

# Daintree® Wireless Controls

## WHS20 Wireless Sensor

Project Name \_\_\_\_\_

Date \_\_\_\_\_ Type \_\_\_\_\_

Catalog Number \_\_\_\_\_

## Description

The **Daintree® Wireless High-Bay Sensor (WHS20)** is a sensing and control module within the Daintree wireless building control solution. It enables standalone or networked control of individual luminaires. The WHS20 provides cost-effective occupancy and ambient light detection with full range dimming. An optional built-in BLE beacon with Apple® iBeacon™ technology can be used for position and proximity detection.

The WHS20 Control Module is equipped with a passive infrared (PIR) sensor for Occupancy Detection and an ambient light sensor for Ambient Light Detection to adjust the luminaire based on external light levels from daylight and other fixtures to ensure consistent lighting at the task level. With innovative methodology, Occupancy and Ambient Light Detection can be synchronized to provide dynamic continuous dimming performance to maximize energy efficiency.

Available in both a bottom mount and side mount version, the WHS20 is an extremely versatile solution for a wide range of fixture types including low, mid, and high bay luminaires. Perfect for industrial warehouses and racked aisles, the WHS20 has an optional snap-on aisle mask for directed occupancy detection that makes for simple and easy installation. With a wide operating temperature range, the WHS20 is well suited for more demanding environments such as manufacturing spaces, high bay retail, warehouses and parking garages.

Lighting parameters can be customized to fit with the lighting strategy of the building by operating in one of the following modes:

- 1) As **Daintree® ONE** standalone control module with occupancy and ambient light detection, configured with the Daintree Wireless Handheld Remote (WHR1)
- 2) As **Daintree® EZ Connect** zonal based control with occupancy and ambient light detection, configured with the **Daintree® EZ Connect** app, available for download on the Apple® App Store.
- 3) As a component of the **Daintree® Networked** solution - a highly scalable system for lighting and building control, monitoring, and optimization.

**Note:** Sensor can be upgraded from Daintree ONE to the other Daintree platforms with an Over-the-Air (OTA) firmware update.

When commissioned in EZ Connect mode the WHS20 sensor provides luminaire level lighting control in case of a network communication issue. In this case, the background mode becomes a two-step dimming operation.



Occupancy



Daylighting



OTA Updates  
& Control



# Daintree® | Wireless High Bay Sensor (WHS20)

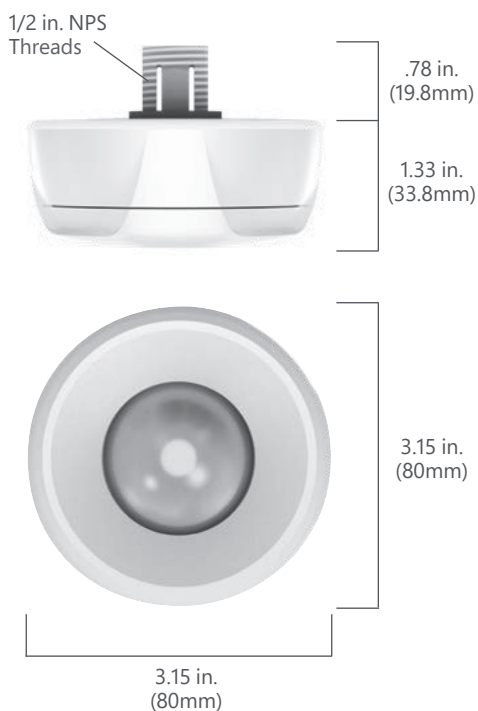
## Ordering Information

WHS20 sensors are available in Albeo High Bay Fixtures. For current catalog logic please reference the Albeo cut sheets for availability

Catalog #	Material #	Description	Quantity
WHR1	93131632	Wireless Handheld Remote	1
	93134984	Snap On Aisle Mask	1
	93134985	Snap On Aisle Mask	10
	93134982	Internal Mount Aisle Mask	1
	93134983	Internal Mount Aisle Mask	10
	93134996	Angle Adjuster	1
	93134997	Angle Adjuster	10
	93134998	Low Lens	1
	93134999	Low Lens	10
	93135000	Medium Lens	1
	93135001	Medium Lens	10
	93135002	High Lens	1
	93135003	High Lens	10

