ZigBee™- Motion Detector

Datasheet

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Fig. 1 ZB11 Appearance

Introduction

ZB11 is an infrared motion detector based on ZigBee wireless technology. ZB11A acts as an End Device in the network. It does not perform permit-join function as a coordinator or a router for other devices to join the network. When ZB11 detects a movement, it reports the message to the network for specific task.

There are four different models depending on hardware functions:

	Tamper switch	Light sensor	Temperature sensor
ZB11A	V		
ZB11B		V	
ZB11C	V	V	V
ZB11D			



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Main property

- 1. Sensing angle- horizontal: 110°; vertical: 60°
- 2. Mechanical rotating angle: 40°
- 3. Built-in serial communication capacity FLASH memory AT25DF041, 4Mbit.
- 4. Tamper switch / light sensor / temperature sensor available.
- 5. Motion detection sensitivity: $\geq 0.2(M)/(S)$, alarm will be triggered.



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Electrical property

Power supply	2 x ER14505 3.6V AA batteries
Voltage	3.6V
Working current	45mA (Max.)
Stan by current	100uA (Max.)

Frequency property

Frequency	2.4 — 2.4835 GHz
Channel number	16 (ISM $11^{th} \sim 26^{th}$)
TX power	7dBm (Max.)
Antenna type	Build-in antenna
Communication rang	120m
Rx sensitivity	-101dBm
Data transfer rate	250Kbps
Spread technique	DSSS (O-QPSK)

Physical property

Dimension	125 mm*80 mm*89 mm
Humility	<95%RH
Working Temp.	-10°C ∼ +50°C
Storage Temp.	-40°C ∼ +85°C

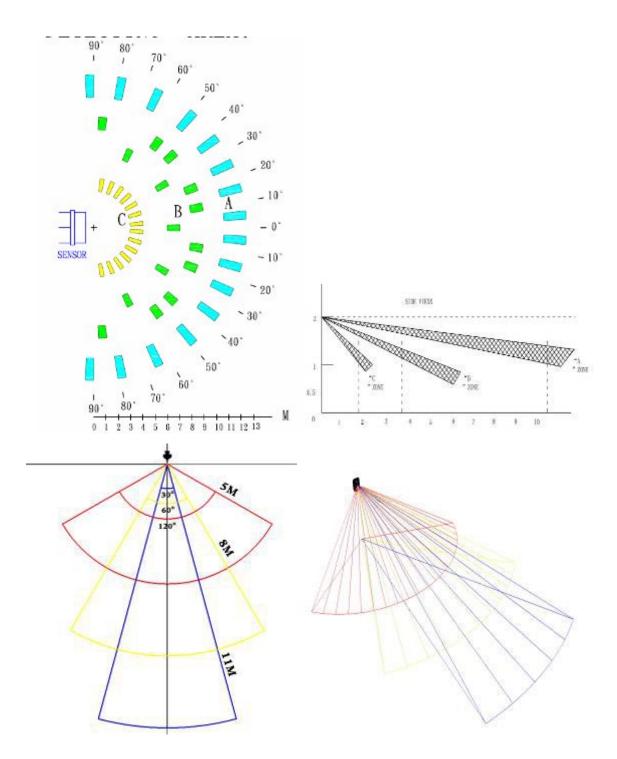
Sensing range

Mounting height	2 to 2.2 meters from ground level
Mounting angle	Incline 15 degrees to the ground
Sensing angle	110°
Sensing distance	2 meters to 12 meters



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IR coverage range:



The coverage area A- Distance: 11 meters; sensing angle: 30°.

The coverage area B- Distance: 8 meters; sensing angle: 60°.

The coverage area C- Distance: 5 meters; sensing angle: 110°.