SECURITY DOOR CONTROLS ■ WWW.SDCSECURITY.COM
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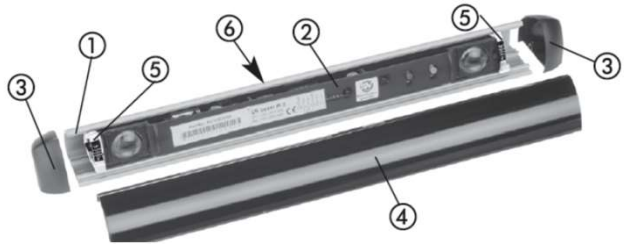
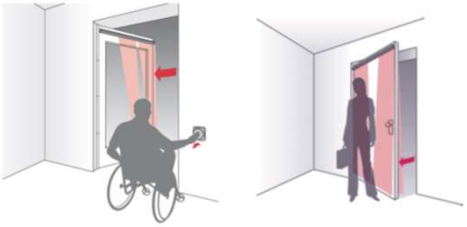
INSTALLATION INSTRUCTIONS

AUTO-IR36 & AUTO-IR48
DOOR-MOUNTED PRESENCE SENSOR

Intended use: The sensor is designed for installation at the top of an automatic swing pedestrian door and for connection to a low energy automatic door operator. The sensor detects people in the door swing area with an active infrared field.



① Aluminum Rail
② Sensor (US Beam)
③ End Cap 2x
④ Front Cover
⑤ Bearing Clamp 2x
⑥ Screw Terminal
(Not visible in figure)
7 Mounting screws 2x



Safety Instructions

- Read these operating instructions thoroughly before putting the device into operation and retain for future reference.
- This product is designed to be mounted at the top of an overhead pedestrian door. See images above.
- Do not use this product other than for its specified application.
- Only trained and qualified personnel may install and initialize the device.
- Only authorized factory personnel may perform hardware/software changes or repairs to the product.
- Failure to follow these safety precautions may cause damage to sensor or objects, serious personal injury, or death.
- It is the responsibility of the equipment installer to carry out a risk assessment and to install the system, in compliance with applicable local, national and regulations, safety standards, codes and laws.
- Always consider the safety functions of your applications as a whole, never just in relation to one individual section of the system.
- The sensor should only be operated from a low voltage system with safe electrical separation from high voltage systems. The wiring must be protected against mechanical damage.
- If the front cover ④ breaks, there is a risk it may shatter.
- The sensor may only be operated in the aluminum rail provided for this purpose.
- Parts of the sensor may become warm during operation.
- Avoid touching any electronic and optical components.

Start-Up

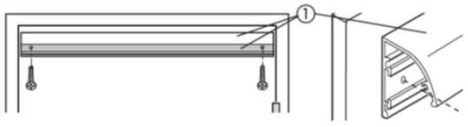
Recommended start-up sequence: 1. Mount the aluminum rail, 2. Connect mounting sensor/cables, 3. Adjust the angle, 4. Initialization.

The start-up procedure below covers virtually all applications. However, you may have a need of a particular application not described here. In this case, contact SDC technical support.

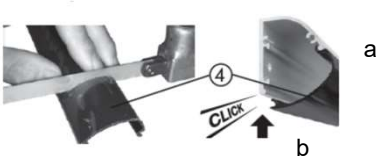
1. Mounting the aluminum rail

1.1. The rail ① does not have any mounting holes, make some in the rear of the profile and mount it using the #8 x 5/8" screws supplied so that it is horizontal (use of a level is recommended)

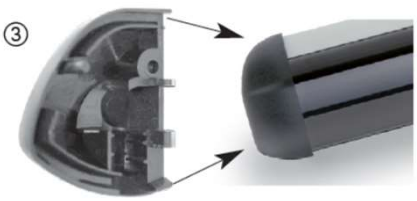
Important: The aluminum profile must lay <u>flat</u> against the mounting surface.



1.2. If the front cover ④ or rail needs to be cut to size, lay it on flay, clean surface and cut it using a fine tooth hacksaw, a metal cutter or a rotary tool (with an appropriate attachment). To attach the cover <u>after</u> initialization (a.) remove protective foil. (b.) Insert the top of the cover ④, then click the bottom of the cover into place.