## Product Dimensions

Bottom Mount



Side Mount



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## Specifications

Occupancy Detection	PIR
Ambient Light Detection	ALS
Wireless Technology	Based on the 802.15.4 standard
Radio	2.4GHz +10dBm transmit power
BLE Beacon	iBeacon™
Driver Compatibility	Digital Addressable (DA) Digital Power Bus
Power Consumption	< 0.5Wz
DA Input	24VDC, 250mA Max
LED Indicators	Green: Occupancy Detection Red: Off for Normal Operation
Lenses	2.5m, 6m, and 12m (8ft, 20ft, and 40ft) 360° or Aisle
Operating Environment	-40°C to +70°C (-40°F to +158°F) 5 to 90% RH, Non-Condensing
Enclosure	NSF, IP66 and IP69K Rated (when installed in similarly rated fixture)
Compliance	FCC Part 15 FCC ID: QOQMGM12PO IC ID: 5123A-MGM12PO CAN ICES-3 (B)/NMB-3(B) UL Listed: E337125
Warranty	5 Years

## Labels

Every WHS20 includes the necessary labels for Daintree Networked commissioning.

### Unit Label

WHS20 comes with unit label affixed.



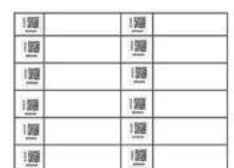
### Fixture Label

When attaching WHS20 to a fixture, attach fixture label to the fixture and visible to maintain regulatory compliance.



### Plan Label

The plan label is useful for attaching to a paper facility map or tracking sheet.



# Daintree® | Wireless High Bay Sensor (WHS20)

## WHS20 Commissioning

Daintree WHS20 sensors can be ordered and commissioned in **Daintree® ONE** Stand alone mode, when ordered with Albeo fixtures using "FB" controls catalog logic. **Daintree® EZ Connect** provides zonal based control of Daintree sensors with "DF" controls catalog logic and can be commissioned with the **Daintree® EZ Connect** app available on the Apple® App Store. Full featured scheduling and monitoring is capable with the **Daintree® Networked** platform when ordered with the "NA" catalog logic. Commissioning and upgrading to **Daintree® Networked** is capable via an OTA firmware upgrade by using the Daintree WHR1 Remote.

## Daintree One® Default Performance

When in standalone **Daintree® ONE** mode, the default operation of the WHS20 is as follows:

### Occupancy Detection

Occupied Output	100%
Idle Output	10%
Vacant Output	Off
Occupied Time	15m
Idle Time	15m
Occupancy Sensitivity	High
Transition Rise Time	Instant
Transition Fall Time	5s

### Ambient Light Detection

Low Ambient Threshold	2.5x
High Ambient Threshold	3.5x
High Ambient Output	Off
Ambient Light Sensitivity	Medium
Ambient Transition Time	1m

### Dimming Function

Max Dim Output	100%
Min Dim Output	10%
Min Output	OFF

Available in the following **Albeo® Luminaires ABV Series** and **ABN Series**. For a complete list of fixtures with Integrated Fixtures, please download our Integrated Fixture Guide at [gecurrent.com](http://gecurrent.com)



