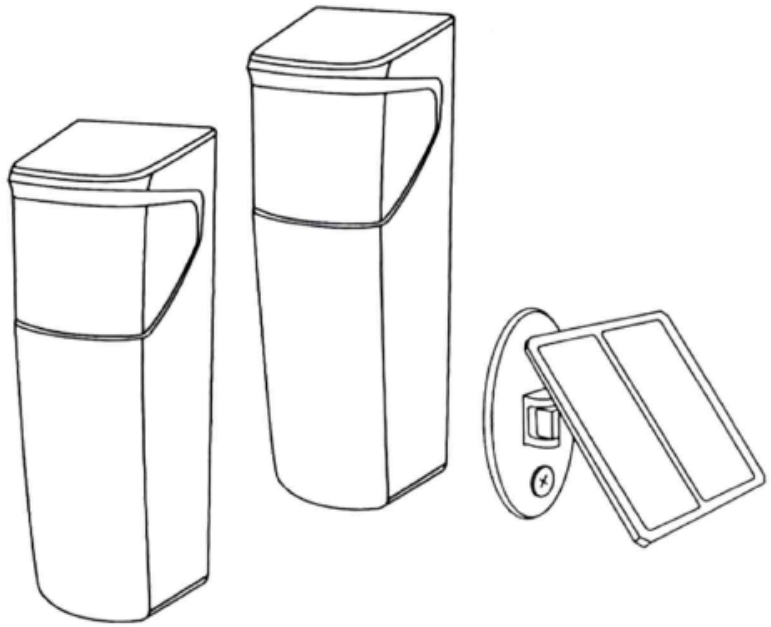
ALTECH

YOUR KEY TO AUTOMATION

HW-09

Solar Photocell Sensor
USER MANUAL



NOTES

SPECIFICATIONS

1 Transmitter

Working voltage	DC 3.2V
Working current	Transmitter: ≤ 200uA
Operating distance	12M
Operating temperature	-20℃~+70℃
Protection class	IP45
On/activate and off/inactivate could be set through jumper on transmitter.	

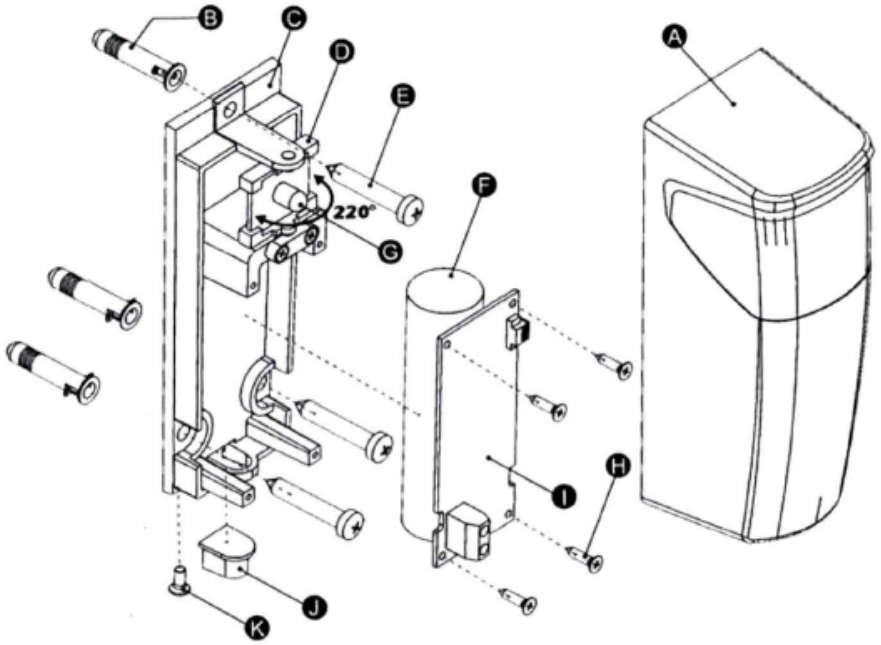
2 Receiver

Working voltage	AC/DC 12-24V
Working current	≤ 10mA
Standby current	≤ 60mA
Operating temperature	-20℃~+70℃
Protection class	IP45
N.C. or N.O. mode could be set through Jumper on receiver	

