

Specification

Product series: Low-mounting microwave motion sensor (DALI 2.0 version)

Product model: MSA055

Product version: V1.0

Version	Release/ change Date	Publishing
V1.0	2023.03.22	Jacky

【Product Description】

MSA055 is a 5.8GHz microwave sensor with high antenna gain and wide sensing range. Combined with the unique software algorithm of Merrytek, it can accurately detect human movements in almost all indoor spaces to trigger smart scene application by DALI communication in smart homes, smart hotels, and smart offices.

【Product Feature】

- Merrytek patent high gain 5.8GHz microwave antenna technology
- Accurate human motion detection
- Daylight sensor detection available
- Support DALI 2.0 communication
- DALI bus power available
- In accordance with 101,103,303,304 protocol under IEC62386
- Detection area,hold time can be set by remote control
- 6-8m max diameter detection range based on 3m installation
- Surface/Flush mounting available
- Circle radar radiation to eliminate blind sense angle
- Low RF power output. No harm to human health
- Not affected by temperature, humidity, noise, airflow, dust, light and other environments



【Product dimension】

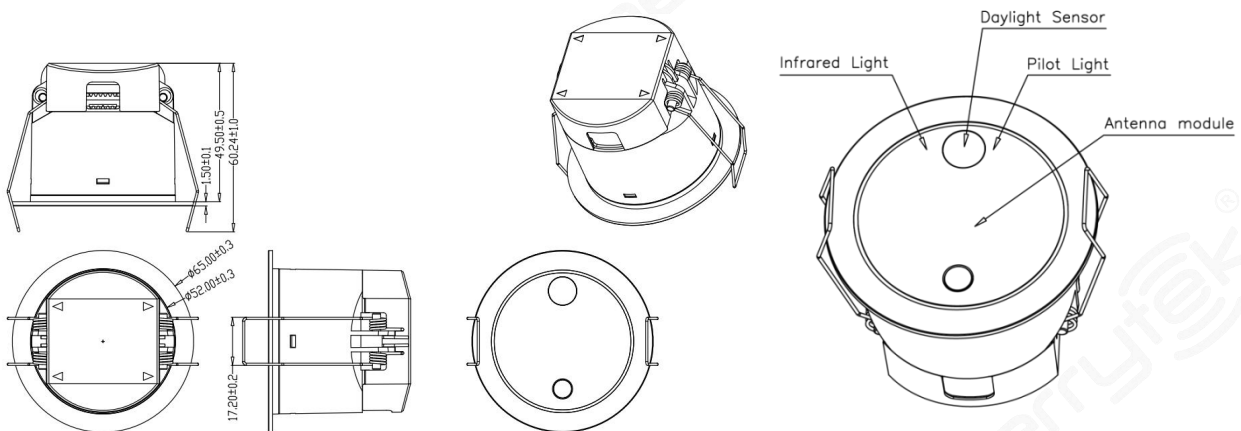
- Dimension: $\phi 65 \times 49.5 \text{mm}$
- Terminal: 2pin terminal

【Parameter】

Input/Output	Input voltage	DALI bus power
	Working Current	13±1mA
	Communication	DALI bus communication
Sensor Parameter	Radar Frequency	5.8GHz±75MHz, ISM band
	Radar transmit power	5mW Max
	Detection Sensitivity	MH10 remote setting: 100% 75% 50% 25%
	Hold Time	5S(fixed)+1s -30min(DALI master setting)
	Daylight Sensor	0-1200Lux
	Radius detection range(based on 100% sensitivity and 3m mounting)	4-5m
	Remote control	Available
	Mounting height	2.5-4.0m typical value:3m
	3dB beam angle	90° (horizontal) 95° (vertical)
Application Environment	Drill hole	Φ55mm
	Working Temperature	0℃...+50℃
	Storage Temperature	-40℃~+80℃
Certificate Standard	Certificate	CE/FCC/RED
	Environmental Requirement	Compliant to RoHS
	IP Rating	IP20

