

HR94D1 Motion & Presence Sensor F Version INSTALLATION INSTRUCTIONS

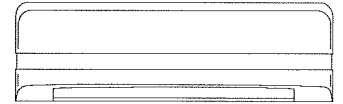
Active Infrared Motion & Presence Sensor for Automatic Door Control

We would like to extend our thanks to you for purchasing this sensor. We at Hotron is committed to providing you with quality products and excellent customer service. Before installing this sensor, please read the following instructions carefully:

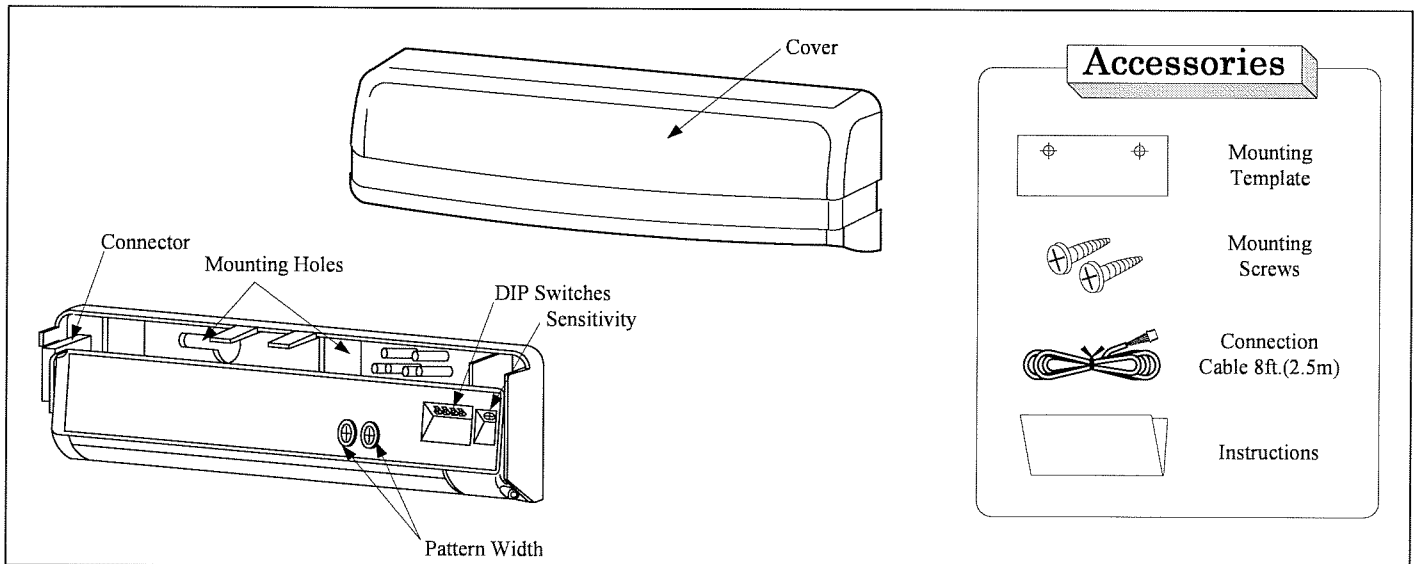
Section 1 General Description / Features

The HR94D1 is a microprocessor controlled active infrared motion and presence detector which serves two purposes. First, it is designed to activate any automatic door made today. Second, it provides presence detection close to the door on single slide and bi-parting sliding doors.

- Detection area of the sensor is adjustable.
- Pattern depth and width are adjustable using mounting height, pattern width and pattern angle adjustments.
- 'Snow mode' prevents malfunction due to falling snow, falling leaves, insects, etc.'
- Microprocessor provides programmable Presence Timer (180, 60, 15, or 2 seconds).

