

General Description

YY-MHPB is a human body detection sensor based on infrared detection. Its unique wide-angle infrared sensor can detect the presence of human bodies in most coverage areas. It has the characteristics of high detection sensitivity, rapid response and low false alarm rate. It is widely used in smart home, office and other occasions that need sedentary monitoring and reminder.

Features and Benefits

- Factory Pre-calibrated
- Low Cost And 4-Pin Common Connector Using TTL-UART Communicate
- Wide Power Supply, Low Current Consumption
- Wide Human Body Detected FOV, Up To 110 Degree
- Operating Temperature Range: 5°C To +40°C <85%RH No condensation</p>
- Storage temperature Range: -20°C To +80°C <45%RH No condensation
- Three Kinds Of Infrared Sensors Detect Accurately To Avoid False Alarm

Applications

- Office Sedentary Monitoring
- Human Body Detection

Household electrical appliances

Block Diagram



Electrical Characteristics

Symbol	Parameter	Conditions	Min.	Тур.	Max.	Unit
V _{dd}	Supply voltage		3.6	5.0	6.0	V
I _d	Working current	VDD=5.0V	8	9.6	10.2	mA
B_{speed}	UART Baudrate	VDD=5.0V	9600	115200	921600	Bps
FOV	Filed of view	Infrared thermopile	90	100(H*V)	110	٥
		PIR	100	110(H*V)	120	0
		Diode	15	20(H*V)	25	0
D	Sense Distance		50	60	85	cm

Thermometer Sensing Characteristics

Symbol	Parameter	Conditions	Min.	Тур.	Max.	Unit
T_{amb_range}	Ambient reading range	VDD=5.0V	0		60	°C
T _{amb_res}	Ambient resolution			0.1		°C
T_{PIR_t}	PIR Duration Time	VDD=5.0V	15	30		S
S_{PIR}	PIR Sensitivity(Delta amb te	mp) VDD=5.0V	1.5	3	6	°C
T _{alarm_on}	Alarm Sensitivity		1.5	3	60	S
T_{alarm_off}	Exit alarm Time		15	30	60	S

CAUTION: These devices are sensitive to electrostatic discharge; follow proper IC Handling Procedures.

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YY-MHPB Infrared Human Body Sensing Module

Sense Radar Diagram

有效距离区间
超出后无效距离

Optical Characteristics



Incident Angle of Radiation(degree)

Mechanical Drawings (Unit : mm)



Pin Definitions and Descriptions

Pin Name	Pin No.	Туре	Description
VDD	1	Source	Power Supply
UART-TX	2	TTL-3.3V	UART Output
UART-RX	3	TTL-3.3V	UART Input
GND	4	Source	Power Ground

Revision History

Revision Number	Release Date	Description
V1.0	2021/11/28	Initial Release

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