3 OPTIONAL sun solar panel

Solar cell	monocrystalline silicon
Overall dimensions	60*60*2.5mm
Working voltage	DC 3.2V
Working current	90mA

HOW TO FIT THE PHOTOCELLS



- A Outer shell
- B 3*expansion pipe to wall
- C Bottom shell
- D 220 degree rotating panel
- E 3*Fixing screws to wall
- F 18650 lithium battery 3.2V
- G Tranimitter end
- H 4*Fixing screws to transmitter panel
- I Tranimitter circuit board
- J Support for bottom shell
- K Fixing screws to transmitter shell

HOW TO ALIGN THE PHOTOCELL

Taking Fig 1 as a reference, loose screws so that the printed circuit rotating part can be rotated.Turn the circuit and align the transmitter with the receiver.
A perfect alignment is therefore required on the entire stroke of the gate/door.
Fig. 9 shows the correct assembly of the device.
Fig. 10 shows an incorrect assembly.

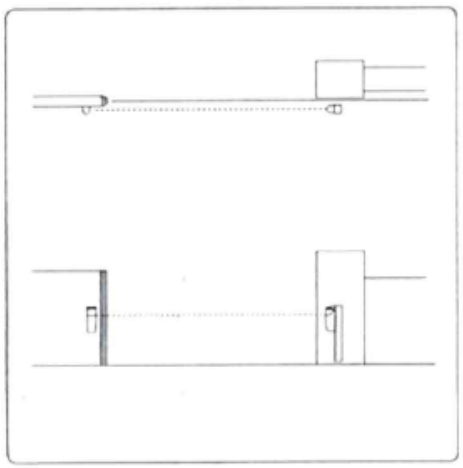


Fig 8

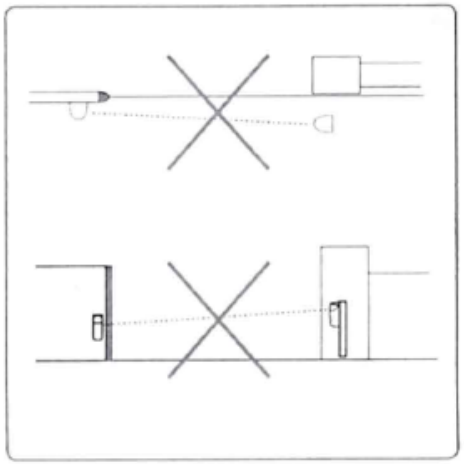


Fig 9

HOW TO REPPLACE THE BATTERY

Remove the screws H and board I(please refer to Fig 1). The battery is at the back of the board(ref. F), and it is kept in the correct position by a plastic box. Disconnect the battery and replace it. Reconnect the wire connections. Carry out a new alignment as shown in the paragraph "how to align the photocell".

IMPORTANT NOTES

For a correct operation of the device, the instructions here under should strictly followed.

1. The solar panel must be installed in a sunny position.
2. Check out during the day the panel is not in shadow(trees, buildings, etc).
3. Periodically clean the solar panel from dust and dirt.

Used as normal infrared photocell sensor(swing gate)

It allows to remarkably simplify and reduce the length of underground wires. Specially useful to complete already existing installations or if the floor cannot lifted for wiring.

2nd situation (Fig 7)

1. HW-09 transmitter.
2. HW-09 receiver, connected to the control unit.
3. Solar panel, it provides for the recharging of the transmitter battery.
4. Control unit.

