

Manual of Diffuse Reflective Photoelectric Sensor

HW-12

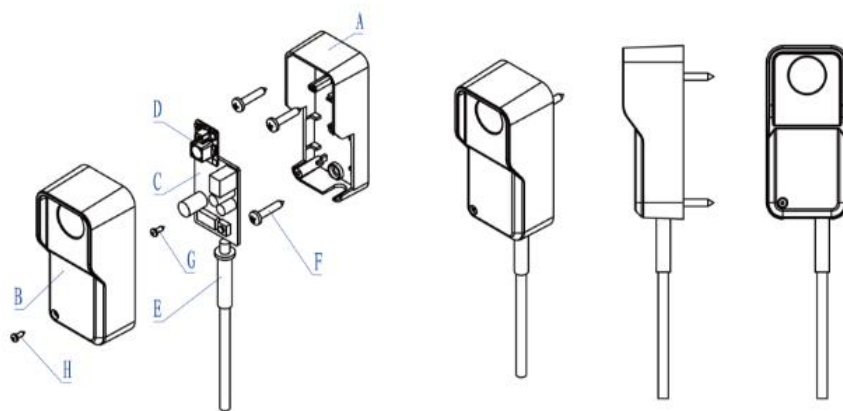
General

Diffuse reflective photoelectric sensor consists of light projector and light receiver in one, can distinguish transparent or opaque reflective object. Infrared photoelectric sensor can be compensated for longer distance with sensitivity controller, less susceptible to interference, fast reaction, long life, high resolution and high reliability.

I. Parameter

Work Voltage	12-24V (AC/DC)
Sensing Distance	$\leq 16\text{M}$
Work Current	$\leq 100\text{mA}$
Protection Class	IP 67

II. Installation



- A: Back shell
- B: Front shell
- C: PCB
- D: Laser Module
- E: Power cable
- F: Screw for locking the device in the wall
- G: Screw for locking the PCB
- H: Screw for locking the shells

