



HYTRONIK HBHC25 PIR Standalone Motion Sensor Instruction Manual

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HYTRONIK®

HBHC25 HBHC25/R
HBHC25/H HBHC25/RH
Installation and Instruction Manual
PIR Standalone Motion Sensor with  Bluetooth® 5.0 SIG Mesh
Two DALI Channels Output

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Technical Specifications

Operation frequency	2.4 GHz – 2.483 GHz
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Transmission power	4 dBm
Range (Typical indoor)	10~30m
Protocol	5.0 SIG Mesh
Stand-by power	<1W
Operating voltage	220~240VAC 50/60Hz
DALI Channel 1	30mA, Max. 15 LED drivers
DALI Channel 2	50mA, Max. 25 LED drivers
Sensor principle	PIR detection
Detection range (Max.)*	Installation height: 6m
HBHC25	Detection Range (Ø) :9m
Detection range (Max.)*	Installation height: 6m
HBHC25/R	Detection Range(Ø) :10m
Detection range (Max.)*	Installation height 15m (forklift) 12m (person)
HBHC25/H	Detection range (Ø) 24m

Detection range (Max.)*	Installation height 15m (forklift) 12m (person)
HBHC25/RH	Detection range (Ø) 40m
Detection angle	360°
Operation temperature	Ta:-20°C~+50°C
IP rating	IP20
EMC standard (EMC)	EN55015, EN61000, EN61547
Safety standard (LVD)	EN60669-1/-2-1 AS/NZS60669-1/-2-1
RED	EN300328, EN301489-1/-17
Certification	CB, CE, EMC, RED, RCM

Download the App

Free App for set-up and commissioning

Bluetooth 5.0 SIG mesh



Koolmesh Pro for iPad



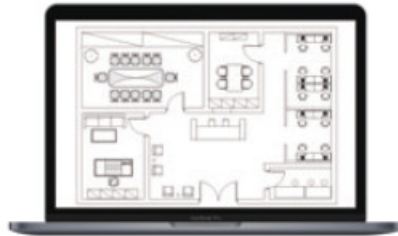
for iOS



for Android



for iPad



for Web

<https://apps.apple.com/cn/app/koolmesh/id1570378349>

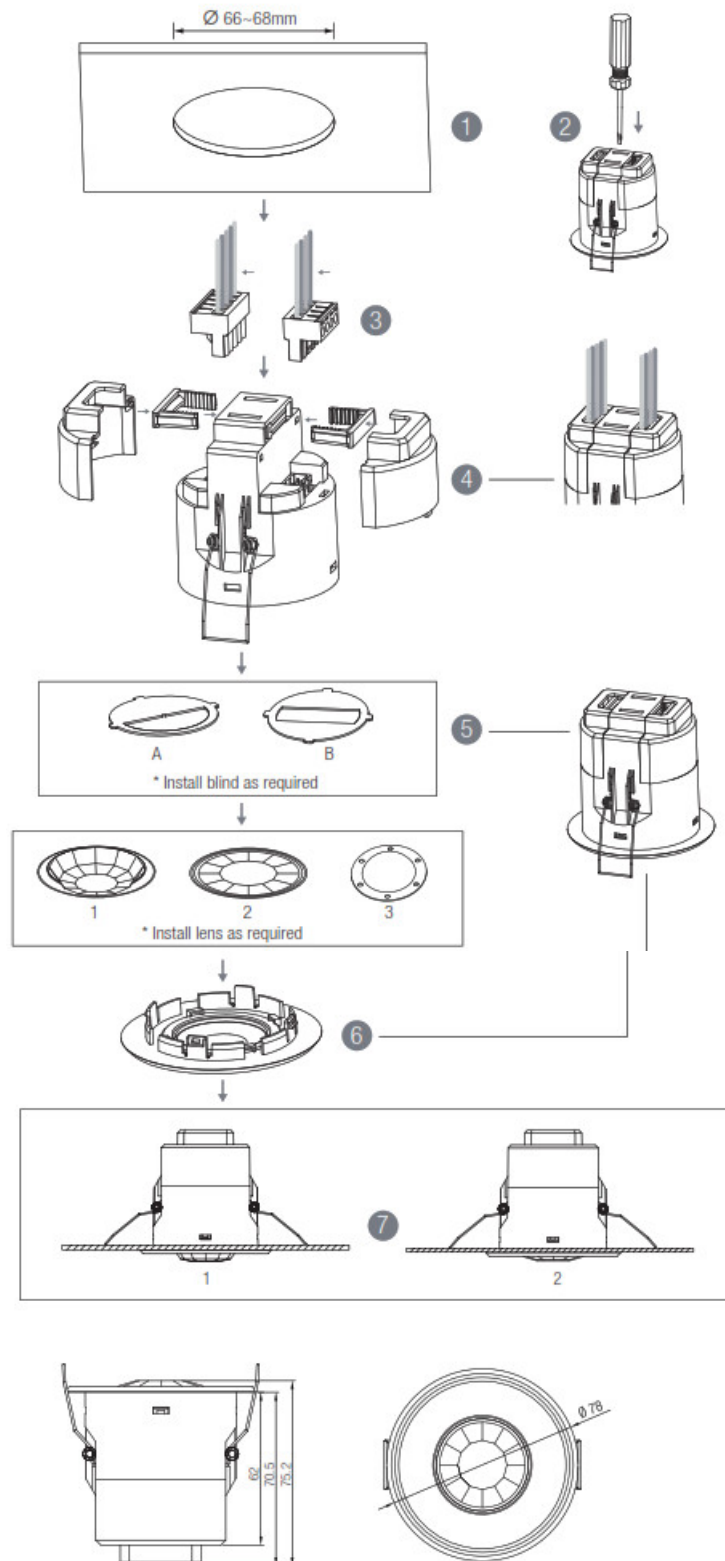
<https://apps.apple.com/cn/app/koolmesh/id1483721878>