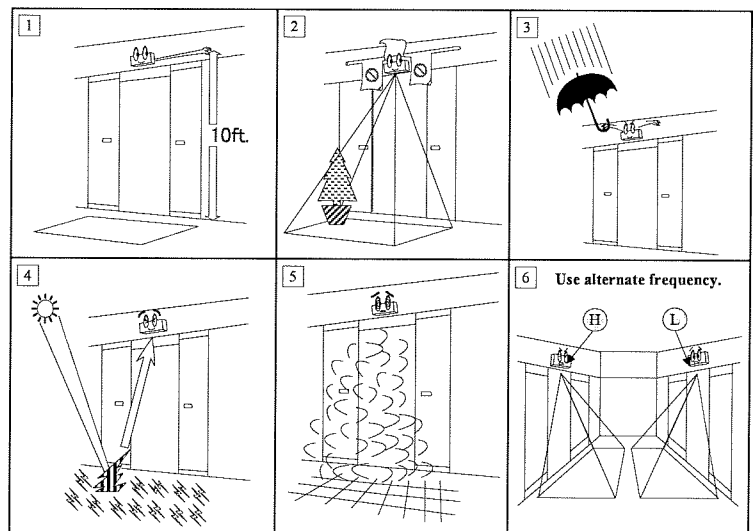


Section 2 Parts Identification

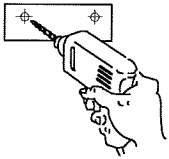
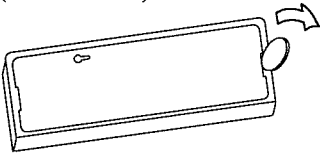
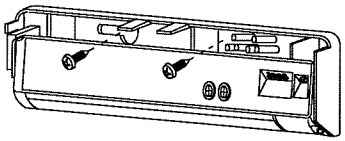
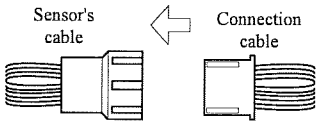
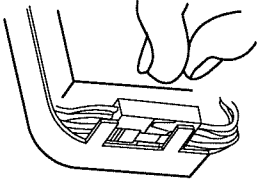
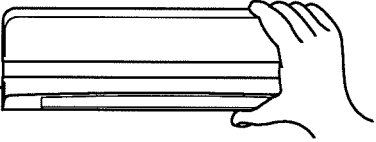



Section 3 Mounting Information

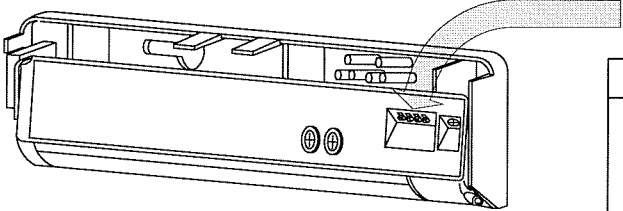
- 1 Do not mount higher than 10ft. (3m).
- 2 Do not leave any objects which may move in the detection pattern.
- 3 Do not mount where rain or snow will fall directly on unit.
- 4 Do not mount in a place where reflection of sunlight will shine on unit.
- 5 Do not mount in a humid or steamy environment.
- 6 Do not mount five devices in proximity to each other. When using from 2 to 4 devices in proximity, use alternate frequency settings as shown. (Maximum 4 sensors)



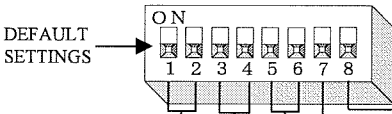
Section 4 Mounting and Wiring

<p>1. Using the mounting template provided, drill mounting and wire holes.</p> 	<p>2. Remove cover using a quarter (or other coin).</p> 	<p>3. Fasten unit with mounting screws provided.</p> 
<p>4. Connect wiring. Push connector.</p>  <p> Sensor's cable ← Connection cable Red & Black = Power [Nonpole] Yellow = Normally Open [NO] Green = Normally Close [NC] White = Common </p>	<p>5. Place connector in holder.</p> 	<p>6. Set desired sensor parameters as noted in Sections 5 & 7.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>⇒ 5. DIP Switch Settings</p> <p>⇒ 7. Adjusting Detection Pattern</p> </div>
<p>7. Place cover on sensor and clean the sensor.</p> 	<p> NOTE: For maximum pattern depth and width, mount the HR94D1 as high as possible and use the maximum pattern angle (5°)</p>	

Section 5 Dip Switch Settings



DEFAULT SETTINGS →



① Presence Timer	②	③ Frequency	④ Monitor mode	⑤
2 Secs <input type="checkbox"/> <input type="checkbox"/>	Not used	H <input type="checkbox"/> <input type="checkbox"/>	Snow <input type="checkbox"/>	Not used
15 Secs <input type="checkbox"/> <input type="checkbox"/>		MH <input type="checkbox"/> <input type="checkbox"/>	Normal <input type="checkbox"/>	
60 Secs <input type="checkbox"/> <input type="checkbox"/>		ML <input type="checkbox"/> <input type="checkbox"/>		
180 Secs <input type="checkbox"/> <input type="checkbox"/>		L <input type="checkbox"/> <input type="checkbox"/>		
1 2		5 6	7	

① Presence Timer : The HR94D1 will detect a stationary object only for the time period set by the Presence Timer. The timer will reset and begin if any movement is detected.

