Wattstopper®

HBLx Lens Modules for the HB3xx Series of High Bay Occupancy Sensors

No: 24804 – 04/22 rev. 1

Lens Coverage Guide

Catalog Numbers: HBL1, HBL1M, HBL2, HBL2W, HBL3, HBL3W, HBL7, HBL7W

Country of Origin: Made in China

DESCRIPTION AND OPERATION

The HB3xx-Lx series of occupancy sensors are modular, and are made up of two parts: a Power Module and a Lens. The Power Module is selected according to the type of power available in the installation, and the desired operational features. The Lens is selected based on the coverage desired for the sensor application.

NOTE: The HBL2W, HBL3W and HBL7W are wet-rated. The HBL1,HBL1M. HBL2, HBL3 and HBL7 are not.

Sensors must directly “see” motion of an occupant to detect them, so careful consideration must be given to sensor placement. Avoid placing the sensor where shelving or other obstructions may block the sensor’s line of sight.

This document describes the coverage patterns available with each Lens. Coverages shown in the diagrams are maximum. They represent coverage for full-step walking motion, with no barriers or obstacles.

See the Power Module Installation Instructions for a complete description of the assembled unit installation, wiring, and safety information.

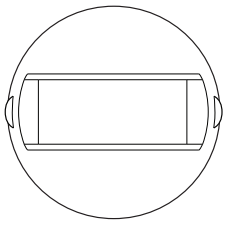
PASSIVE INFRARED SENSING IN WAREHOUSES

Warehouses can have ambient temperature variations that may affect sensor detection and coverage areas. High temperatures at the covered area (above 89-92°F) reduce the detection zone of the sensor. Consider adding more sensors if the ambient temperatures are expected to be high. Additionally, high floor level temperature may require larger movement for detection. In some cases, sensors mounted above 40’ may only detect large heat signatures such as forklift trucks.

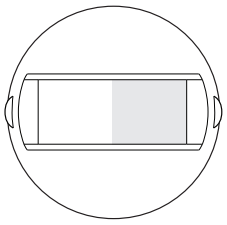
SPECIFICATIONS

Operating Temperature .....32° to 131°F (0° to 55°C)

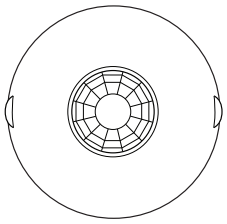
US Patents: 4,787,722 • 4,874,962 • 5,124,566



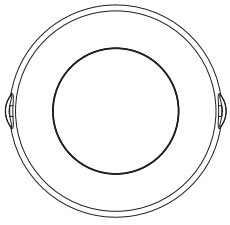
HBL1 Lens



HBL1M Lens



HBL2, HBL2W, HBL3, and HBL3W Lenses



HBL7 and HBL7W Lenses

COVERAGE

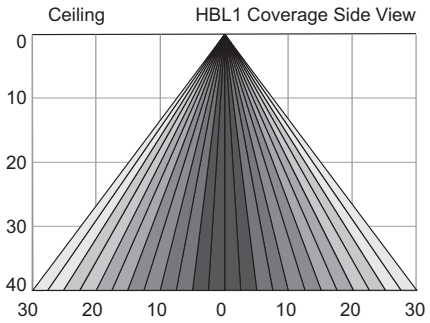
HBL1 and HBL1M: Linear Aisleway Coverage

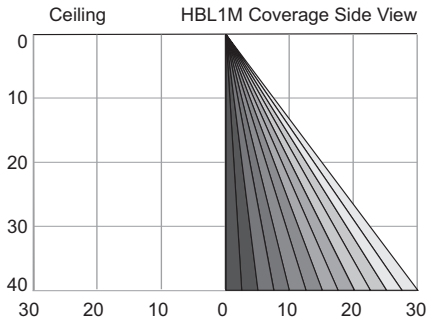
The HBL1 lens is best suited for high ceiling aisleway applications.

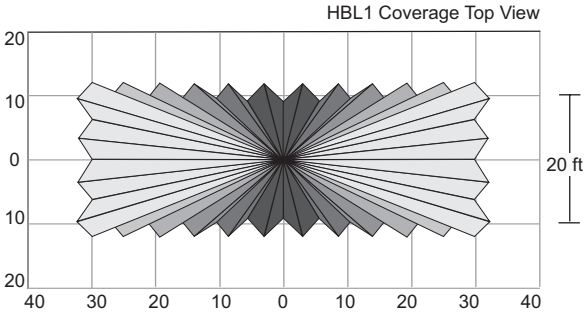
The HBL1 Fresnel lens is designed to detect walking motion when mounted at 40’ above the floor. When mounted at 40’, in optimal conditions, the HBL1 has a 60’ linear detection range.

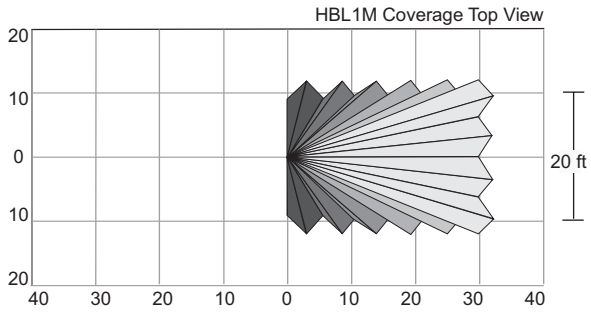
Identical to the HBL1, the HBL1M comes with opaque adhesive tape applied to the interior of the lens, cutting off 1/2 of the coverage pattern. This customized coverage is ideal for the beginning of aisle ways where cross traffic could be an issue.

