

Specification

Product series: Low-mounting PIR motion sensor (Casambi+DALI version)

Product model: MSA246 IR B1(order sku: 313921002)

Product version: V1.0

Version	Release Date	Record	Publishing
V1.0	2026.4.25	Initial version	Jacky

【Product description】

MSA246 IR B1 is a low-mounting PIR motion sensor with daylight detection function and casambi wireless communication. Combined with the unique software algorithm of Merrytek, it can accurately detect human movements in almost all scenario lower than 4m mounting to trigger smart scene application.

【Product Feature】

- PIR motion detection
- Connect to casambi BLE ecosystem
- Accurate motion detection with one channel DALI output and casambi communication
- Daylight sensor detection available
- Detection area,hold time can be set by casambi app
- Max detection range: 8-10m in diameter
- 2.5-6m mounting height
- Multi-profile switch available
- Private office,open office,conference motion detection highly recommended
- Flush mounting and surface mounting(need buy extra surface mounting kit) available
- 5 years warranty

CASAMBI



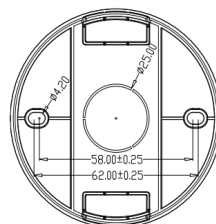
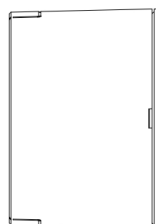
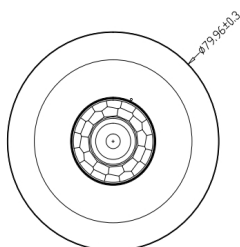
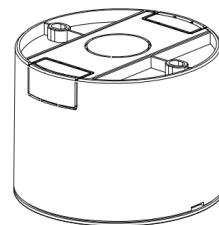
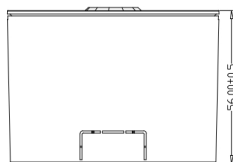
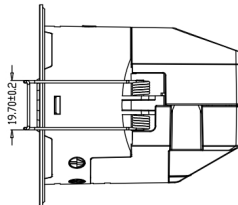
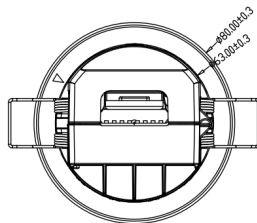
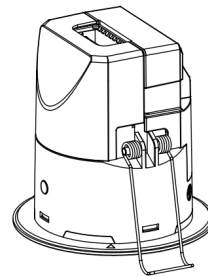
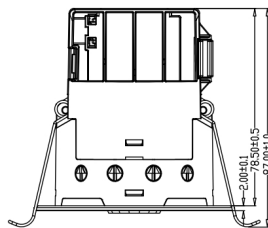
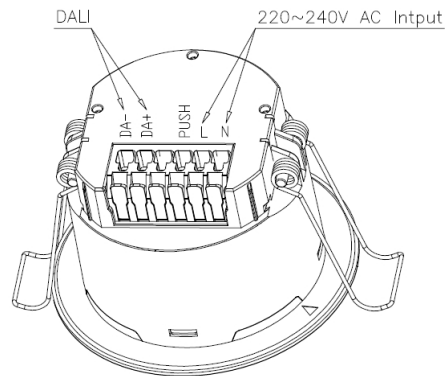
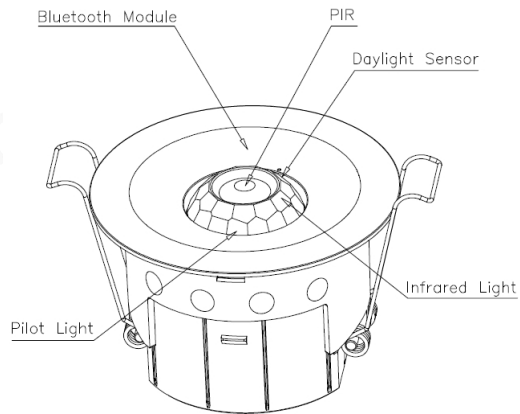
【Dimension】