② Not used.

③ Frequency : When more than two sensors are used in close proximity to each other, to prevent interference use alternate frequency settings.
(H + MH + ML + L = Maximum 4 sensors)

④ Monitor Mode : A Snow Mode is available using switch 7. Snow Mode should only be used in environments with heavy snowfall or other extreme conditions.

⑤ Not used.

Section 6 Power

BEFORE APPLYING POWER, READ AND FOLLOW THESE INSTRUCTIONS:

When power is applied, the sensor will read and store the environmental optical parameters. This is necessary for Presence Detection to work properly.

- ① CLEAR THE AREA OF ANY UNNECESSARY OBJECTS.
- ② Apply POWER.
- ③ Vacate the Detection Pattern immediately. While the sensor sees ANY moving objects in its DETECTION PATTERN, it will not proceed to the following step.
- ④ DO NOT enter DETECTION PATTERN for 10 seconds (Presence Detection Setting).
- ⑤ TEST the presence feature, especially near the door.

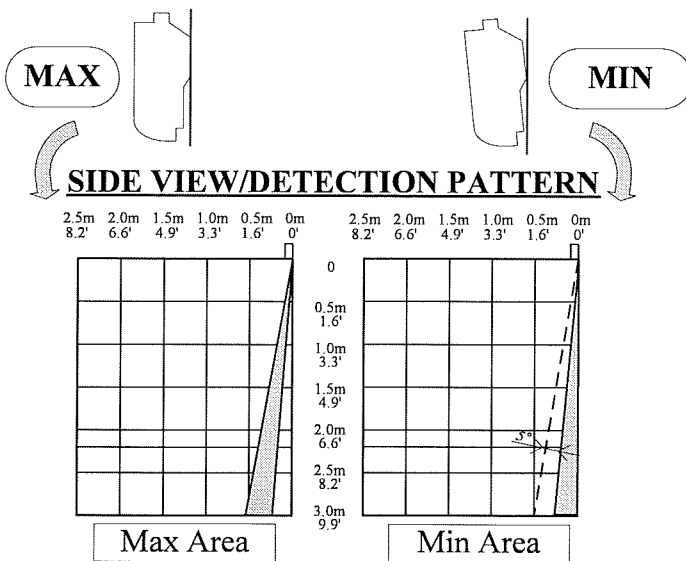
When carrying out the following work, DISCONNECT POWER TO THE SENSOR:

1. When the floor condition change (woolen/rubber).
2. Adjusting pattern or sensitivity.

Section 7 Adjusting Detection Pattern

Adjust the detection pattern according to the following diagrams:

1. Pattern Angle Adjustment.

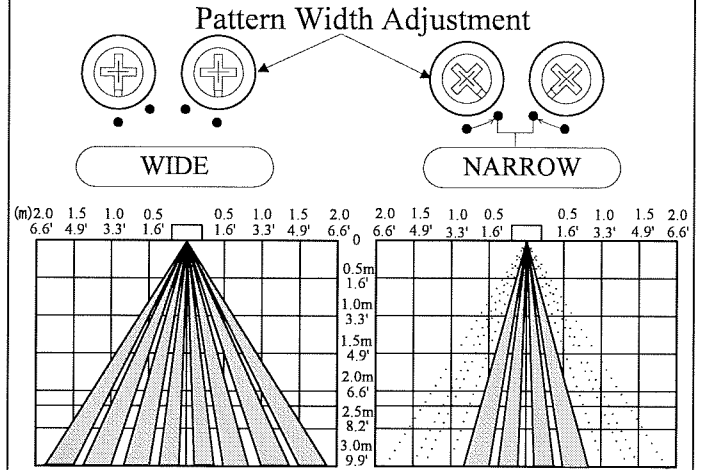


» The body of the sensor can be rotated from 0°~5°(3 Steps)

2. Pattern Width Adjustment

Mask Adjustments for single and/or double doors.

FRONTAL VIEW/DETECTION PATTERN

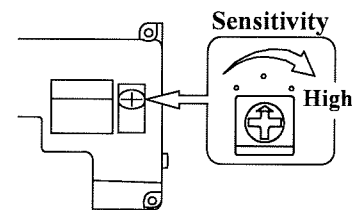


Detection pattern will vary according to objects, material, color and speed.

Section 8 Verification of Operation

1. After mounting, setting parameters and applying power, walk test unit to verify detection pattern.
2. If the door does not operate properly, recheck the dip switch settings and pattern adjustments.
3. After rechecking, if there is still a problem, adjust the sensitivity.