www.hytronik.com

Web app/platform: iot.koolmesh.com

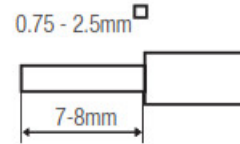
Installation

Mechanical Structure & Dimensions



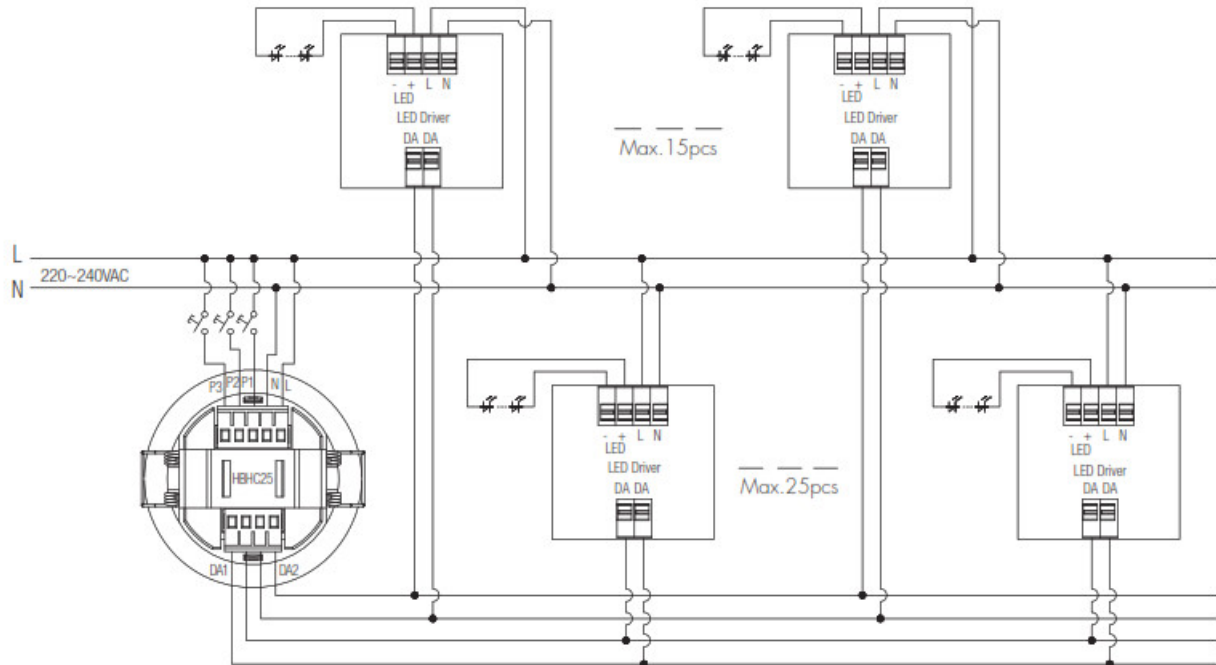
1. Ceiling (drill hole $\phi 66\sim 68\text{mm}$)
2. Carefully prise off the cable clamps.
3. Make connections to the pluggable terminal blocks.
4. Insert plug connectors and secure using the provided cable clamps, then clip terminal covers to the base.
5. Fit detection blind (if required) and desired lens.
6. Clip fascia to the body.
7. Bend back springs and insert them into the ceiling.