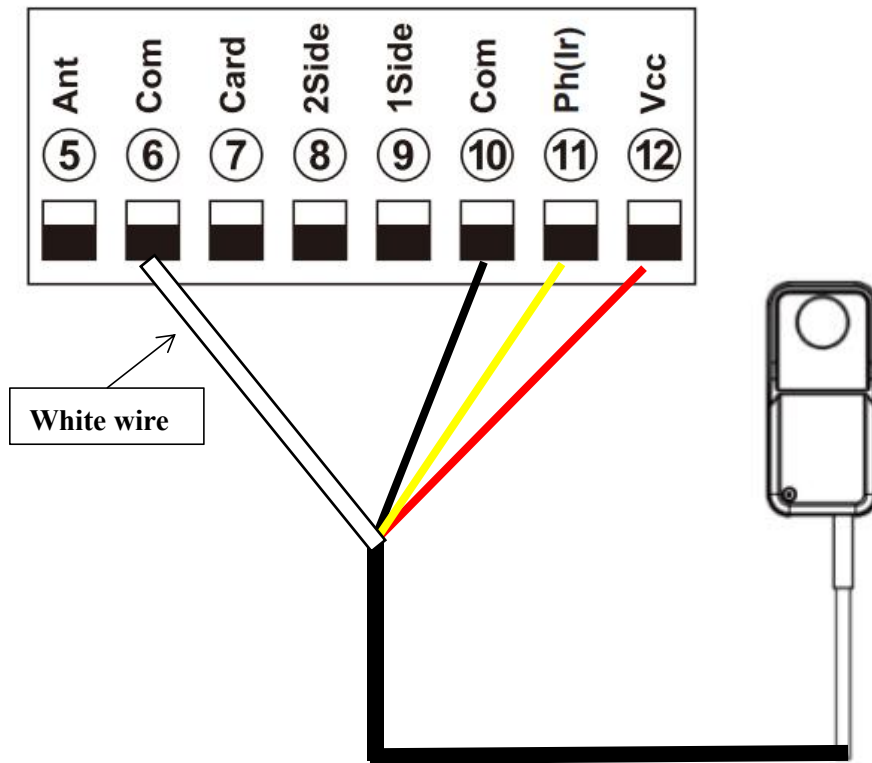
● Wire information

Red: VCC Black: GND White: COM Yellow: Normal open Green: Normal close

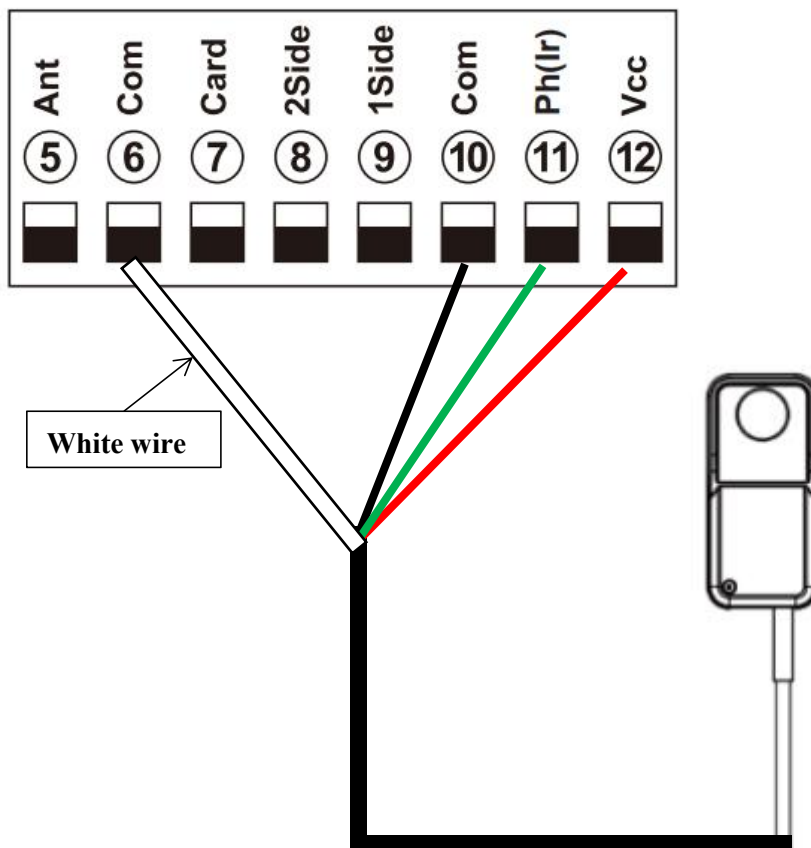
III. Feature

The diffuse reflection sensor detects objects and materials without contact and indicates their presence by a switching signal.

Normal Open



Normal Close



IV. Sensing distance adjustment

①By dip switch adjustment

Determine the sensing distance, then adjust the dip switch to confirm it. Press the setting button once, and the buzzer will sound a short beep with 3 times to set the sensing distance and save the data. The status light will display the corresponding mode status (the status light flashes once every 2 seconds, on for 100ms and off for 1900ms).

Dip switch distance digits setting

- Total are 5 bits, included Bit1, Bit2, Bit3, Bit4, Bit5.
- Set OFF, means bit value is 0. Set ON, means bit value is 1.
- Sensing distance: 0.5-16m
- So sensing distance calculation: $(\text{Bit1} \times 1 + \text{Bit2} \times 2 + \text{Bit3} \times 4 + \text{Bit4} \times 8 + \text{Bit5} \times 16) \times 0.5 + 0.5 \text{ m}$

②Set the sensing distance through calibration

Press the setting button twice and release it. The LED light will keep on. The system enters the calibration mode and the buzzer sounds once per second (press the setting button in the middle to exit the calibration mode. Exit without saving the system and take the last setting mode and data).

Calibration mode, enter the calibration mode to detect obstacles for 10 seconds. The smallest obstacle distance is used as the calibration distance. If no obstacles are detected within 10 seconds, the maximum distance of 16 meters is used as the calibration distance. After 10 seconds, the buzzer sounds three times quickly to indicate that the set distance is saved and the status light shows the corresponding mode status (the status light flashes once per second, on for 200ms and off for 800ms).

V. Factory default

Factory default use the calibration mode, and the sensing distance is 8 meters.

Press and hold the setting button for 6 seconds, the buzzer will beep 3 times, and the factory default parameters will be restored.