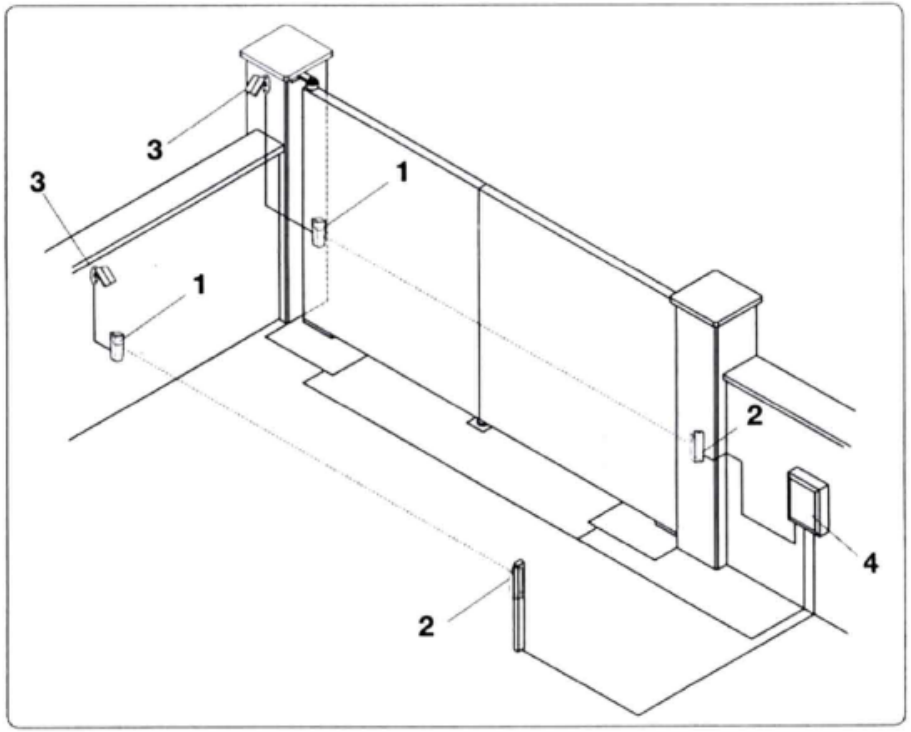


Fig 7

TERMINALS INTRODUCTION ON PANEL

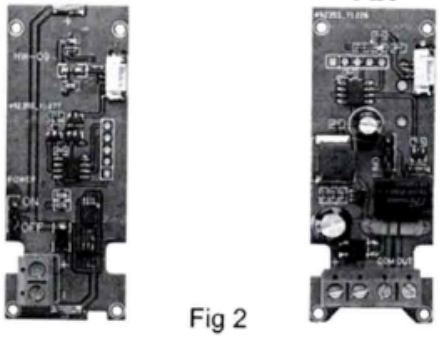


Fig 2

Tx

+ is for solar panel red wire, - is for solar panel black wire

Power ON and OFF could be set through the Jumper

Rx

Power 2 terminal is for power supply.

COM and OUT is for photocell sensor signal output wires(wires to control board)

N.C. or N.O. mode could be set through Jumper

Wiring, please refer to Fig 3:

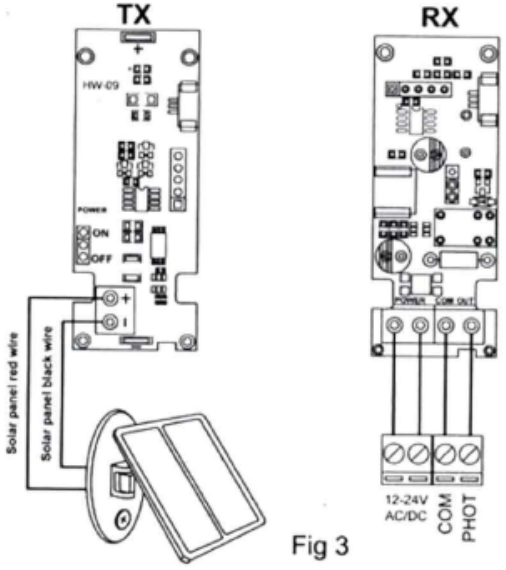


Fig 3

HW-09 infrared photocell sensor with wireless transmitter, orientable 220 degree.

