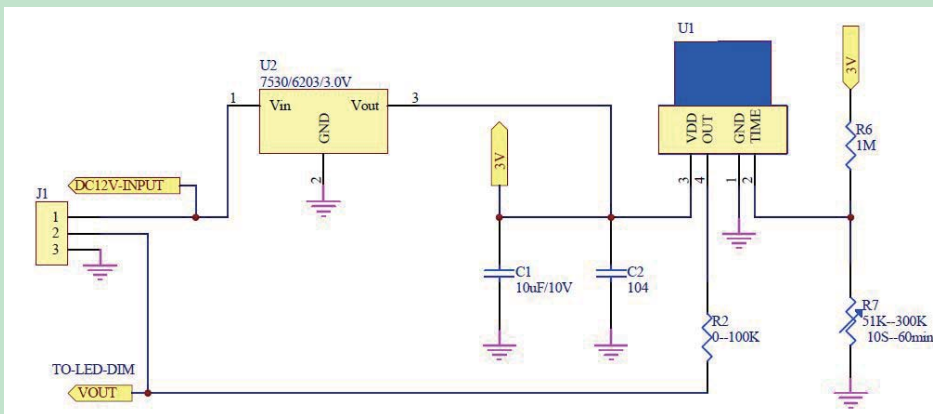 Detecting Angle:≥100°

Lens information

Lens diameter: 13.5mm (default), detecting angle≥100°, detecting range<5M.

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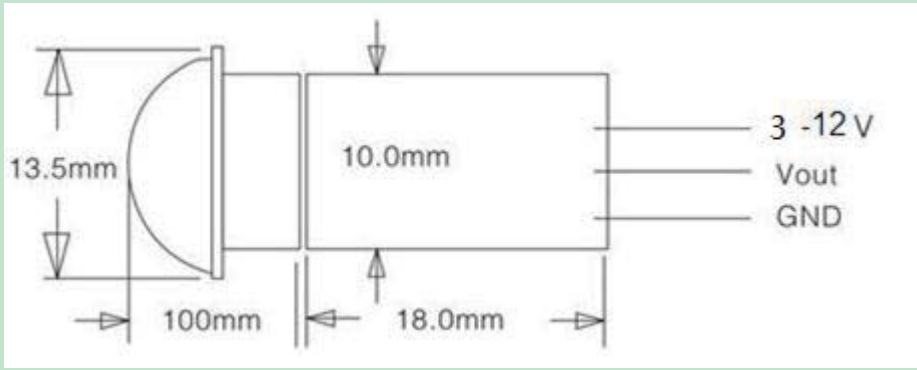
Schematic Diagram

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Application Note

Funtions:

1. DC-INPUT：working voltage or input supply voltage (range is DC 3V～12V)
2. VOUT：signal output pin. Output: High level signal 3V；Standby 0V。
       Voutput can be as same as DC-Input by adding some components
3. Delay time adjustment: the default delay time is 10s, can be adjusted by changing resistor(see following delay time adjustment form)

Parameter Setting

1. Input voltage and Quiescent current

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

2. Delay time adjustment

Step	ONTIME Center Voltage (V)	On time(s)	Voltage(V)	Pull-up resistor	Pull-down resistor
	(VDD*(Step*2)+3)/128	(Typical)	(VDD=3V)		
0	3/128 or lower	2.3	0	NO	0R
1	(VDD*2+3)/128	4.7	0.07	1M	24K
2	(VDD*4+3)/128	7	0.117	1M	39K
3	(VDD*6+3)/128	9.4	0.164	1M	56K
4	(VDD*8+3)/128	18.7	0.21	1M	75K
5	(VDD*10+3)/128	37	0.257	1M	91K
6	(VDD*12+3)/128	56	0.304	1M	110K
7	(VDD*14+3)/128	1min 15 sec	0.351	1M	130K
8	(VDD*16+3)/128	2min 30 sec	0.398	1M	150K
9	(VDD*18+3)/128	5min	0.445	1M	174K
10	(VDD*20+3)/128	7min 29 sec	0.492	1M	200K
11	(VDD*22+3)/128	9min59 sec	0.539	1M	220K
12	(VDD*24+3)/128	19min 58 sec	0.585	1M	240K
13	(VDD*26+3)/128	39min 56sec	0.632	1M	270K
14	(VDD*28+3)/128	59min25 sec	0.679	1M	294K
15	(VDD*30+3)/128 or higher	1hour20min	3	0R	NO

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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