» **Adjust high (clockwise) to increase sensitivity.**
» **Adjust low (counter-clockwise) to decrease sensitivity.**



******* EXTREMELY IMPORTANT *******

After final set-up, test unit(s) completely to ensure that proper coverage has been achieved (width, depth and location of the pattern must be tested).

After the installation and operational check of the system :

Place the proper labels on the door per ANSI/BHMA A156.10. & BS 7036.

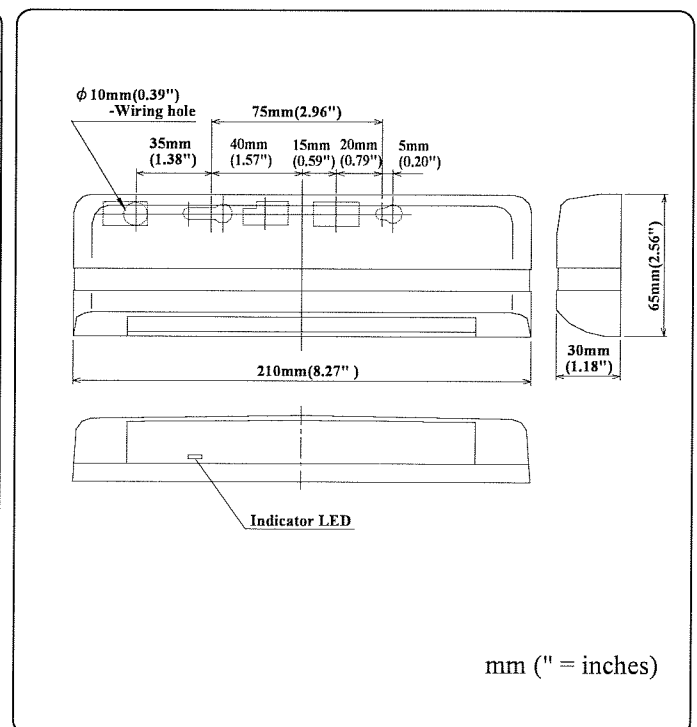
Section 9 Troubleshooting

Problems	Cause	Solution
Door does no operate	Sensor Connector	Tighten connector or reconnect
	Power Supply	Check that the power supply is properly connected.
Door operates intermittently	Sensor is very dusty or covered in water drops, etc.	Clean the sensor (do not use thinner or alcohol to clean sensor)
	Sensitivity too low	Turn up sensitivity
	Detection pattern in the wrong position	Alter the detection pattern by changing sensor angle, and/or pattern width adjustments
Door operates by itself	Sensitivity too high	Turn down Sensitivity.
	Another sensor is too close by	Change the frequency to each sensor.
	Sensor detects the door movement	If the indicator LED is an Orange color, adjust the pattern depth angle away from the door
	There is a cloth mat in the monitored area.	Turn the sensor power off and then on again, and allow it 10 seconds.
	Detection pattern too far in front of the door, detecting people passing by	Adjust the detection pattern - move it closer to the door
	The condition of the monitored area is varying. ·Dusty / Dirty ·Snow	The condition of the monitored area can change due to heavy dust or dirty, heavy snow or footprints being left in fresh snow, this will cause the door to open sometimes. Set the Presence Timer to a short times. See Section 5.

Section 10 Technical Data

Model	HR94D1 Motion & Presence Sensor
Detection Method	Active Infrared Detection
Maximum Installed Height	10ft. (3m)
Pattern Adjustments	Pattern Width (wide or narrow) Angle Adjustment 0° to 5° in 3 steps Sensitivity
Power Supply	12 to 32V AC or DC +/-10% Red & Black wires (Nonpole)
Power Consumption	AC24V-2.8VA , AC12V-1.8VA DC24V-60mA,DC12V-100mA
Output Contact	Form C Relay : DC50V 0.1A(Resistor Load) Yellow Wire : Normally Open Green Wire : Normally Close White Wire : Common
Output Holding Time	Approx. 0.5 seconds
Presence Timer	Limits of 180, 60, 15 and 2 seconds
LED Indication	RED-Detecting , GREEN-Standby , ORANGE-Hunting Door
Temperature Range	-4 °F to 140 °F (-20 °C to 60 °C)
Weight	0.190kg, (0.42lbs.)
Color	Black or Silver (Painting is possible)
Accessories	Cable : 8ft (2.5m) , Mounting Template , Installation Instructions

Section 11 External Dimensions



The HR94D1 is manufactured in Japan by : HOTRON CO.,LTD



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