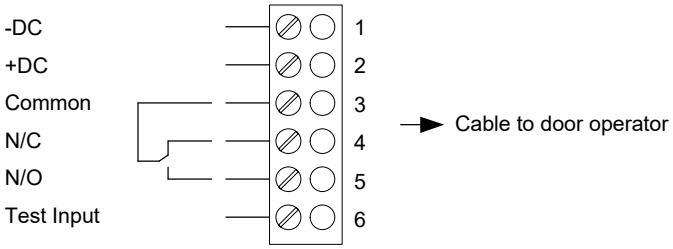
1.3. Mount the end caps ③ after attaching the cover. Punch through the screw hole on the end cap. Secure the end caps with the supplied screws being careful to align the end cap pins with the pin guides on the rail.



Any suggestions or comments to this instruction or product are welcome. Please contact us through our website or email engineer@sdcsecurity.com

2. Electrical Connection

Connection diagram for individual sensors



Attention!
Connection polarity above is illustrated powered off.

When powered (passive) in default output mode, connection 5 (N/O) = Closed circuit

Notes on wiring:

Wiring according to the requirement of the door system

1. Pull the screw terminals ⑥ out of the sensor to be connected to the door operator (= master sensor if multiple sensors are used).
2. Perform wiring in accordance with the door operators specifications.
3. Once the plug terminal has been wired, re-insert it into the sensor.

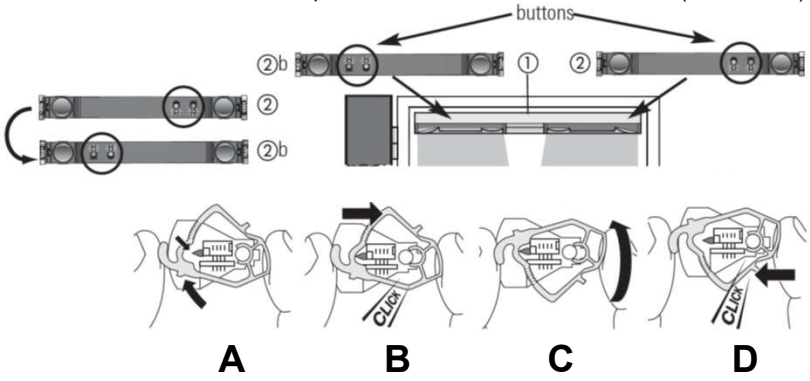
Master / Slave Wiring for Multiple Sensors
Master / Slave sensors are connected using enclosed ribbon cable. A maximum of 3 additional slave modules can be added in this way.

Mounting the optical unit

The buttons red and green on the optical unit must be mounted on the corresponding leading edge of the door.

Sensor may need to be rotated by 180° and re-mounted

Sensor position below shown for dual sensors (AUTO-IR48)



To do this, rotate the mounting clips ⑤ on the sensor ② (Steps A, B, C, D shown on the right).
A, B to remove the clips. C,D to re-install the clips

1. After re-installing clips, click sensors and onto the aluminum rail ① .Insert the upper lug of the mounting clips ⑤ into the upper groove of the rail ① ,then click into place.
2. There is space for the cables between the mounting clip ⑤ and the profile ① .
3. For AUTOIR-48, use the ribbon cable ⑧ to interconnect the individual sensors (Align the narrow and wide grooves of the ribbon cable connector. Do not use force to insert the ribbon cable).

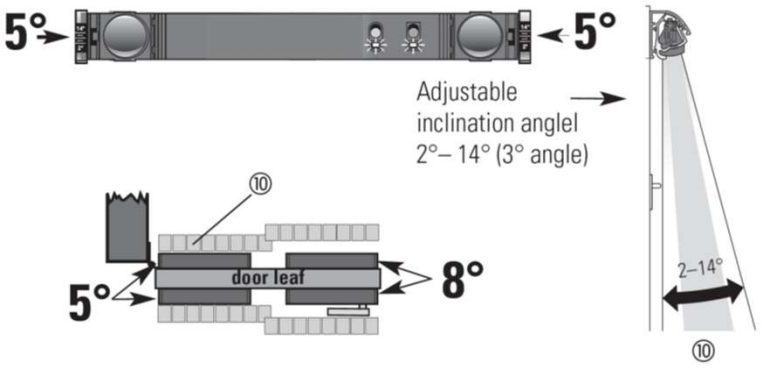
3. Setting the inclination angle

To ensure correct functioning, **the same angle must be set on the left and ride sides of a sensor.**

The position of the detection field ⑩ is determined by the position of the sensor in the aluminum rail.