Coverage@ 40’ height: 60’ x 20’ for HBL1, 30’ x 20’ for HBL1M





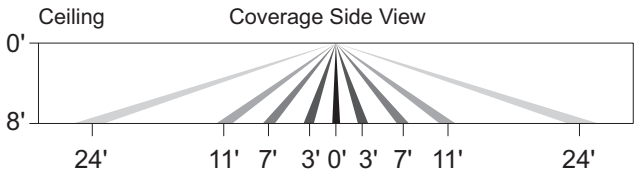


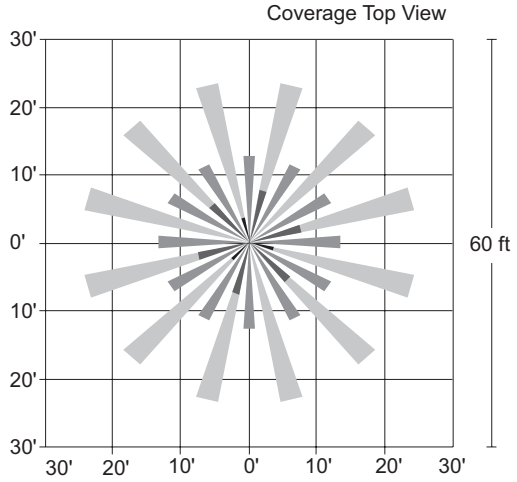


HBL2 and HBL2W: 360° Coverage

The HBL2 and HBL2W lenses are best for open area coverage in a low bay. These lenses have multi-cell, multi-tier Fresnel lenses with a 360° view. The HBL2W is designed for wet environments.

These lenses cover a 48' diameter area at a height of 8'. As shown in the coverage diagrams, the outer detection tiers are only effective at a mounting height of 10' or less.

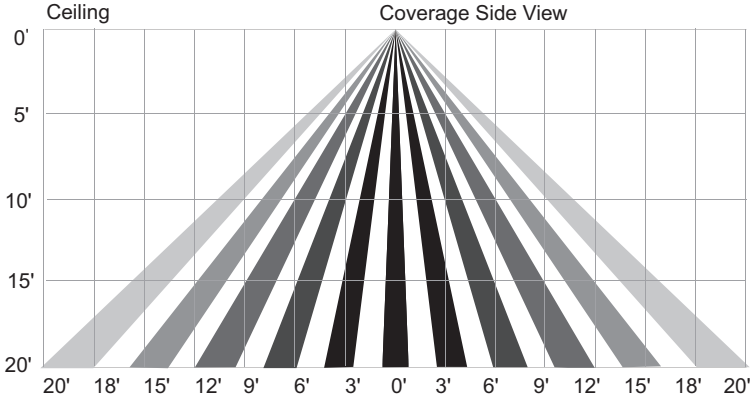


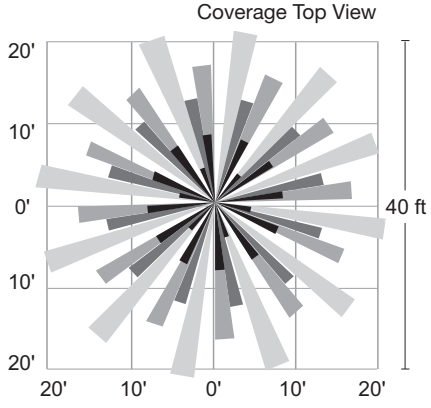


HBL3 and HBL3W: 360° Coverage

The HBL3 and HBL3W lenses are best for open area coverage in a mid bay. These lenses have multi-cell, multi-tier Fresnel lenses with a 360° view. The HBL3W is designed for wet environments.

These lenses cover a 40' diameter area at a height of 20'. As shown in the coverage diagrams, the outer detection tiers are only effective at a mounting height of 10' or less.



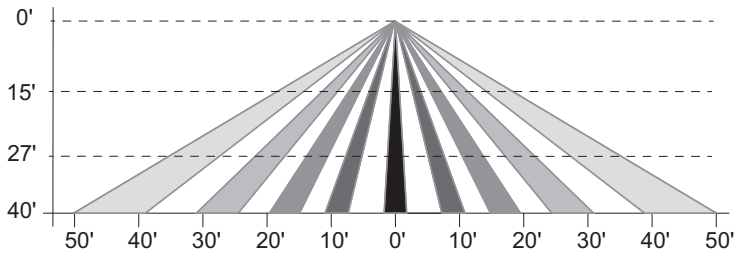
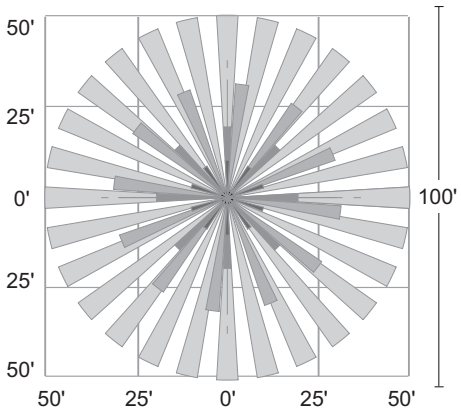


HBL7 and HBL7W: 360° Coverage

The HBL7 and HBL7W lenses are designed for mounting in a high bay The HBL7W is designed for wet environments.

These lenses cover a 100’ diameter area at a height of 40’.

Coverage Side View



Coverage Top View