ABV Series



ABN Series

# Daintree® | Wireless High Bay Sensor (WHS20)

## Daintree EZ Connect Mode - Default Performance

Name	Description	Minimum Value	Maximum Value	Default Profile Value
<b>Settling Time</b>	The time (measured in sec) that occupancy must be detected for a fixture to transition from Background state to Task state.	0 sec	300 sec	5 sec
<b>Hold Time</b>	The time (measured in minutes) that occupancy must NOT be detected for a fixture to transition from Task state back to Background state.	0 min	60 min	10 min
<b>Group Hold Time</b>	The time (measured in minutes) that any fixture in a room or zone of fixtures must NOT detect occupancy for the entire of fixtures to transition from Background state to Standby state.	0 min	60 min	10 min
<b>Grace Time</b>	Set to 0 for Automatic-Detection mode. Otherwise, the room is programmed to operate in Vacancy-Detection Mode, and the fixture will transition from the Standby state to the OFF state if occupancy is NOT detected within the Grace Time (measured in seconds).	0 sec	30 sec	0 sec
<b>Partial Off/Standby</b>	The output power level in Standby state – in percentage of the full power.	0%	100%	0%
<b>Background Level</b>	The output power level in Background state – in percentage of the full power.	0%	100%	50%
<b>Task Level</b>	The output power level in Task state – in percentage of the full power.	0%	100%	100%
<b>Daylight Harvesting</b>	This parameter enables the Daylight Harvesting functionality.	0 (OFF)	1 (ON)	1 (ON)
<b>Low Ambient Output</b>	The light level above which daylight harvesting dimming will start, given as a percentage of the fixture's own light output.	10%	800%	300%
<b>High Ambient Output</b>	The light level above which daylight harvesting dimming will start, given as a percentage of the fixture's own light output.	OFF	ON	OFF
<b>Occupancy Sensitivity</b>	The sensitivity of the motion sensor. between 1 (lowest) and 5 (highest).	1 (lowest)	5 (highest)	5 (highest)
<b>Occupancy Indicator</b>	This parameter switches between Indicator OFF (0) Indicator ON (1) mode.	OFF	1 (ON)	1 (ON)

## Daintree® Networked Mode - Default Performance

When in **Daintree® Networked** mode, the default operation is as follows:

### Default Operation

- The WHS20 will keep the luminaire on at the Max Dim Output until commissioned.

### Daintree® Network Connected

#### Not Commissioned

- The WHS20 will still keep the luminaire on at Max Dim Output setting.

#### Commissioned to a Zone

- The WHS20 will follow the zone control of the Daintree Network, configurable via ControlScope software.

### Daintree® Networked Connection Lost

- The WHS20 will return the luminaire to Max Dim Output after a period of lost connection.
- Once connection is restored, the WHS20 will return to the zone control configurable via Daintree ControlScope software.

# Daintree® | Wireless High Bay Sensor (WHS20)

## Accessories

Accessories are available for customization and can be ordered separately.



### Aisle Mask (Snap On)

SKU	QTY
93134984	1 PC
93134985	10 PC



### Aisle Mask (Internal)

SKU	QTY
93134982	1 PC
93134983	10 PC



### Angle Adjuster

SKU	QTY
93134996	1 PC
93134997	10 PC



### Low Lens

SKU	QTY
93134998	1 PC
93134999	10 PC

Mounting Height: 2.5m (8 ft.)



### Medium Lens

SKU	QTY
93135000	1 PC
93135001	10 PC

Mounting Height: 6m (20 ft.)



### High Lens

SKU	QTY
93135002	1 PC
93135003	10 PC

Mounting Height: 12m (40 ft.)



## Convenient Commissioning

WHR1 is the **Daintree® ONE** Wireless Handheld Remote control that provides easy commissioning of Control Modules from the ground with bi-directional IR communication. The interface is intuitive and graphical to make configuration easy in the field.

For zonal control of your Albeo High Bay Fixtures, use the **Daintree® EZ Connect** app. The app allows you to group fixtures into zones and customize the settings of the fixtures. The zoned fixtures will work in concert with each other based on parameters set in the app depending on occupancy and light level detection.

Effortlessly upgrade your Daintree® devices from **Daintree® ONE** to **Daintree® Networked** utilizing the WHR1. See WHR1 spec sheet for additional details.



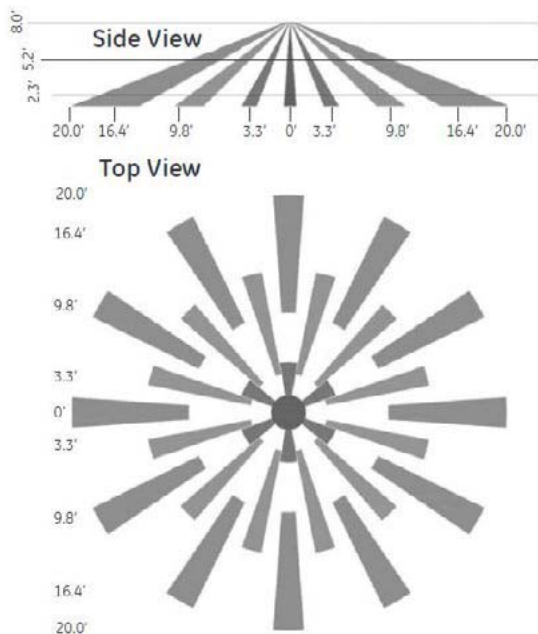


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Coverage patterns for different lens and mounting heights.