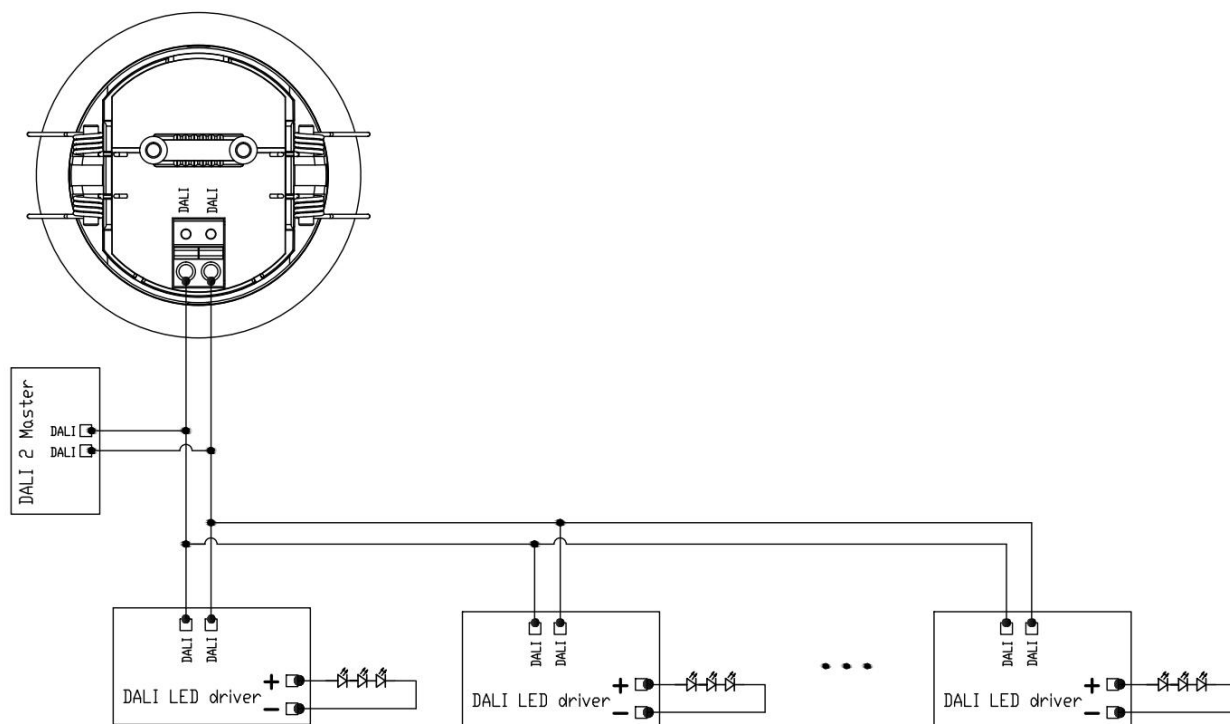
Note: "N/A" means not available.

【Dimension and Function diagram】

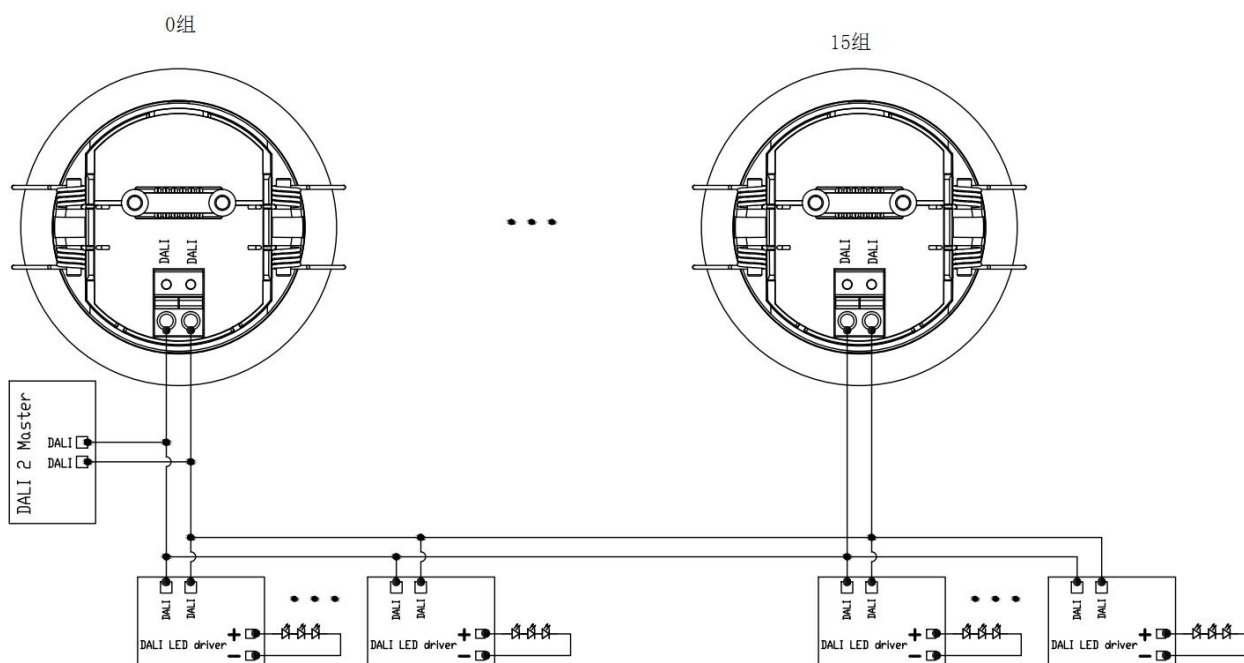


【Wiring instruction】

Broadcast mode



Group control mode



Remark: we recommend no more than 6pc sensor in a 250mA-circle to avoid communication problem due to insufficient loading problem

