

TECHNICAL DATA

TYPICAL APPLICATIONS

- High Bay Aisle Way
- HID Bi-Level
- T-5 & T-8 Fluorescent

SENSOR HIGHLIGHTS

- Patented High Bay Sensor
- Up to 45' Mtg, 50° Coverage
- Aisle Way Sensing Pattern
- Optional Isolated SPDT Relay

FEATURES

- Time Delay: 30 sec. to 20 minutes
- Optional Start-to-High Timer:
0 to 20 minutes
- Green LED Indicator

SPECIFICATIONS

- Size: Rectangular, 4.96" x 3.1" x 1.6"
- Sensor Weight: 7 Ounces
- Sensor Color: White
- Mounting: Single Gang Handy Box
- Relative Humidity: 20 to 90%
non-condensing
- Operating Temp: 14° to 160° F
- Storage Temp: -14° to 160° F
- UL and CUL Listed
- 5 Year Warranty
- Made in U.S.A.

LOW TEMP/HI HUMIDITY(-LT)

- Conformally Coated PCB
- Operates down to -40° F
- Corrosion resistant from moisture

HM-50 Series



HM-50
Fluorescent



HM-50-SH
HID Bi-Level

High Bay Aisle way sensing from 70 to 110 feet when mounted 30 to 45 feet is provided in this bi-directional sensor. HID Bi-Level, or Fluorescent systems are switched through remote power packs. The *HM-50-SH* controls Bi-Level HID with a Start to High ("STH") timer, whereas the *HM-50* is simpler and controls individual fluorescent fixtures. The view pattern provides typical coverage of up to 3 High Bay fixtures. When controlling each fixture, lighting on both sides of the occupancy area is provided. Some "Program Start Ballasts" have such a delay, that when traveling in a fork-lift truck, lighting ahead needs to be initiated to "On" allowing proper performance. Masking of the sensor for "End of Aisle" cut-off is easily done with the enclosed kit. For freezer or high humidity applications, use the *HM-50-LT* or *HM-50-SH-LT* which allows for cold temperatures or condensing humidity. For total aisle way sensing consider the HM-10 at each end, and *HM-50's* in the center section.

SENSOR OPERATIONS

The *HM-50* typically operates with a PP-20 or MP-20 Power Pack. However, this unique sensor accepts 12 to 24 volts AC or DC (Red & Black wires), and outputs the DC component (White wire). When occupancy is detected, the output goes high and can drive up to a 200 mA of connected load. When used with the Power Packs, complete 20 amp circuits can be controlled. The *HM-50* detects changes in the Infrared energy given off by occupants as they move within the sensors field-of-view. An internal timer in the sensor, typically set at 10 minutes, keeps the lights "On" during periods of no activity. This state-of-the-art design allows the sensor to adapt to it's environment, eliminating the need for manual field adjustments.

HID BI-LEVEL FIXTURES (HM-50-SH)

The HID Bi-Level fixture must provide it's own interposing relay for switching the capacitor in the ballast from "High" to "Low". The "Start to High" timer must be used. This is a warm-up period for HID lighting loads. It is adjustable from zero to 20 minutes. This sensor also offers override switches on the front of the unit. With the right switch in the down position, the sensor is in the ON mode. This is used for the initial burn time on the HID lamps. With the left switch in the down position; the sensor is in the OFF mode. With both switches in the up position the sensor is in the AUTO mode. With both switches in the down position, the sensor remains in the OFF mode because OFF overrides ON.

FLUORESCENT FIXTURES

The *HM-50* sensor does not include the Start to High timer, or both override switches since these features are used for HID only.

PASSIVE INFRARED DETECTION TECHNOLOGY

The *HM-50* views in both directions, however PIR detects occupants crossing the beams better than walking directly at the beams. At the end of the Aisle, half of the sensor should be masked (see masking kit) and mounted right at the entrance, or HM-10 sensors should be used. Attempting to use one *HM-50* in the center of an aisle to detect exactly at apposing entrances can be done, but is not advised or practical.

