

DH17i

Industrial Door High-Mount Motion & Presence Detector

INSTALLATION INSTRUCTIONS

Section 1

General Description

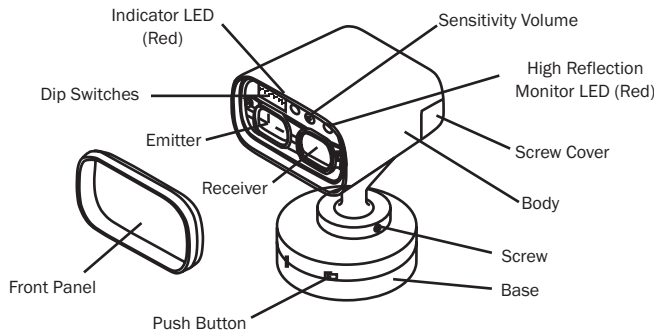
The DH17i is an active infrared motion and presence detector designed for high-mount applications on industrial automatic doors.

- The detection pattern is made up of 4 rows, each of which has 6 detection spots. This provides a very dense detection area of 24 detection spots.
- This sensor is designed to be installed at extremely high installation heights of 10' to 20' (3m to 6m).
- The sensor is microprocessor controlled, providing programmable Presence Timer (2 sec., 60 sec., 10 min. or infinity).
- The front panel is a ONE TOUCH design allowing for easy opening and closing without the use of a screwdriver.

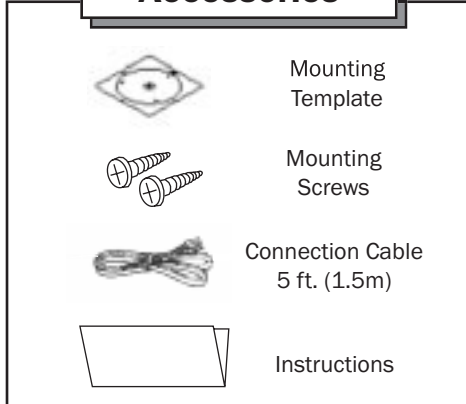


Section 2

Parts Identification



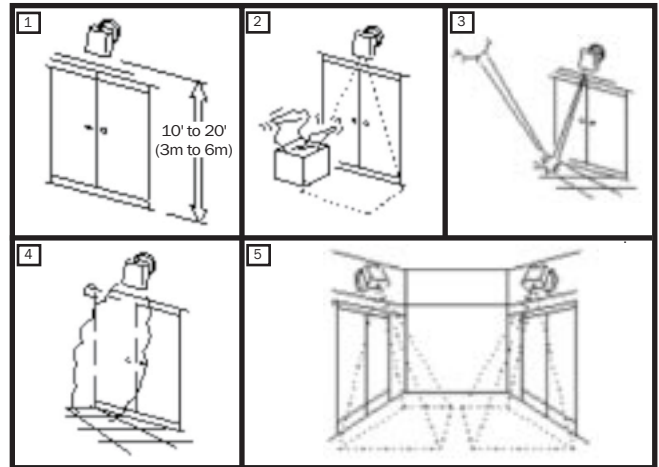
Accessories



Section 3

Mounting Information

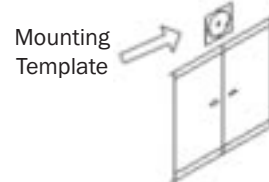
1. Only mount between 10 ft. (3m) and 20 ft. (6m). Dip Switch 9 must be set for appropriate height for proper operation.
2. Do not leave any objects which may move in the detection pattern.
3. Do not mount in an area where reflection of sunlight will shine on unit.
4. Do not mount in humid or steamy environments.
5. When using more than two units in proximity, use alternate frequency settings as shown (dip switch selectable freq. H, MH, ML or L).
6. The enclosure is rated IP55, however, we suggest mounting under an awning or soffet when possible.



Section 4

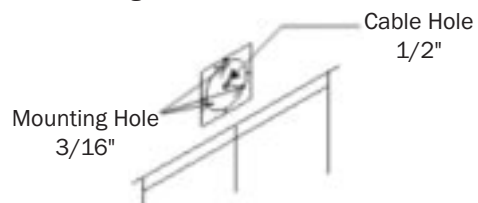
Mounting and Wiring

1. Stick the Mounting Template on the mounting position.



CAUTION: Mount DH17i to a medium which has little or no vibration.