Push the sensor towards the left or right end of the profile in order to protect the leading edges.

The inclination angle of each sensor must be configured such that the door stops **BEFORE** it comes into contact with an obstacle.

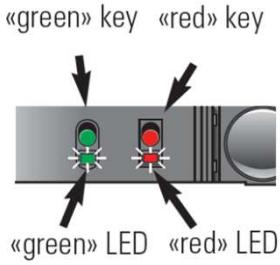


IV. Initialization of a sensor

A sensor must always be initialized on the master module on each start-up. If only a single sensor is present, it is the master module.

Notes on initialization for special floor surfaces:
In the case of special floor surfaces (such as a metal grating), place a cardboard on the background in order to ensure faultless initialization

Master-initialization using the <<green>> key:
Press the **<<green>>** key for **5 seconds** to trigger the master-initialization procedure. (For units with multiple sensors, trigger the master-initialization only on the sensor which is connected with the door operator.)



1. Both the red and green LEDs flash to show that the initialization procedure has been triggered. You now have 6 seconds to leave the detection field.
2. The red LED flashes to show the initialization is being performed. Do **NOT** enter the detection field.
3. Once both LEDs cease to flash, initialization is complete
4. if the red LEDs continue to flash, please refer to Troubleshooting.

After initialization, the sensor is ready for operation. Please check the sensor's detection responses.

Optional Setting

Sensitivity setting (sets field distance from floor – 40cm by default)

Setting using the <<red>> and <<green>> keys:
1. Press the <<red>> and <<green>> keys for 1 second, → device located at parameter 1, <<test input>>.
2. Press the <<red>> key 3 times → device moves to parameter 4, <<sensitivity>> and indicates a value of 3 (20 cm) by flashing green 3 times
3. Press the <<green>> key twice → device indicates a value of 5 (40 cm) by flashing green 5 times.
4. Optional: Exit setting mode by press the "red" and "green" keys for 1 second.

Troubleshooting

Symptom	Possible Cause	Remedy
The red LED flashes 8 times after initialization.	- The detection field was not empty during initialization. - The bearing clamps are not mounted correctly in the profile. - The bearing clamps are set to different angles on the same sensor. - Reflecting background or metal grating.	- Carry out the initialization again. - Click the bearing clamps into the profile correctly. - Set the bearing clamps to the same angle. - Contact support.
The red LED flashes continuously.	- Faulty ribbon cable.	- Replace the ribbon cable.
The red LED flashes twice.	- Dark or reflecting ground - Object in the detection field (no fault)	- Contact support
Not all sensors react when carrying out the master initialization.	- Connection interrupted along the ribbon cable.	- Insert the ribbon cable correctly or replace it.
No reaction from the doors, although detection is taking place.	- Initialization has been carried out on a sensor that is not directly connected to the operator	- Carry out initialization on the sensor that is directly connected to the door controller.
The sensor functions without the cover but not with it.	- The angle of the bearing clamps is not consistent - The cover is of poor quality (has coarse grooves).	- Check the angle of the bearing clamps. - Replace the cover.
The red LED flashes 4, 5, 6, or 7 times.	- Configuration error (sensors have been swapped following master initialization). - Sensors have been incorrectly initialized or not initialized at all.	- Check DC supply. - Carry out the initialization again - Carry out the initialization on the master (sensor on the door controller).
Both LEDs (red & green) are lit permanently.	- Supply voltage is not within range	- Isolate the sensor from the supply. - Check the power supply.
Detection sometimes takes place whilst the door panels are moving.	- If the floor is very uneven and the door moves, this may lead to detection.	- Reduce the sensitivity. - Set a different angle (ensure safety requirements are met).
The red LED flashes 10 times	- Loss of power during parameterization (memory error).	- Carry out initialization on the master (sensor on the door controller).

Note: Carrying out master initialization or switching the operating voltage Off / On will reset an error.

Technical data

Technology	Active infrared (triangulation)
Wavelength	880 nm
Number of IR beams	8
Response time	< 50 ms
Mounting height	Up to 8.8'
Angle setting	2° - 14°, set in increments of 3°
Operating voltage	15 – 37 VDC
Power consumption	Max. 3.3 W, 140mA per sensor

Relay Output	Change-over relay max. 40 VDC /40 VAC, 1 A

Operating temperature	-20° C bis 60° C
Type of protection	IP54

Number of devices that can be interconnected	4 units total, synchronized
Application	Stationary / moving presence detection