



Pyroelectric Infrared Radial Sensor

TYPE: AS312
NANYANG SENBA OPTICAL AND ELECTRONIC CO., LTD.

Digital Smart Pyroelectric Detector AS312

AS312 is a newest smart digital motion detector with a small window size. It offers a complete motion detector solution, with all electronic circuitry built into the detector housing. Only a power supply and power-switching components need to be added to make the entire motion switch.

AS312 delay time is 2 seconds.

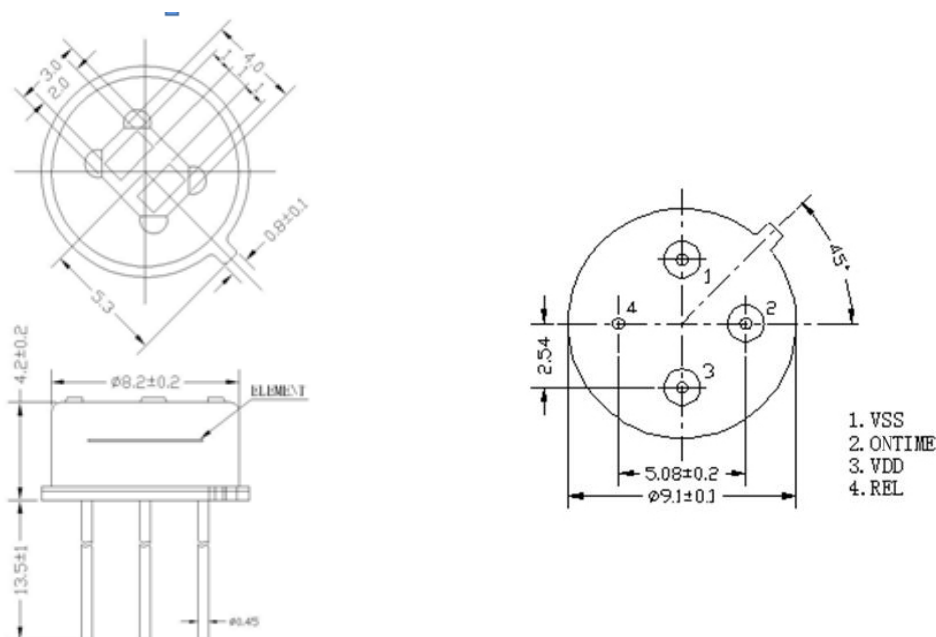
■ Features and Benefits

- Digital signal processing (DSP)
- Power adjustable, save more energy
- Two-way differential high impedance sensor input and temperature compensation
- Built-in filter, screen the interference by other frequency
- Excellent power supply rejection, Insensitive to RF interference
- Schmidt REL output

■ Application

- Intelligent appliance
- Alarms
- Motion detector
- Sensor lamp, Sensor switch
- Security system
- Automatic control etc.

■ Dimension



■ Technical Data

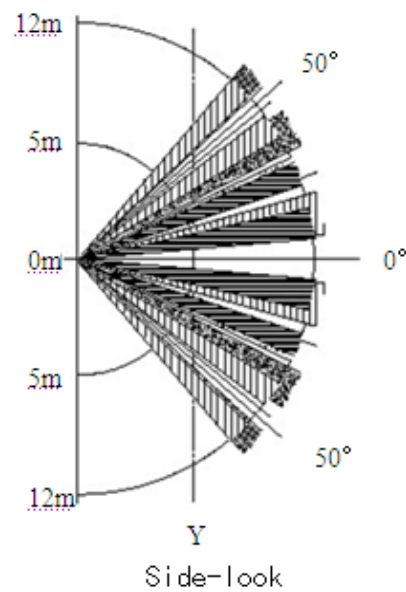
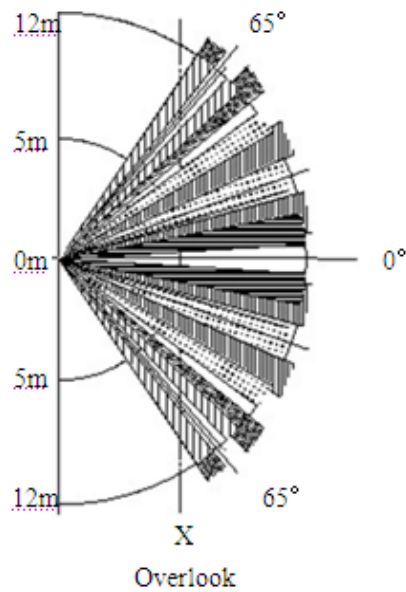
1. Maximum Ratings

Characteristics	Symbol	Min. Value	Max. Value	Unit	Remarks
Supply Voltage	V _{DD}	-0.3	3.6	V	
Working Temperature	T _{ST}	-20	85	°C	
Max.current for pin	Into	-100	100	mA	
Storage Temperature	T _{ST}	-40	125	°C	

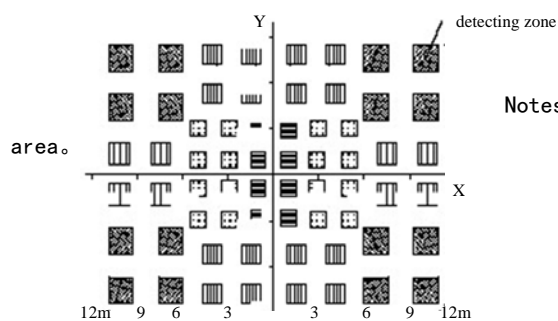
2. Working Conditions (T=25°C, V_{DD}=3V)

Characteristics	Symbol	Min.	Type	Max.	Unit	Remarks
Supply Voltage	V _{DD}	2.7	3	3.3	V	IR=0.5mA
Working Current	I _{DD}	12	15	20	μA	
Sensitivity	V _{SENS}		120		μA	It is not adjustable
Output REL						
Output Low Current	I _{OL}	10			mA	V _{OL} <1V
Output High Current	I _{OH}			-10	mA	V _{OL} >(V _{DD} -1V)
Lock time	T _{OL}		2.3		s	It is not adjustable
On-time	T _{OH}		2.3		s	
Oscillator & Filter						
Low pass filter cut-off frequency				7	Hz	
High pass filter cut-off frequency				0.44	Hz	
Oscillator frequency on Chip	F _{CLK}			64	kHz	
Interior Block Diagram						

■ **Detection View**



X-Y sectional view



- Notes:
1. X-Y sectional view represent the detecting area.
 2. Objects with temperature difference can be Detected in the vertical level.



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