2. Drill mounting and wire holes.

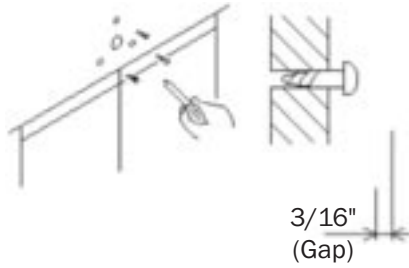


DH17i

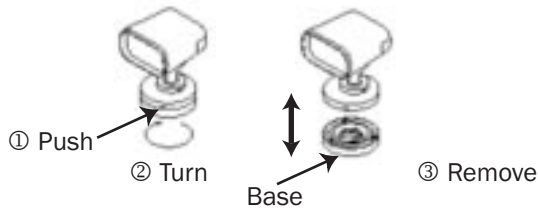
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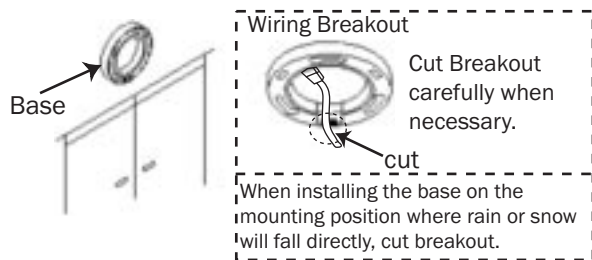
3. Remove the mounting template and insert the mounting screws in the holes as shown:



4. Remove the base from the DH17i.



5. Install the base on the mounting screws.



6. Remove the front panel from the DH17i.

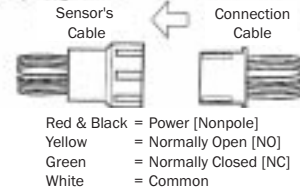


7. Set the desired parameters using dip switches and sensitivity adjustment provided. (Refer to Section 7)



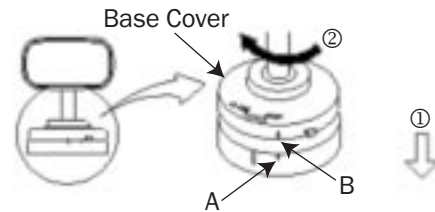
Attach front panel to the DH17i

8. Connect wiring. Push amp connectors tightly together.



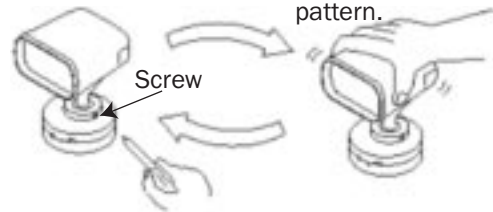
9. Attach the DH17i to the base.

- ① Set "B" slot mark to "A".
② Turn the base cover clockwise.



10. Adjust pattern left/right.

- ① Loosen lock screw. ② Adjust the left or right pattern.

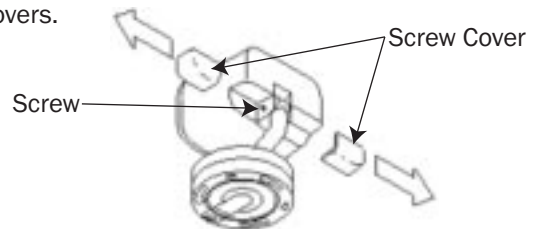


- ③ Re-tighten the screw.



CAUTION: When adjusting pattern left/right, damage may result if lock screw is not loosened first.

11. Adjusting the tip angle. Remove the screw covers from DH17i and loosen the screw. Make necessary adjustments, retighten screw and replace screw covers.



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Section 5

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.
- ⑤ TEST the presence feature, especially near the door.

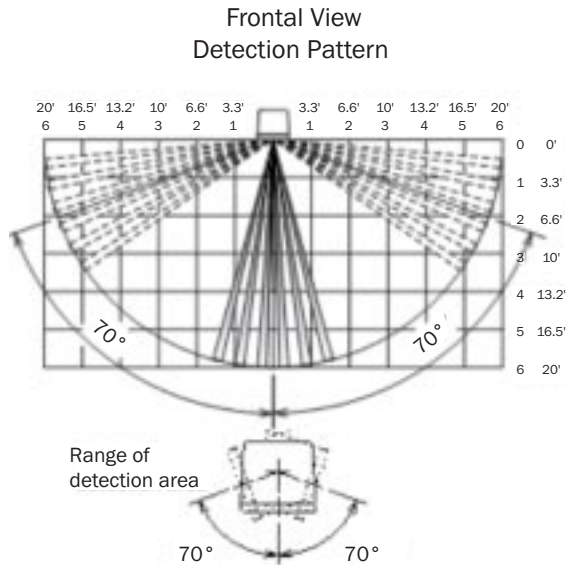
Before performing any of the following operations, ensure that power is OFF.

