

Shenzhen Merrytek Technology Co., Ltd

Application Specification

Product:	Zigbee LifeBeing Sensor
Model No.:	MSA035-Z1
Date:	July 16 th , 2020

1. Product Feature



The sensor is a combined Tuya 2.4GHz Zigbee module and Merrytek breathing detecting microwave module.

It can accurately detect achieve any human motion including walking, typing and even breathing to achieve the real presence detection.

Compatible with Tuya IOT platform and linked with the units in the platform.

2. Specification

Input	Input Range	108-305V AC, 50Hz/60Hz
	Rated Input	120-277V AC, 50Hz/60Hz
	Surge	L-N: 1kV
Output	Sensor Mode	Lifebeing Sensor, Daylight Sensor
	Communication Mode	Zigbee 3.0
Sensor	Working Frequency	5.8 GHz \pm 75 MHz, ISM band
	Transmitting Power	0.5mW Max.
	Detection Area(Radius)	20%/40%/60% /80% /100%, set by Tuya App
	Daylight Detection	Monitoring ambient lux level and reporting every 30sec. Immediately report if lux abruptly change. Lux change value can be set in App.
	Master-slave control	Two LifeBeing sensors can control the same group of lighting..
	Detection range(R)	Motion/Minor Motion: 4-5m Breathing detecting:3-4m
	Mounting Height	2.5-3m
	Detection Angle	360° (ceiling mounting)
Environment	Operating Temperature	-25℃...+60℃ humidity: 85% (Non-condensing)
	Storage Temperature	-35℃...+80℃
Approval	Environmental Requirement	Comply with RoHS directive

Standards	Certificate	CE
Others	Wiring	Press-in Type Terminals, wire diameter: 0.75-1.5mm ²
	IP Rating	IP20
	Protection Class	Class II
	Installation	Flush mounted
	Dimension	Cut size: Ø70-Ø80
	Package	Small white box+Clapboard+Carton(K=A)
	Warranty	5-year warranty @Ta 230V full load

Note:

1. "N/A" means not available.
2. Detection area is effected on volume of motion object and motion speed. The detection area is tested by a 165cm height person and walking speed is 0.5m/s.

3. Product Function

Instructions of signal detection: the sensor detects human walking, slight motion(such as body movement, turn up head and others minor movements) and breathing to realize the detection of human existence in non-sleep state.



