

REACTION ONE / REACTION TWO



MANUFACTURER'S STATEMENT

Read this operation manual carefully before use to ensure proper operation of this product. Failure to read this operation manual may cause improper operation and may result in serious injury or death of a person. The meanings of the symbols are as follows. Please study the following first and then read the contents of this operation manual.

WARNING	Disregard of warning may cause the improper operation causing death or serious injury of a person.
CAUTION	Disregard of caution may cause the improper operation causing injury of person or damage to objects.
NOTE	Special attention is required to the section of this symbol.

NOTE

- This sensor is a non-contact switch intended for header mount / ceiling mount of an automatic door. Do not use for any other applications.
- When setting the sensor's detection area, make sure there is no traffic around the installation site.
- Before turning the power on, check the wiring to prevent damage or malfunction of equipments that are connected to the sensor.
- Only use the sensor as specified in the operation manual provided.
- Be sure to install the sensor in accordance with the local laws and standards of the country in which the sensor is installed.
- Before leaving the job site make sure that the sensor is operating properly and instruct the building owner/operator on proper operation of the door and the sensor.
- The sensor setting can only be changed by an installer or service engineer. When changed, register the changed setting and dates in the maintenance logbook accompanying the door.

WARNING	Do not wash, disassemble, rebuild or repair the sensor, otherwise it may cause electric shock or breakdown of equipments.
Danger of electric shock.	

NOTE The following conditions are not suitable for the sensor installation.
 -Vibrating header or mounting surface, -Waterdrops or snow on the sensor,
 -Moving objects, steel plate, emergency lights or illumination in the detection area or in vicinity.

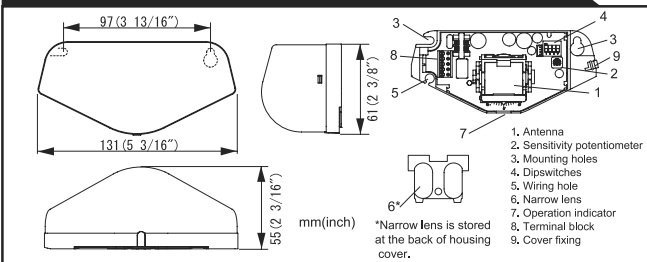
SPECIFICATIONS

Model	: REACTION ONE / REACTION TWO	Output	: Form C relay
Cover color	: Silver / Black		: 50V 0.3A Max.(Resistance load)
Mounting height	: 2.0 (6'7") to 3.5m (11'5")	Output hold time	: 2.0sec. / 4.0sec.
Detection method	: Microwave doppler effect	Response time	: <0.3 sec.
Power frequency	: 24,125GHz	Operating humidity	: <80%
Power density	: <2000m	Operating temperature	: -20°C to +55°C(-4°F to 133°F)
Detection area	: See Detection area	IP rate	: IP54
Vertical adjustment	: +10° to +70° (Header mount) +20° to +80° (Ceiling mount)	Weight	: 140g (4.9oz)
Horizontal adjustment	: 30° to left or right	Accessories	: 1 Cable 3m (9'10") 1 Operation manual 2 Mounting screws 1 Mounting template 1 Narrow lens*
Power supply	: 12 to 24VAC(±10%) 12 to 30VDC(±10%)		
Power consumption	: <1.5W(±2VA at AC)		
Minimum speed	: 5cm(1'15'16'')/sec.		
Operation indicator	: Green / Stand-by Red / Detection Green blinking / Set-up		

* At the back of housing cover

NOTE The specifications herein are subject to change without prior notice due to improvements.

OUTER DIMENSIONS AND PART NAMES



INSTALLATION

- Affix the Mounting template at the desired mounting position.
 2. Drill 2 Mounting holes of ø3.4mm (ø1/8").
 3. To pass the cable through to the header, drill a Wiring hole of ø8mm (ø5/16").
 4. Remove the Mounting template.
 5. Remove the Housing cover with screw driver as shown below.
 Attach the sensor to the mounting surface with 2 Mounting screws.

- Wire the cable to the door controller properly as shown below.