1. When replacing or cleaning mats in doorway.
2. When adjusting height and/or sensitivity settings.
3. When adjusting detection area.

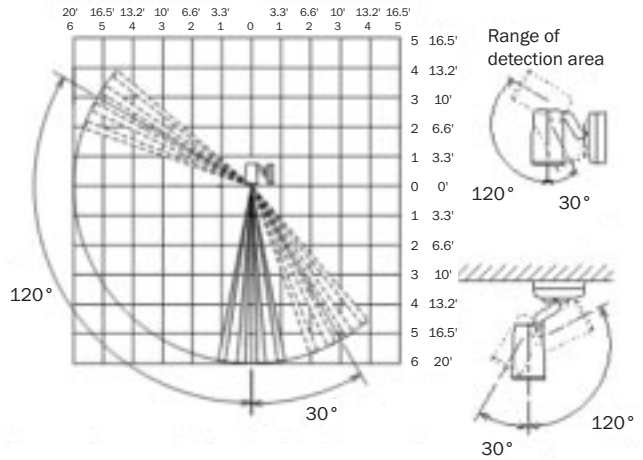
Section 6

Adjusting the Detection Pattern

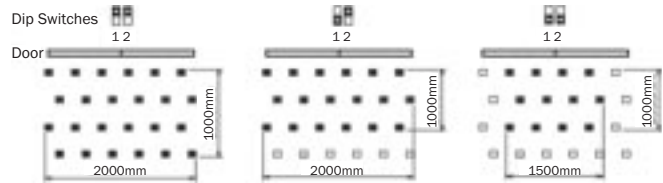
Adjust the detection pattern according to the following diagrams:



Side View
Detection Pattern

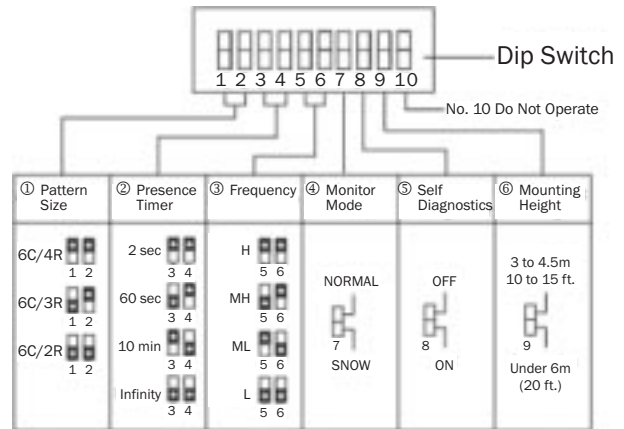


The diagrams show the detection pattern sizes when the sensor is mounted at **4m**. To adjust the pattern size, set the dip switches to the positions shown below.



Section 7

Dip Switch Settings



- ① **Pattern Size:** To adjust the detection area size, set dip switch 1 & 2. The DH17i 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 **Presence Timer:** Delay is adjustable using dip switch 3 & 4.

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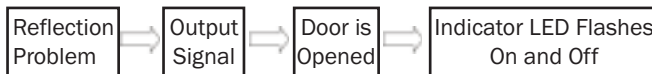
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- ③ **Frequency:** When two sensors are used in close proximity to each other, switch frequency settings to prevent interference (switch 5 & 6).
- ④ **Monitor Mode:** A Snow Mode is available using switch 7. Snow Mode should only be used in environments with heavy snowfall or other extreme conditions.
- ⑤ **Self Diagnostic:** Refer to Section 8.
- ⑥ **Mounting Height:** Set the Mount Height switch according to the installed height of the sensor.

Section 8

Self Diagnostic Mode

DH17i employs a Self Diagnostic Mode in which the sensor checks itself for abnormalities. If the unit should stop seeing reflected light for some reason, the relay will be active and the Indicator LED will flash on and off indicating failure.



Section 9

Troubleshooting

PROBLEM 1: Door does not open.

- CAUSE 1: Sensor Connector
SOLUTION 1: Tighten connector or reconnect
- CAUSE 2: Power Supply
SOLUTION 2: Check that the power supply is properly connected and 12 to 24V AC/DC

PROBLEM 2: Door operates intermittently.

