F-R4M1

REFLECTIVE PHOTOELECTRIC SENSOR

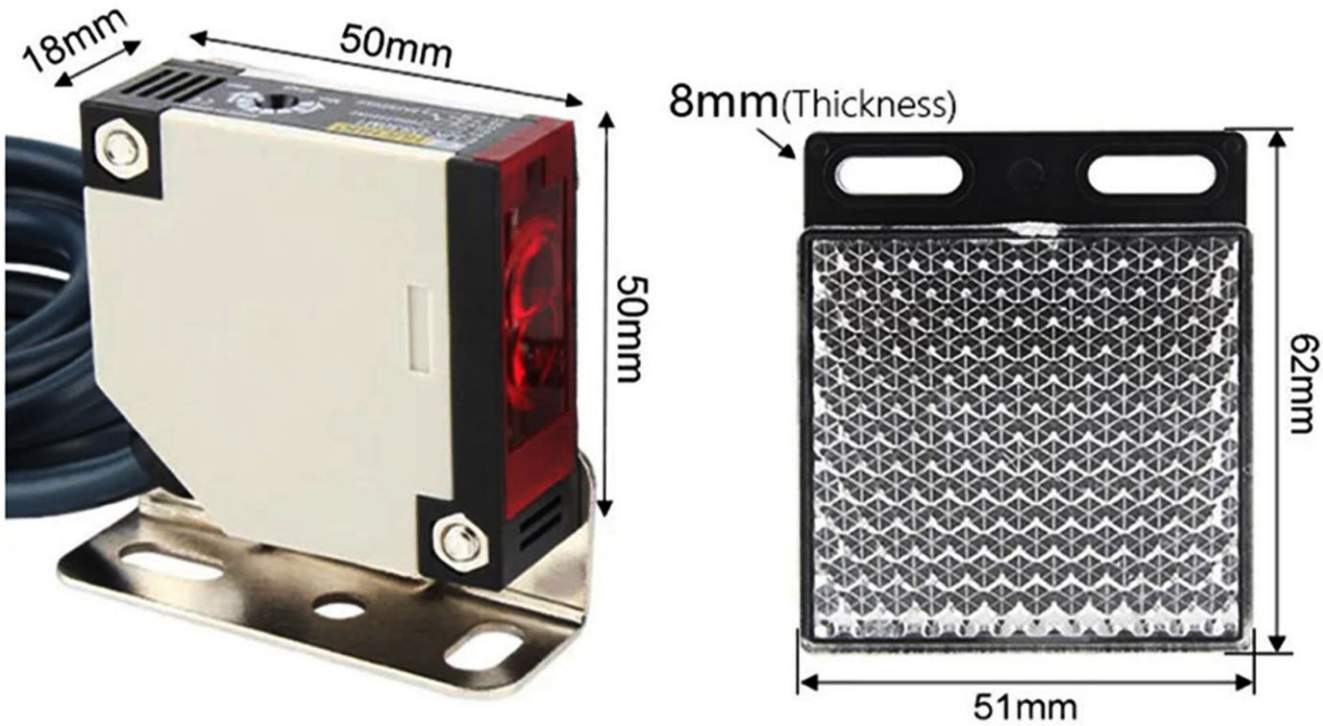
Product Features

- **Long-Distance Sensing:** Offers a reliable detection range of up to 4 meters when paired with the reflector.
- **Dark-ON Operation:** Specifically designed to trigger the output when the light beam is interrupted by an object.
- **High-Capacity Relay Output:** Equipped with an SPDT relay rated for up to 3 A at 250 VAC, capable of directly switching heavy industrial loads
- **Robust Protection:** Rated IP67 for ingress protection, providing high resistance to dust and water splashes in harsh conditions.
- **Enhanced Visibility:** Features a pulse-modulated red LED light source that makes the sensing spot clearly visible during alignment.
- **Operational Resilience:** Functions reliably in temperatures ranging from -25°C to 55°C.

Technical Specification

Model	F-R4M1
Current Specifications	3A
Operating Voltage	12-24V DC
Detection Distance	4 Meters
Response time	5Ms
Material	Heat-resistant ABS
Detecting Objects	Non-transparent objects
Wire Length	2 Meters
Pointing Angle	Floodlight angle: 3-5°
Shock	**Durability:** 500m/s (approx. 50g)
Shock protection	IP67
Sensitivity adjustable	Fixed and adjustable
Environmental Illuminance	**Incandescent lamps:** photoluminescence < 3.0001X; **Sunlight:** <10.0001X.
Operating ambient temperature	-10°C to +55°C
Ambient Humidity	35~95%HR
Insulation resistance	50MΩ and above
Vibration	**Durability:** 10-55Hz complex amplitude 15mm

Dimension:



INSTALLATION PROCEDURE

1. Mounting

- **Sensor Unit:** Use the supplied mounting bracket to secure the sensor to a stable surface.
- **Reflector:** Mount the reflector directly opposite the sensor.
- **Distance:** Ensure the distance between them is within the 0 to 4-meter rated range.
- **Anti-Glare Tip:** If detecting glossy or shiny objects, mount the sensor at a slight angle *(not perpendicular)* to the object's surface to prevent false triggers from direct reflections.

2. Connection Details

- **Power (Supply):** *Brown* (+) and *Blue* (-) wires connect to your DC or AC source.
- **Common (COM):** The White wire serves as the common point for the internal switch.
- **Normally Open (NO):** The Black wire connects to COM when an object is detected.
- **Normally Closed (NC):** The Gray wire stays connected to COM unless an object breaks the beam.

3. Optical Aligment & Adjustment

- **Alignment:** Move the sensor and reflector horizontally and vertically until the red indicator light turns ON (indicating the beam is received).
- **Sensitivity Calibration:**

1. ***Point A:*** With no object present, ensure the indicator is lit.
2. ***Point B:*** Place your target object in the beam path. Turn the sensitivity adjuster until the indicator turns OFF.

- **Optimum Setting:** Set the adjuster to the midpoint between where the indicator is reliably ON (clear path) and OFF (blocked path).
- **Final Check:** Verify that the sensor is ready to detect within 200ms of power-on