Wire Preparation



Pluggable screw terminal. It is recommended to make connections to the terminal before fitting to the sensor.

Wiring Diagram



Dimming Interface Operation Notes

Switch-Dim

The provided Switch-Dim interface allows for a simple dimming method using commercially available non-latching (momentary) wall switches. Detailed Push switch configurations can be set on the Koolmesh app.

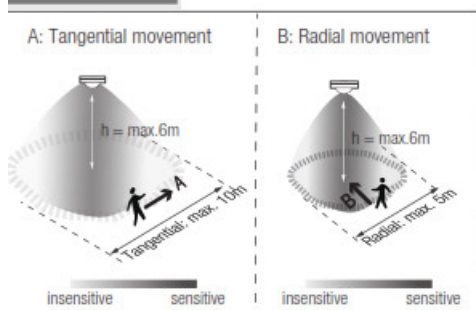
Switch Function	Action	Descriptions
Push switch	Short press (<1 second) * Short press has to be longer than 0.1 s. or it will be invalid.	<ul style="list-style-type: none"> – Turn on/off – Recall a scene – Turn on only – Exit manual mode – Turn off only – Do nothing
	Double push	<ul style="list-style-type: none"> – Turn on only – Exit manual mode – Turn off only – Do nothing – Recall a scene
	Long press (1 second) – Colour tuning	<ul style="list-style-type: none"> – Dimming – Do nothing
Simulate sensor	/	– Upgrade a normal on/off motion sensor to a Bluetooth controlled motion sensor

Detection Pattern & Optional Accessories

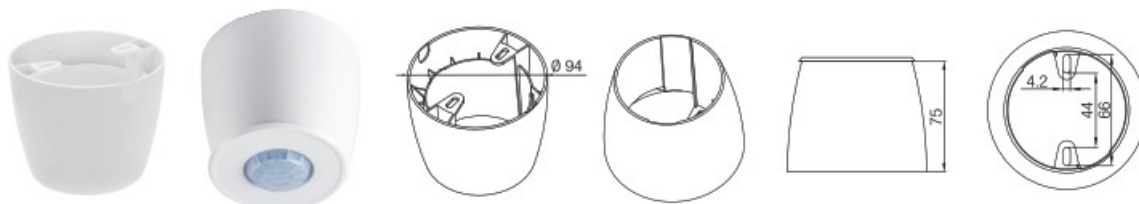
1. HBHC25 (Low-bay)

HBHC25: Low-bay flat lens detection pattern for single person @ Ta = 20°C
(Recommended ceiling mount installation height 2.5m-6m)

Mount height	Tangential (A)	Radial (B)
2.5m	max 50m ² (Ø = 8m)	max 13m ² (Ø = 4m)
3m	max 64m ² (Ø = 9m)	max 13m ² (Ø = 4m)
4m	max 38m ² (Ø = 7m)	max 13m ² (Ø = 4m)
5m	max 38m ² (Ø = 7m)	max 13m ² (Ø = 4m)
6m	max 38m ² (Ø = 7m)	max 13m ² (Ø = 4m)