Movement signal active



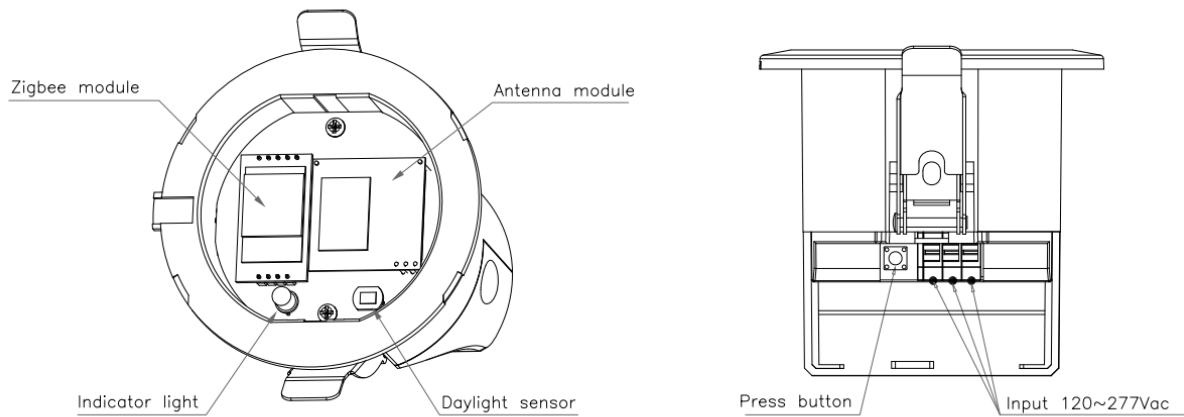
Slight motion



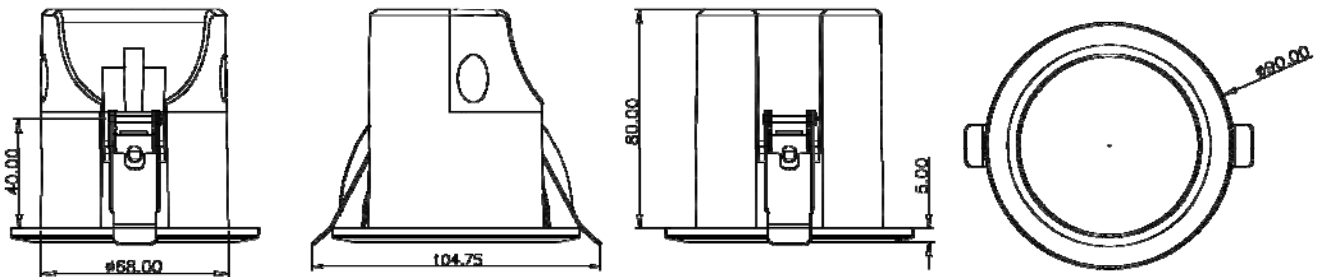
Breathing

- * Movement signal: Big movement for sensor triggering
- * Slight motion signal: very small movement even only body motion can be collected , the indicator flashes once.
- * Breathing signal: when no slight motion signal, only breathing signal can be collected ,the indicator flashes for 3 times by detecting 3 effective breathing signals.

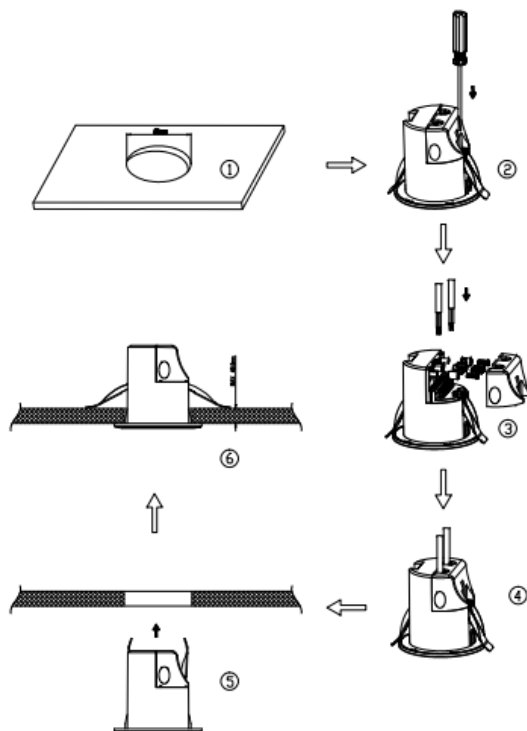
4. Structure



5. Dimension (mm)

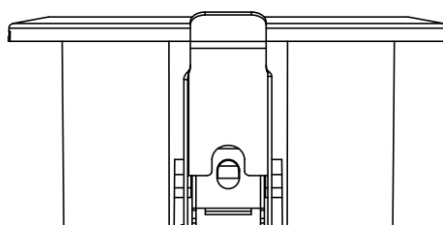


6. Installation

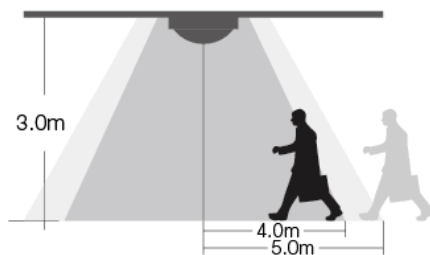


1. Cut hole $\phi 70-80\text{mm}$ for ceiling mounted
2. Open cover by small straight screw
3. Loosing clamp and wiring(see 7 wiring)
4. Screw clamp and put the cover.
5. Open spring clip outward and install.
6. Adjust and make sensor flat with ceiling.