- Product size: $\phi 63$ (internal diameter) $\times 80.5$ mm/ $\phi 80$ (external diameter) $\times 80.5$ mm
- Connection interface: 6-pin terminal

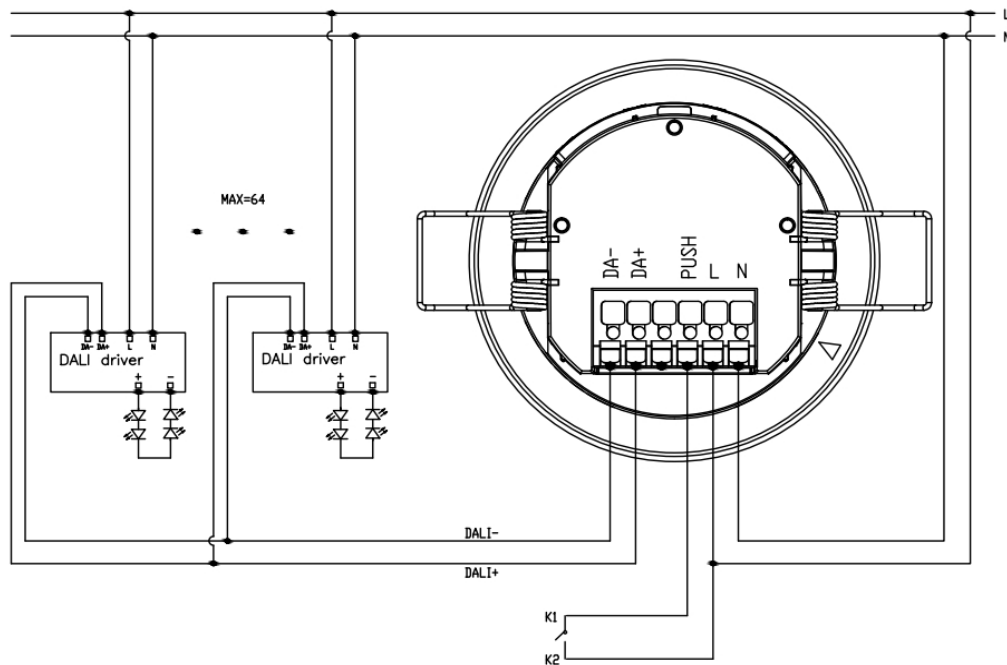
【Parameter】

Input/Output	Input voltage	220-240V AC
	Rated voltage	230V AC
	Working current	20mA max
	Power consumption	≤0.5W @230V AC
	Output signal	DALI+Casambi BLE
Sensor parameter	Function	PIR motion detection+ daylight sensor
	Detection Area	Casambi app setting: 100%/75%/50%/25%
	Sensor Hold Time	Sensor fixed hold time 2s+Casambi app setting linger time
	Daylight Sensor value	0-1200lux
	Radius detection range(based on 100% sensitivity)	3m height installation: tangential movement at 1m/s speed: 4-5m @25℃ radial movement at 1m/s speed: 2-3m @25℃ 6m height installation: tangential movement at 1m/s speed: 4-5m @25℃ radial movement at 1m/s speed: 2-4m @25℃s
	PUSH control	Available
	APP control	Available(casambi app)
	Mounting height	2.5-6m, typical value: 3m
Application environment	Drill hole	Φ65mm
	Working temperature	-25℃...+50℃(detection range might differ based on different temperature)
	Storage temperature	-25℃~+50℃,humidity≤60% (non-condensation)
	Warranty	5 year (available based on product quality under indoor application)
Certificate Standard	Certificate	Compliant to CE
	Environmental requirements	Compliant to RoHS
	IP rating	IP20(flush mounting)
"N/A" means not available		

【Dimension and Function diagram】



【Wiring instruction】



Wiring layout suggestion:

1. LN terminal stands for AC input, PUSH stands for push output, DA+ DA- stands for DALI output, please wiring correctly
2. Casambi bluetooth communication range is 40m in open area, if there's wall or other obstacle, communication range might shorten.
3. DALI terminal output broadcast signal and max access dali driver quantity shall not exceed 64pc

【Initialization】

When powered on, sensor indicator will turn off after flashing for 35s and will not detect moving signal during this time.