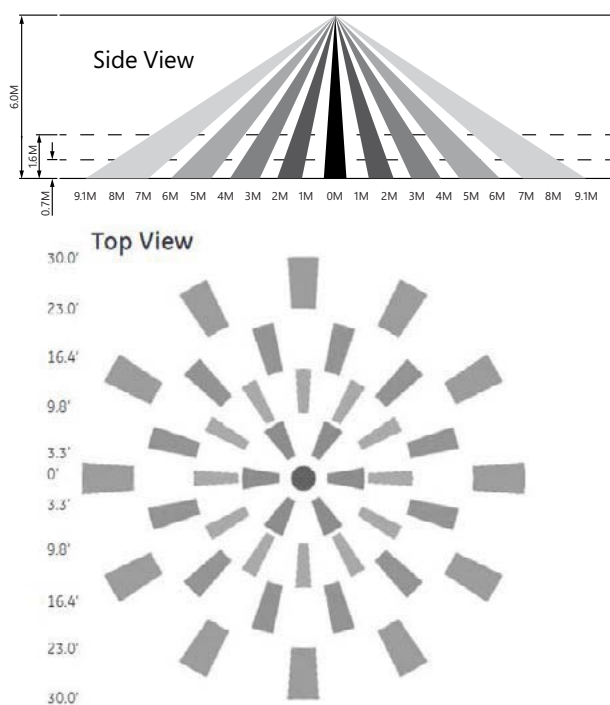
## Low Lens: 2.5m (8ft)

20ft Radius/40ft Diameter



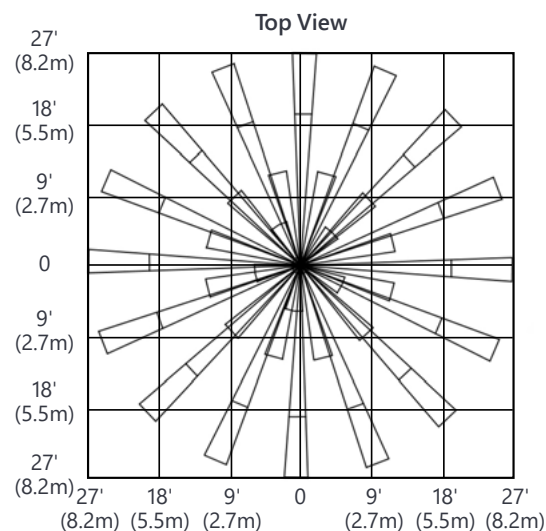
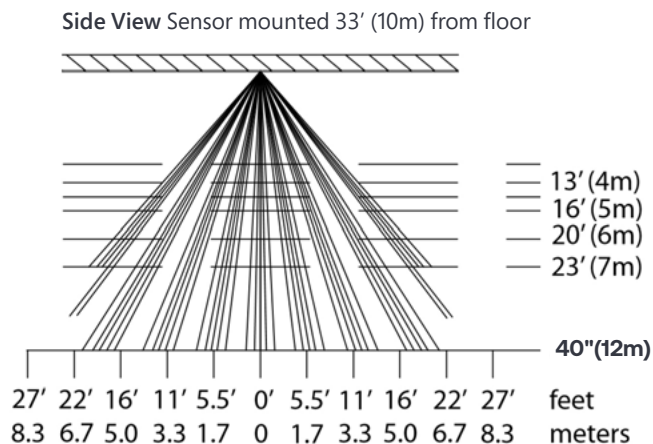
## Med Lens: 6m (20ft)

30ft Radius/60ft Diameter



## High Lens: 12m (40ft)

27ft Radius/54ft Diameter



The WHS20 comes with the High Lens as standard.  
Low and Medium lenses can be ordered separately.

PIR sensor coverage tested as per NEMA WD7-2011