WARNING	Before starting the procedure, ensure that the power is turned OFF. When passing through the cable to the hole, make sure not to tear the shield, otherwise it may cause electric shock or breakdown of the sensor.
Danger of electric shock.	

- Plug the connector of the sensor.
 2. Supply power to the sensor and the sensor will automatically start the set-up mode with blinking Green.
 3. Adjust the detection area and set the Dipswitches. (See ADJUSTMENTS)

NOTE Make sure to connect the cable correctly to the door controller before turning the power ON. The sensor does not detect objects for 10 seconds after supplying power.

- Hook the Housing cover on the left side of main body to place the Housing cover. If wiring is to be exposed, break the knockout.

WARNING	Do not use the sensor without the Housing cover. When using the cable knockout, install the sensor indoors or use the rain-cover (Separately available) otherwise electric shock or breakdown of the sensor may occur.
Danger of electric shock.	

ADJUSTMENTS

- Detection area**
Adjust the detection area with Sensitivity potentiometer.

NOTE When the sensor is mounted at higher than 3.0m, set the SENSITIVITY to "H (high)".

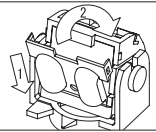
Detection area angle adjustment

	Adjustment	Scale	Angle
Vertical adjustment		3° X 20 steps	Header: +80°, +70°, +10° Ceiling: +20°
Horizontal adjustment		5° X 12 steps	+30°, +30°

CAUTION Do not touch electric part of the sensor to avoid possible breakdown of the sensor.

Narrow area

To obtain Narrow area, place Narrow lens attached at the back of housing cover. To place Narrow lens, follow step 1&2 as shown on the right.



Dipswitches settings

Set Dipswitch 1&2 to enable the direction recognition. (REACTION TWO Only.)

Auto-caution mode (A person waving in the detection area to be detected.)
 Dipswitch 3: Output hold time (2.0sec, 4.0sec)
 Dipswitch 4: Immunity (If there is external interference, set Dipswitch 4 to ON.)

INFORM BUILDING OWNER / OPERATOR OF THE FOLLOWING ITEMS

WARNING

- Always keep the housing cover clean. If dirty, wipe the housing cover lightly with a cloth. (Do not use any cleaner or solvent.)
- Do not wash the sensor with water.
- Do not disassemble, rebuild or repair the sensor yourself, otherwise electric shock may occur.
- Always contact your installer or service engineer when changing the settings.
- Do not paint the housing cover.

NOTE

- After applying power, wait 10 seconds then walk test detection area to ensure proper operation.
- Do not place any objects that move or emit light in the detection area. (e.g. Plant, illumination, etc.)

CHECKING

Check the operation according to the chart below.

Sensor Status	Power OFF	Set-up (Approx. 10sec.)	Stand-by	Detection
Operation indicator	OFF	Green blinking	Green	Red
Output Contact				

TROUBLESHOOTING

Problem	Operation indicator	Possible cause	Possible countermeasures
Door does not open when a person enters the detection area.	None	Wrong power supply voltage.	Set to the stated voltage.
	Unstable	Wrong wiring or connection failure.	Check the wiring and Terminal block.
	Green	Sensitivity is too low. Wrong detection area positioning.	Set the sensitivity higher. Check ADJUSTMENTS.
Door opens when no one is in the detection area. (Ghosting)	Green blinking	The sensor is being set up.	Wait for the set-up to complete.
	Red	Water drops on the housing cover. The detection area is overlapping with the door. Sensitivity is too high. Raining or snowing.	Wipe the housing cover with a cloth. Adjust the detection area away from the door. Or set Dipswitch 4 to ON. Set the sensitivity lower. Set Dipswitch 1 to ON. (REACTION TWO Only) Or Dipswitch 4 to ON.
Door remains open	Green	Wrong wiring or connection failure.	Check the wiring and Terminal block.

FCC WARNING(For USA)

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

-NOTICE-

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

-NOTICE-

1. The antennas cannot be exchanged.
2. To comply with FCC RF exposure compliance requirements, a separation distance of at least 20cm must be maintained between the antenna of this device and all persons.

IC(For CANADA)

Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation of the device.