

Specification

Product series: Low-mounting PIR motion sensor (KNX version)

Product model: MSA070K IR

Product version: V1.0

Versions	Release Date	Record	Publishing
V1.0	2026.6.24	Initial version	Jacky

【Product description】

MSA070K IR is a 35mm cutting hole super mini PIR motion sensor with daylight detection function. Combined with the unique software algorithm of Merrytek, it can accurately detect human movements in almost all indoor spaces to trigger smart scene application in smart home, smart hotel, and smart office by KNX bus communication.

【Product Feature】

- PIR motion detection
- Accurate major motion detection
- Daylight sensor detection available
- Detection area, hold time can be set by remote
- Max detection range: 8-10m in diameter
- KNX bus power and communication
- Hallway and Toilet motion detection highly recommended
- Flush mounting available
- 35mm cutting hole super mini size for perfect ceiling concealed mounting



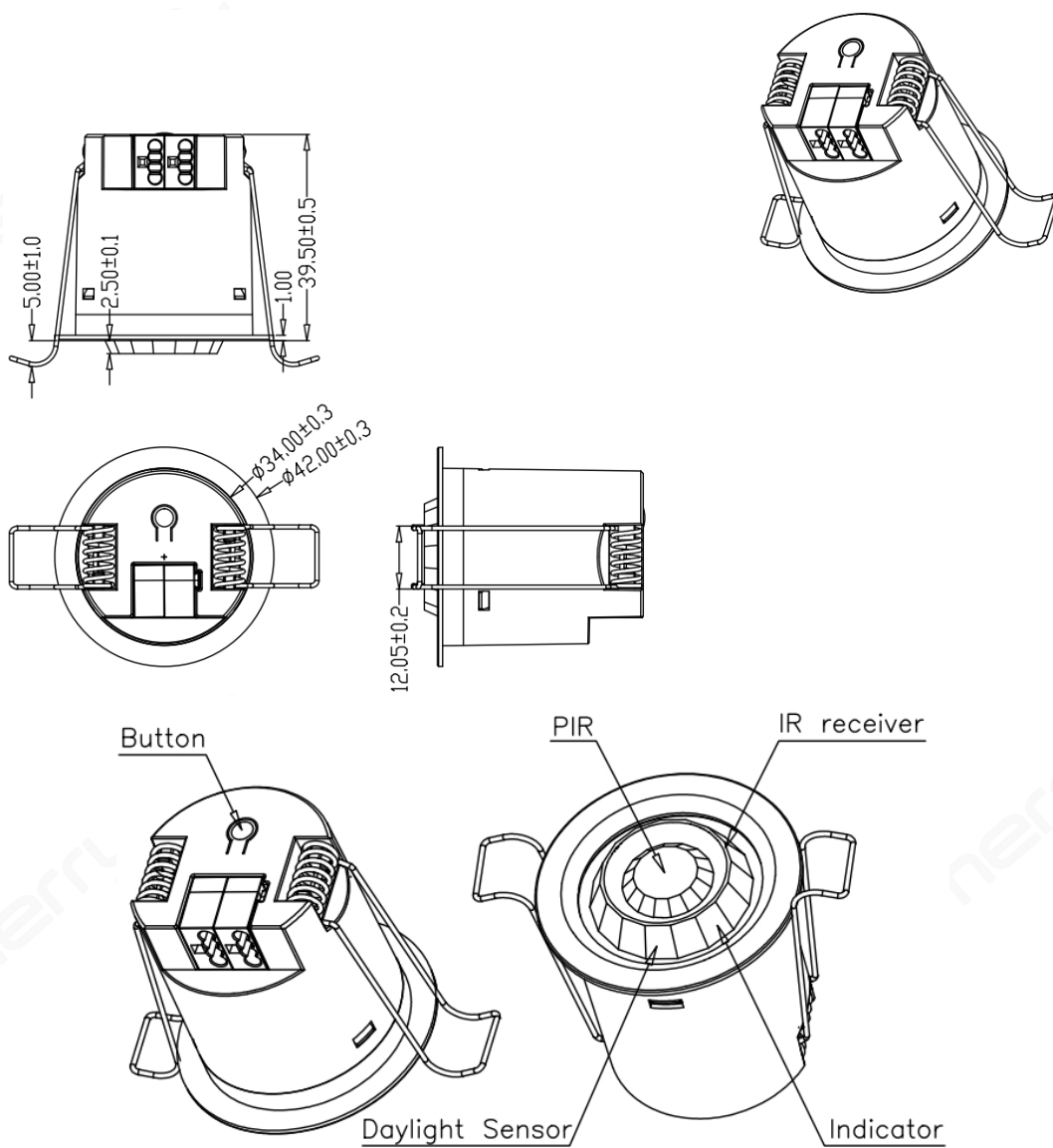
【Dimension】

- Product size: $\phi 34$ (inner diameter) $\times 40$ mm/ $\phi 42$ (external diameter) $\times 40$ mm
- Connection interface: 4-pin KNX bus terminal

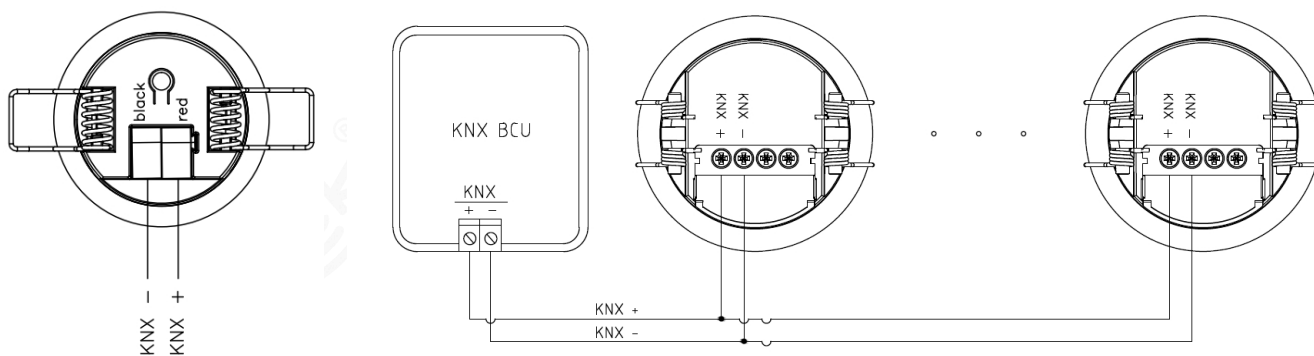
【Parameter】

Input/Output	Input voltage	21-30V DC KNX BUS power
	KNX terminal current	≤10mA
	Power consumption	≤0.5W
Sensor parameter	Function	PIR motion detection+ daylight sensor
	Detection Area	ETS setting: 0%-100%
	Hold Time	5-7200s