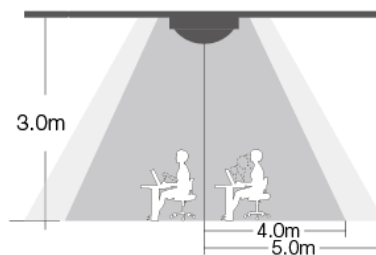
7. Wiring



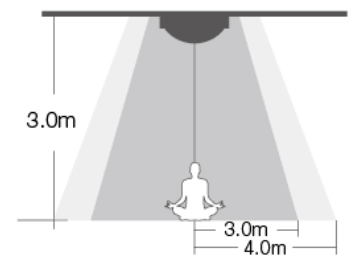
8. Detection Area



■ Movement Detecting
Speed 0.3m/s



■ Minor Motion Detecting



■ Breathing Detecting

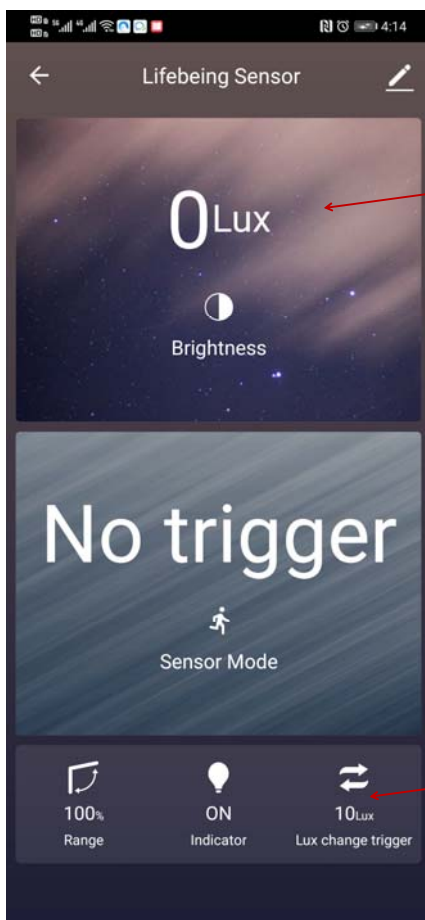
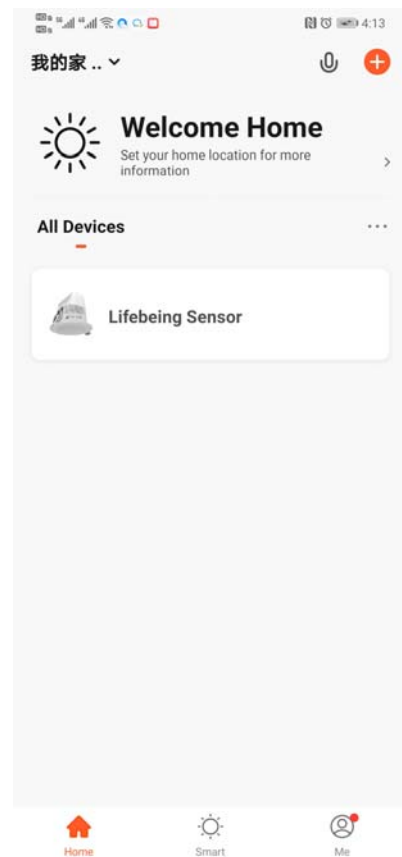
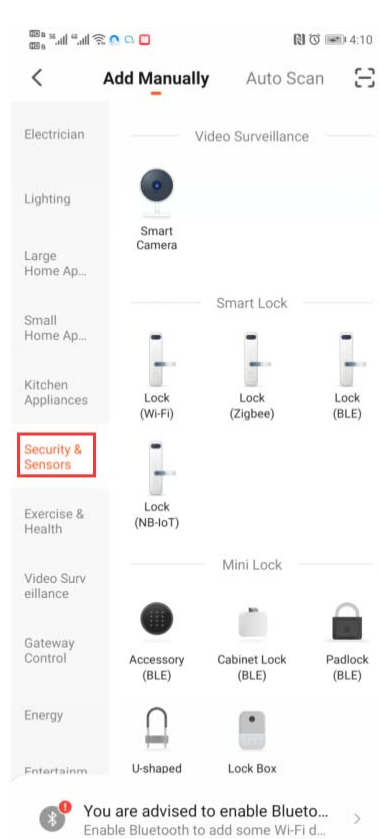
9. Function Setting

Down load Tuya smart Aapp.