DESCRIPTION

HW-09 set is composed of:

1 Infrared transmitter, orientable 220 degree, powered with rechargable, built in battery 3.2V. Refer to Fig 4.

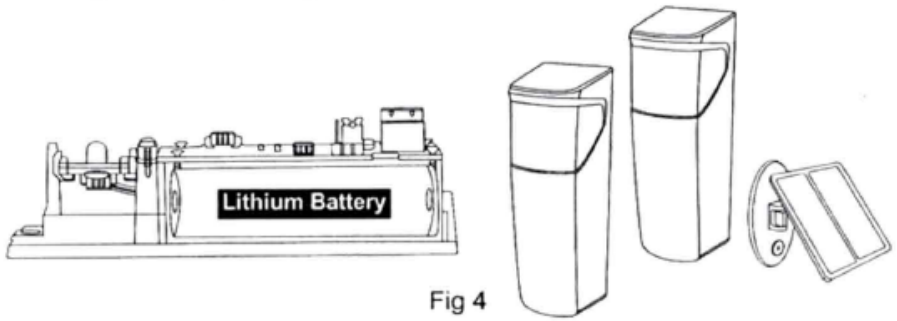


Fig 4

2 Infrared receiver, orientable 220 degree. Refer to Fig 5.

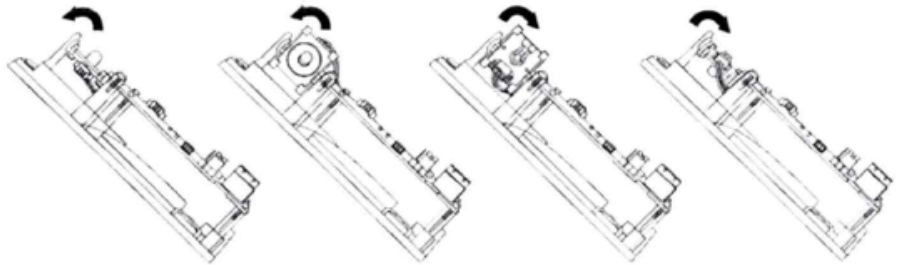


Fig 5

3 (Optional) Sun solar panel, it provides for recharging of battery for the device. No solar panel is also ok.

DIFFERENT USES OF THE DEVICES

The common uses of HW-09 are described as following

Mobile door/gate leaves/sliding gate

Mounted on mobile doors/gates, this device permits to transmit the status of the safety edge with no need for any complex connection devices.
This is ideal solution for installations in compliance with safety regulations in force.

1st situation (Fig 6):

1 HW-09 transmitter, installed on the mobile door/gate leaf and oriented towards the receiver.

2 HW-09 receiver, connected to the control unit, it responds to the contact status of the safety sensitive edge.

3 Solar panel, it provides for the recharging of the transmitter battery.

4 Safety sensitive edge with NO contact connected to the transmitter.

5 Control unit.

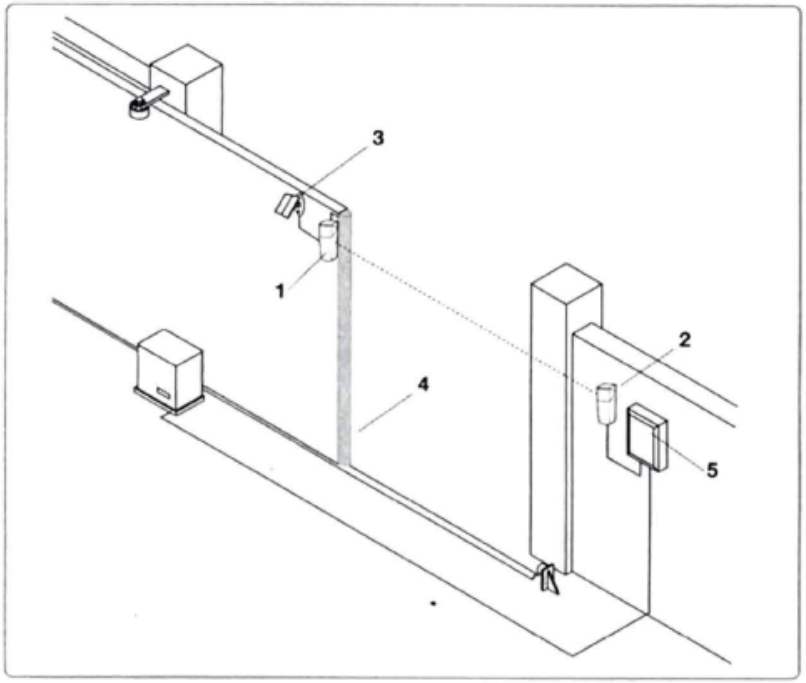


Fig 6