【Initialization】

When powered on, sensor indicator will turn off after flashing for 10S and will not detect moving signal during this time. After 10S, you can use tuya APP to adjust detection area and hold time.

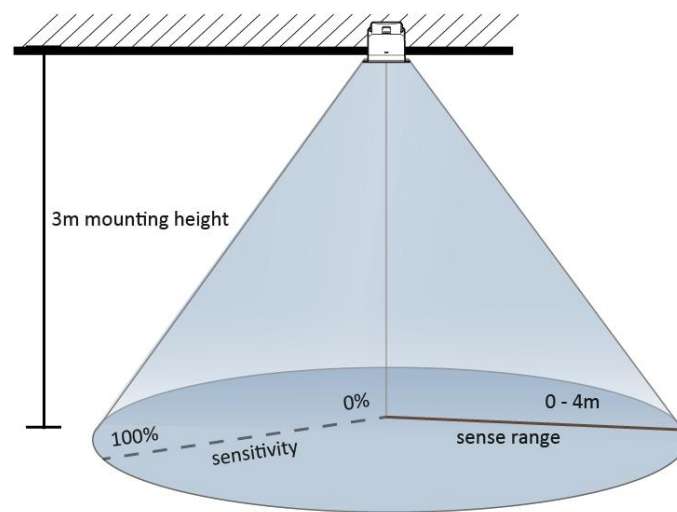
【Factory setting】

Detection Sensitivity : 100%

Hold Time : 5S

【Detection radiation】

MSA055 is highly recommended flush mounting and its detection radiation is as below shows:

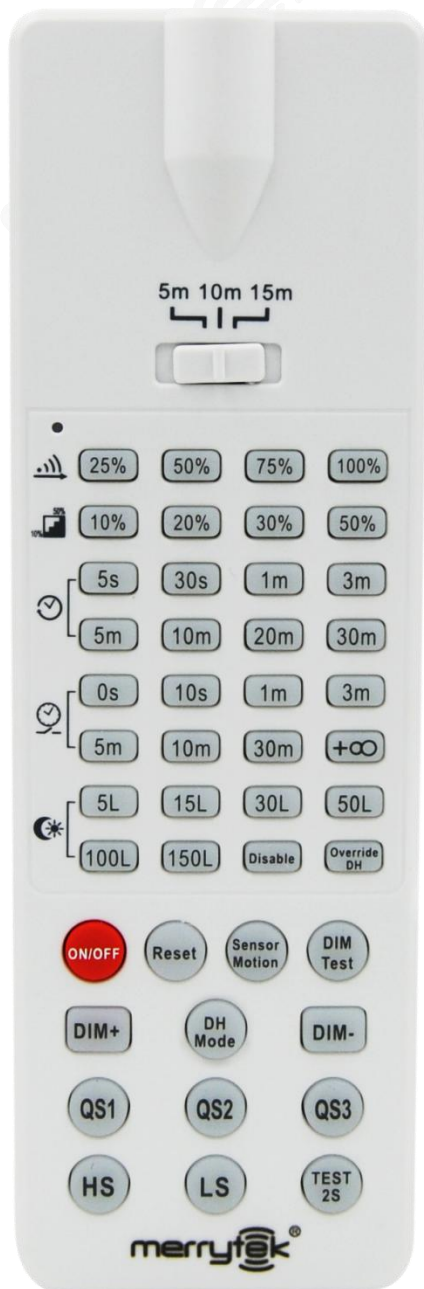


【Detection Signal】

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

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

【Remote manual】



Detection range: 25%/50%/75%/100%

Hold time: 5s/30s/1min/3min/5min/10min/20min/30min

Daylight threshold: 5lux/15lux/30lux/50lux/100lux/150lux/Disable

ON/OFF: disable sense function

Sensor motion: enable sense function

Reset: all parameter back as factory setting

QS1/QS2/QS3: High/Medium/Low sensitivity setting

HS: turn on indicator

LS: turn off indicator

【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.