	Radius detection range(based on 100% sensitivity)	Tangential moving based on 3m high installation: 4-5m @25℃ (radial moving detection range will shorten)
	Remote control	Available
	Mounting height	2.5-4m typical value:3m
Application environment	Drill hole	Φ35mm
	Working temperature	-25℃...+50℃(detection range might differ based on different temperature)
	Storage temperature	-40℃...80℃ humidity ≤85% (non-condensation)
	Warranty	3 years (available due to product quality problem under indoor application)
	Wire standard	EIB wire,Stripping length: 7-8mm
Certificate Standard	Certificate	Certificate
	Environmental requirements	Environmental requirements
	IP rating	IP rating
	Product class	Class II
"N/A" means not available		

【Dimension and Function diagram】



【Wiring instruction】



Wiring layout suggestion:

1. KNX bus wiring suggestion hand in hand to the end, star or tree wiring is not recommended to ensure the stability of signal transmission.
2. KNX bus wiring wire recommends KNX standard EIB shielded wire or Category 6 network cable, the length of the bus wiring is recommended not to exceed 400 meters, and the number of sensor connected to a bus is recommended to not exceed 12.
3. The number of sensors connected to a bus needs to fully consider the current load capacity of the power supply: that is the sum of the currents of all KNX devices (including sensors) shall not be greater than the load current of the KNX power supply.