After 35S, you can use our casambi app to adjust detection area, hold time and daylight sensor etc parameter.

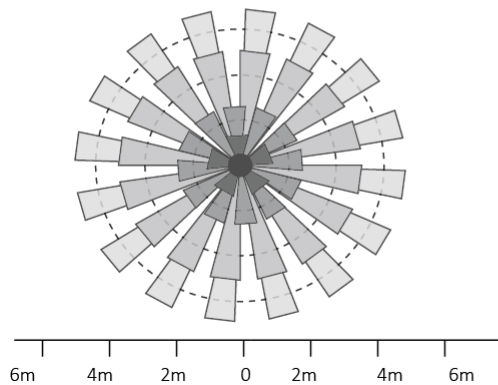
【Factory setting】

Detection Area: 100%, Sensor Hold Time: 2s, Indicator: ON

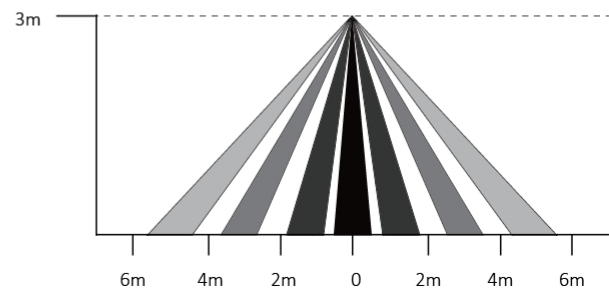
【Detection radiation】

MSA246 IR B1 is highly recommended ceiling flush mounting and its detection radiation based on 3m height is as below shows:

Top View



Side View



【Detection Signal】

The product detects human moving signals and below is a description of the moving signals:

- **Major motion signal:** detect the human significant moving (walking) in the detection area.



Major motion



Minor motion



Micro motion

【Casambi APP setting】

< 返回 MSA246 IR B1

名称 MSA246 IR B1

图标 点击以设置 >

供应商 Shenzhen Merrytek Technology Co Ltd

样式 MSA246 IR B1 >

详情 >

人体存在感应器

有人/无人 >
开灯 → 关灯 [00:00]

已启用 ☒

控制检测到有人或无人时的状况。

日光感应器 94 lux >

已启用 ☒

感应器测量亮度级，日光关联场景可配置为遵循感应器组，以自动调整相关灯具的亮度。

参数

Indicator ON >

Coverage range 100% ?

【Application tips】

1. Our sensor shall be installed by professional electrician under power-off state
2. Our sensor's typical installation is 3m high for indoor use only. And it's strongly suggested installed far away from hot or temperature-change-fast area to avoid false trigger
3. To ensure normal detection, there shall be no big object within our sensor's detection area because our sensor can't detect by penetrating object
4. There shall also no strong-reflect object, wifi router, microwave oven etc before our sensor to avoid false trigger
5. Our sensor's detection area function is based on 25°C environment temperature, when environment temperature is higher/lower than this temperature, our sensor will be dull/sensitive, such the detection area will be shorter/longer
6. Our sensor's detection area function is based on tangential movement, and become short if you test by radial movement due to PIR character

【Disclaimer】

Due to the complexity of product technology and differences in application environment, it is difficult to guarantee a completely accurate or complete description, so this specification is only for user reference. We will reserve the right to make changes to the product specifications without notifying the user, and do not make any commitments and guarantees in the legal sense. At the same time, our company encourages users to supplement or modify the contents of our specifications after using our products.