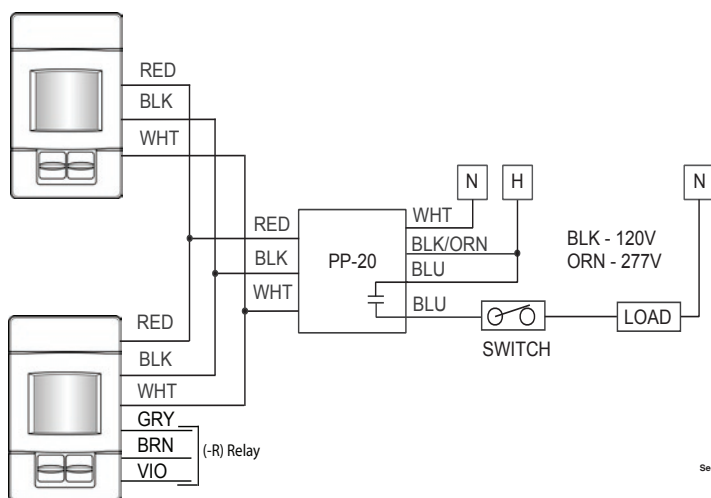
CATALOG INFORMATION

MODEL #	DESCRIPTION	TEMPERATURE	OP. VOLTAGE	CURRENT
HM-50	Passive Infrared High Mount Sensor	14° to 160° F	12 to 24 VAC/VDC	3 mA
Add suffix				
-R	SPDT Relay, 1 amp		12 to 24 VAC/VDC	13 mA
-SH	Start to High Timer & Override Switches			
-LT	Low Temp/High Humidity	-40° to 160° F		

INPUT/OUTPUT

Wire lead connections are Class II, 18 to 22 AWG. The *HM-50* uses 3 leads (Red, Black, and White); the Relay Option adds 3 leads (Brown, Gray, and Violet). The wire colors are as follows:

TYPICAL WIRING DIAGRAM - DO NOT WIRE HOT



STANDARD HM-50

RED-12 to 24 VAC/VDC

BLACK-Common

WHITE-Output (HI DC for Occupancy)

RELAY OPTION HM-50-R

BROWN-Center tap of relay(SPDT)

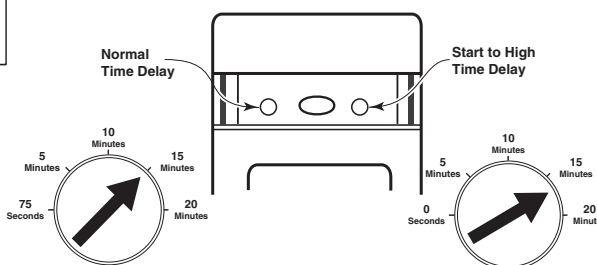
GRAY-During Occupancy Contacts Closed

VIOLET-During Occupancy Contacts Open

INTERNAL LOW VOLTAGE RELAY OPTION

Dry Contact Closure (-R) is provided through a SPDT, 1 amp, 40 volt relay. Relay coil is energized changing state when ALL sensors connected register "Unoccupied". Only one sensor per zone (if multiple sensors) needs to have this relay. Sensor must be powered from either a Power Pack, or Class 2 transformer.

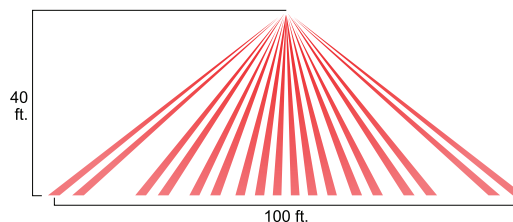
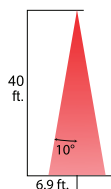
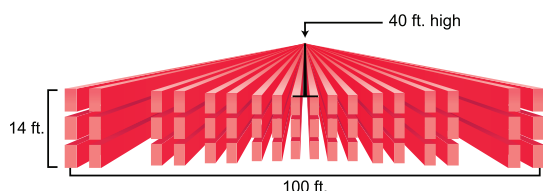
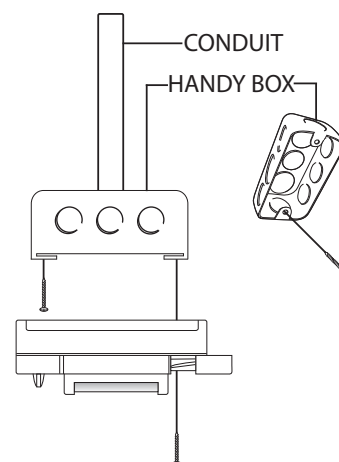
TIME DELAY ADJUSTMENTS



MOUNTING CONSIDERATIONS FOR HM-50

The *HM-50* mounts to a standard switch or single-gang handy box. These sensors view 50° side to side, and 10° wide. The sensor is designed to mount up to 45 feet. A typical mounting of 40 feet provides a distance of 100 linear feet, 50 feet in each direction. The sensor will view slightly farther left or right than the mounting height. The masking kit enclosed may be used to limit the view in either direction. The view pattern shown is for "walking motions" only.

Note: To determine the approximate distance in each direction, multiply the mounting height by 1.2.



WARRANTY: Sensor Switch, Inc. warrants these products to be free of defects in manufacture and workmanship for a period of sixty months. Sensor Switch, Inc., upon prompt notice of such defect will, at its option, provide a Returned Material Authorization number and a replacement product.

LIMITATIONS AND EXCLUSIONS: This Warranty is in full lieu of all other representation and expressed and implied warranties (including the implied warranties of merchantability and fitness for use) and under no circumstances shall Sensor Switch, Inc. be liable for any incidental or consequential property damages or losses.

sensor switch

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