【Start Process & Initialization】

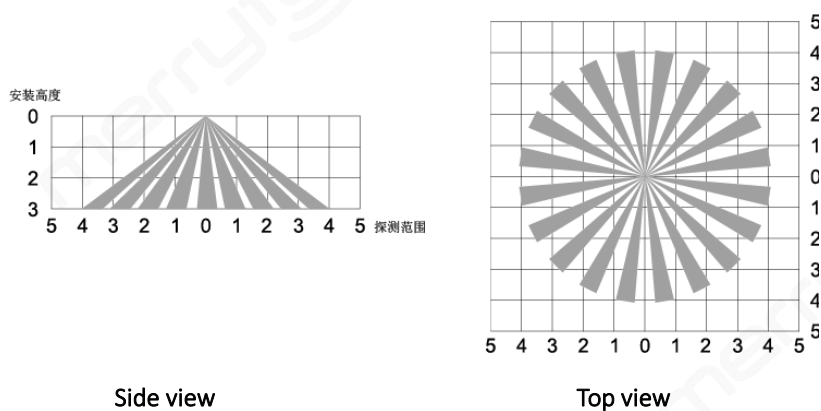
After routing the physical addresses and setting the channel parameters, follow these steps:

- (1) Connect Bus interface;
- (2) Set Bus and auxiliary power on (note: please make sure that product has auxiliary power supply, otherwise the device may not work properly);
- (3) Press the programming switch of the product, the LED light will turn red;
- (4) Use the bus interface to download the physical address through the ETS software. The programming LED light is off to indicate that the physical address download is successfully completed;
- (5) Download the application after setting the required application parameters.
- (6) After downloading the application, the product goes into initialization. During initialization, detection function is disable. After 45s, the initialization is completed, and the product works normally;

Note: Please use the latest version of ETS 5 or 5.7.2 version. Please obtain the ETS engineering configuration file of this sensor from our sales staff.

【Detection radiation】

MSA070K IR is highly recommended ceiling 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.

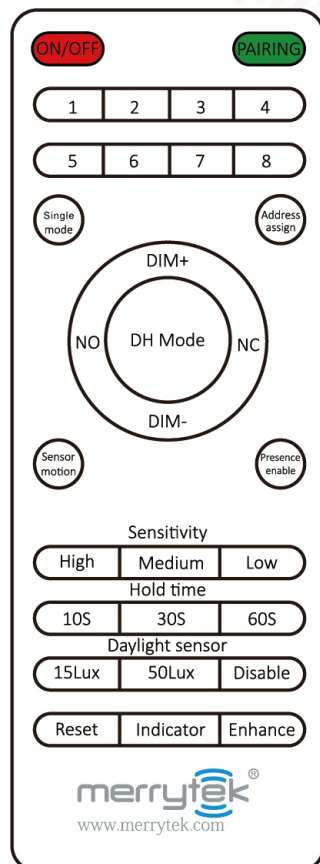


【Application tips】

1. Our sensor shall be installed by professional electrician under power-off state
2. Our sensor support 4m high installation 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℃ 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

【Remote manual】

MH18 remote



Detection range:

1=30%,2=40%,3=50%,4=60%,5=70%,6=80%,7=90%,8=100%

DIM+:short press to disable sense function

Hold time: short press to switch 10s/30s/60s

Daylight sensor threshold: short press to switch 15lux/50lux/disable

Reset: all parameter back as factory setting(5s hold time and 100% detection range)

Indicator: short press to open indicator,long press to close 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.