- CAUSE 1: Sensor is very dusty or covered in water drops, etc.
SOLUTION 1: Clean the sensor (do not use thinner or alcohol to clean sensor)
- CAUSE 2: Sensitivity too low
SOLUTION 2: Turn up sensitivity
- CAUSE 3: Detection pattern in the wrong position
SOLUTION 3: Alter the detection pattern by changing sensor angle, dip switch settings and/or pattern width adjustments

PROBLEM 3: Door operates by itself

- CAUSE 1: Sensitivity too high
SOLUTION 1: Turn down sensitivity
- CAUSE 2: Another sensor is too close by

- SOLUTION 2: Change the frequency to each sensor (see Section 7 Dip Switch Settings)
- CAUSE 3: There is a cloth mat in the detection pattern
SOLUTION 3: Turn the sensor power off and then on again, and allow it 10 seconds
- CAUSE 4: The condition of the monitored area is varying (i.e., dusty, dirty, snow)
SOLUTION 4: The condition of the detection zone can change due to heavy dust or dirty, heavy snow or footprints being left in fresh snow. This may cause the door to open. Set the Presence Timer to a short time. (See Section 7 Dip Switch Settings)

Section 10

Technical Data

Model.....	DH17i Motion & Presence Sensor—High-Mount
Detection Method.....	Active Infrared Detection
Max. Installed Height.....	10 ft. (3m) to 20 ft. (6m)
Pattern Adjustments.....	Pattern Width (wide or narrow) Pattern Depth (4 or 3 rows) Angle Adjustment, Sensitivity and Frequency
Power Supply.....	12 to 24 V AC or DC \pm 10% Red & Black wires (nonpole)
Power Consumption.....	AC24V-2.8VA, AC12V-2.5VA DC24V-75mA, DC12V-150mA
Output Contact.....	Form C Relay: DC30V 2A (Resistor Load) Yellow Wire = Normally Open Green Wire = Normally Closed White Wire = Common
Output Holding Time.....	Approx. 0.5 seconds
Presence Timer.....	Limits of 2 sec., 60 sec., 10 min. or infinity
LED Indication.....	Indicator RED: Monitoring = ON, Detection = OFF, Function Self Diagnostic = Flash ON and OFF High Reflection Monitor LED (Red) Normal = OFF High Reflection = ON
Temperature Range.....	-4 °F to 131 °F (-20 °C to 55 °C)
Weight.....	0.75 lbs. (380g)
Color.....	Black
Accessories.....	Cable: 5 ft. (1.5m), Mounting Template, Installation Instruct.

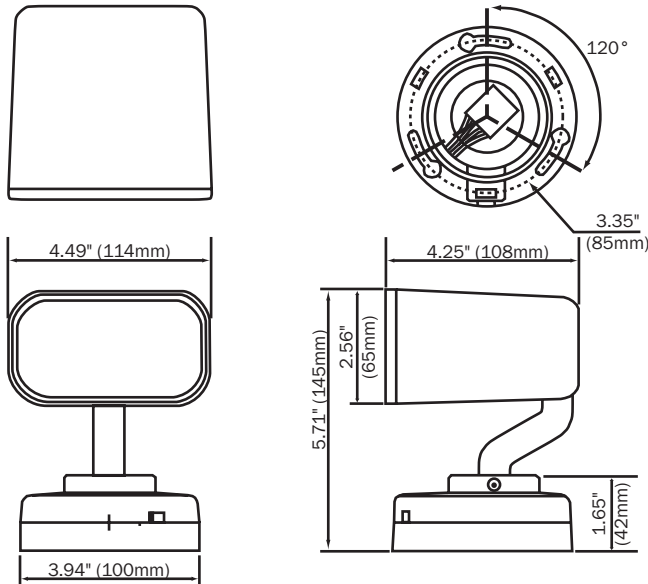
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Section 11

External Dimensions



Section 12

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 (Turn potentiometer clockwise to increase sensitivity or 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:

1. Place the proper labels on the door per all applicable standards.
2. Instruct the owner of the door system operation and how to test it. This should be checked on a daily basis.
3. Instruct the owner on what to do if the door or any of its components become damaged.
4. Strongly recommend to the owner that the complete entry be inspected twice a year as part of the service agreement.

Section 13

Warranty

MS Sedco guarantees this product to be free from manufacturing defects for 3 years from date of installation. Unless MS Sedco is notified of the date of installation, the warranty will be in effect for 3 years from the date of shipment from our factory. If, during the first 3 years, our motion detector or support device fails to operate and has not been tampered with or abused, the unit can be returned prepaid to factory and it will be repaired free of charge. After 3 years, the unit will be repaired for a nominal service charge. **This limited warranty is in lieu of all other warranties expressed or implied, including any implied warranty of merchantability, and no representative or person is authorized to assume for MS Sedco any other liability in connection with the sale of our products. All warranties are limited to the duration of this written warranty. In no event shall MS Sedco be liable for any special, incidental, consequential or other damages arising from any claimed breach of warranty as to its products or services.**