Tuya Smart

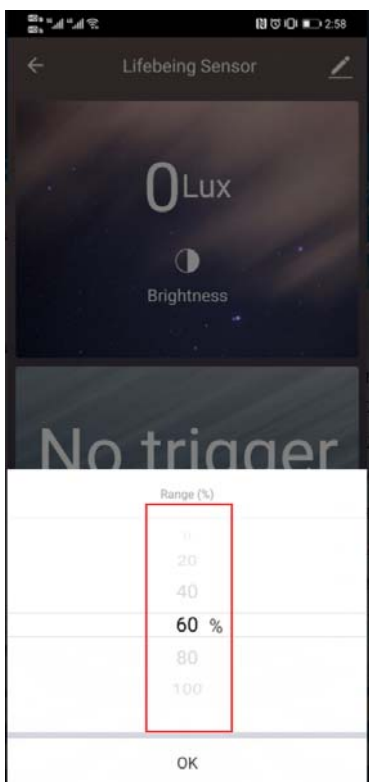
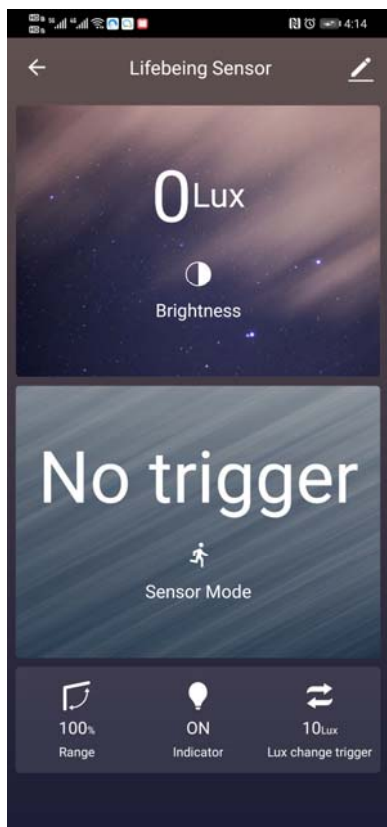
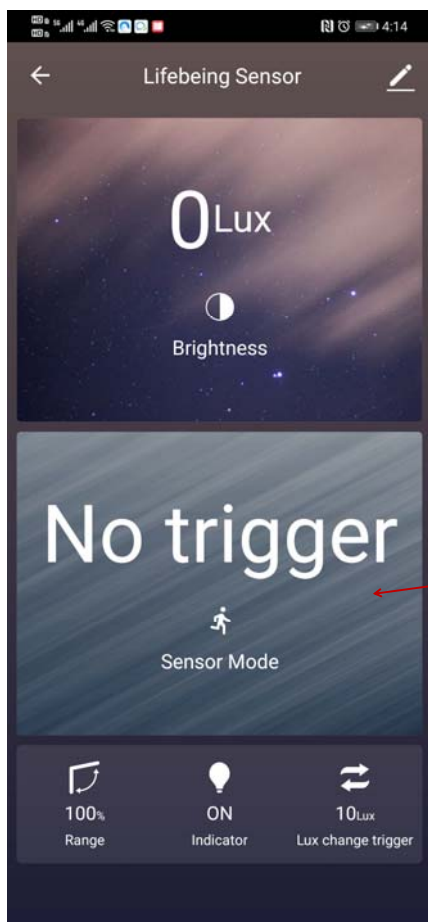


Select Merrtyek Lifebeing Sensor in Tuya App

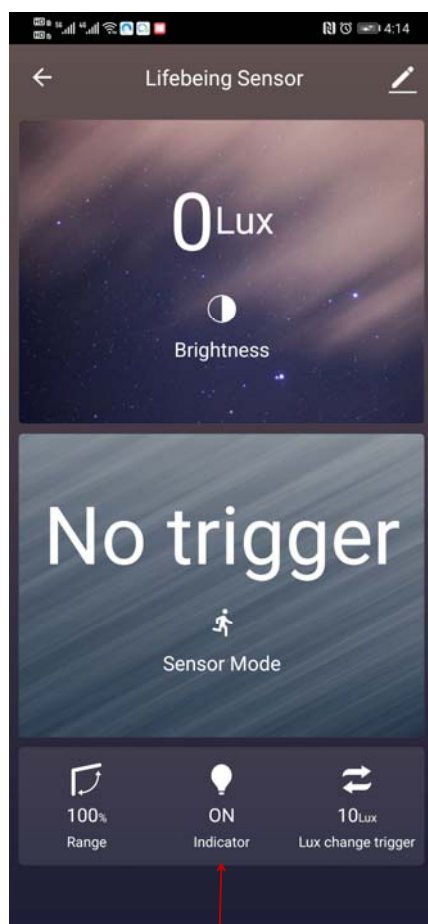


Ambient light level, report every 30sec. Immediately report if lux abruptly change.

Lux change step setting,
10lux, 20lux,...100lux



Detection sensitivity setting: 100%, 80%, 60%, 40%, 20%.



Switch on or off motion detecting indicator.