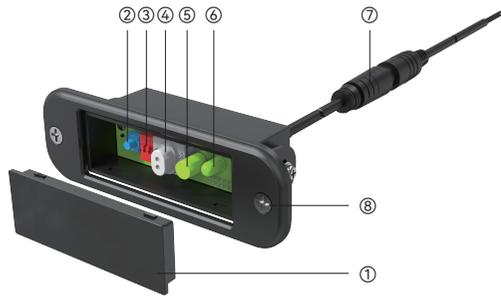# GuardRay

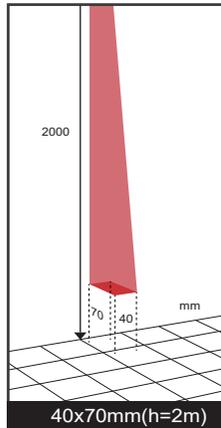## 1  Product Structure / Technical Parameters

② ③ ④ ⑤ ⑥          ⑦

①: Face Cover
②: Button
③: DIP Switch
④: Infrared Module
⑤: Visible Laser
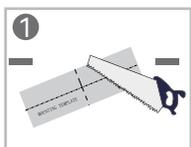⑥: LED Indicator
⑦: Cable and Plug
⑧: Fixing Screws

Note: Do not stare directly at the visible laser or point it at eyes. Low-power visible laser is generally safe, but prolonged direct viewing may pose potential risks.

| Technology | Active Infrared |
|---|---|
| Detection Mode | Distance-measuring Presence Detection |
| Detection Area | 40mmx70mm (at 2m installation height), 50mmx100mm (at 3m installation height) |
| Indicator Light | Red LED on during detection; Orange LED flashes once after power-on |
| Response Time | 64ms |
| Installation Height | 0.6m – 4.5m |
| Power Supply Voltage | 12V – 24V AC/DC (–5%/+10%) |
| Power Frequency | 50 – 60Hz |
| Maximum Current Consumption | 120mA@24V AC / 80mA@24V DC |
| Standard Output | Relay (Dry Contact) |
| Maximum Contact Voltage | 60V AC/DC |
| Maximum Contact Current | 2A (Resistive) |
| Maximum Switching Power | 30W (DC) / 62.5 VA (AC) |
| Monitoring Input | 1 Optocoupler (Dry Contact) |
| Maximum Contact Voltage | 30V |
| Voltage Threshold | High Level: >10V; Low Level: <1V |
| Holding Time | 0.5s |
| Reflectivity | Minimum 10% at 940nm infrared wavelength |
| Temperature Range | -30℃ – +60℃; 0-95% relative humidity (no condensation) |
| Protection Class | IP53 |
| Dimensions | 111 (L) mm x 37 (W) mm x 36 (H) mm |
| Housing Material | ASA+PC (Black) |
| Cable Length | 2.5m |

* The device shall not be used for purposes other than specified. Otherwise, the sensor manufacturer shall not provide warranty for the sensor.

2000

70  40   mm

**40x70mm(h=2m)**

All values are measured under specific conditions. Specifications are subject to change without prior notice.
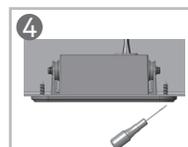
## 2  Installation

❶ Use the installation template to make an opening on the profile.

❷ Adjust the sensor's detection angle.

❸ Connect the cables and insert the sensor into the opening.

❹ Secure the sensor with 2 screws.

---

⑤

| Brown | – Power |
|---|---|
| Green | – 12-24V AC/DC |
| Yellow | – COM |
| White | – NC |
| Black | – NO |
| Red | Monitoring |
| Blue | |

|  | NO-Active | NC-Passive |
|---|---|---|
|  | Yellow-Black | Yellow-White |
| No power | ●— | ●— |
| No detection | ●— | ●— |
| Detection | ●— | ●— |

⑥ Gently lift the front cover with a screwdriver as shown.

⑦ Short-press the button once to turn on the red visible laser; short-press again for automatic setup.

⑧ The LED indicator flashes red-green, then the red laser turns off and the green light stays on—sensor installation is complete.

## 3  Additional Adjustments:  DP1: TEST IN; DP2: Anti-interference

| Auto Mode | **ON** 1 2 — No monitoring needed. For enhanced door safety. | **ON** 1 2 — Monitoring required. | **ON** 1 2 — For improved anti-interference performance. |
|---|---|---|---|
| Manual Mode | For low-reflectivity floors, no background, or installation height >4.5m (customize blind zone height). | Press the button for >2 seconds: Red visible laser turns on (starts manual setup). LED orange light flashes 2x every 3s (learning background). When it flashes 1x every 3s: Use a white paper, move it up/down under the sensor to test the blind zone height. Stabilize the paper position. Setup completes when the laser turns off. | Red visible laser on/off: Short press: Turn on (auto-off after 1 min). Long press: Turn off. |

## 4  Installation Tips / Troubleshooting

Avoid reflective backgrounds /objects in the detection area.

Avoid strong light in the detection area.

Do not block the sensor.

Do not touch optical components.

| Fault | Cause | Action |
|---|---|---|
| Orange light flashes 4 times every 3 seconds | Sensor malfunction | Return the sensor for technical inspection |
| Green light stays on (no response) | Monitoring activated, test input not powered | 1. Door control detection: Connect red and blue wires for test output 2. Door control non-detection: Connect blue wire to 0V, red wire to +12V - 30V DC |

⚠ Important Warnings:
 · The device shall not be used for purposes other than specified. Otherwise, the sensor manufacturer shall not provide warranty.
 · Door operator system manufacturers are responsible for conducting risk assessments. Sensor installation and door operator systems must comply with national/international regulations and door safety standards.
 · The sensor manufacturer is not liable for faults caused by improper installation or adjustment.
 · Only trained and qualified personnel may install and set up the sensor.
 · No warranty is provided for unauthorized maintenance.