Optional Accessory --- Ceiling/Surface Mount Box: HA03



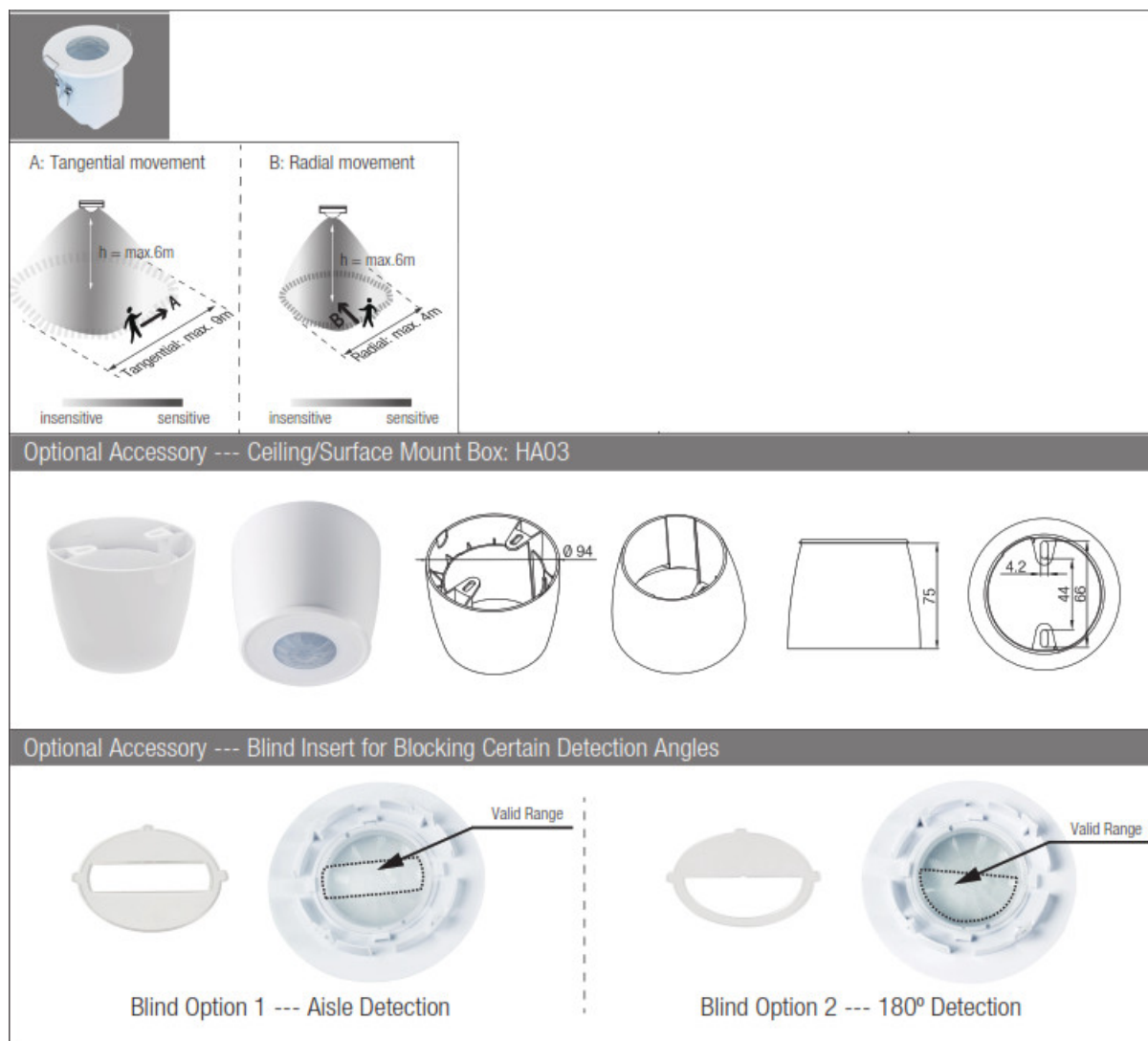
Optional Accessory --- Blind Insert for Blocking Certain Detection Angles



2. HBHC25/R (Reinforced Low-bay)

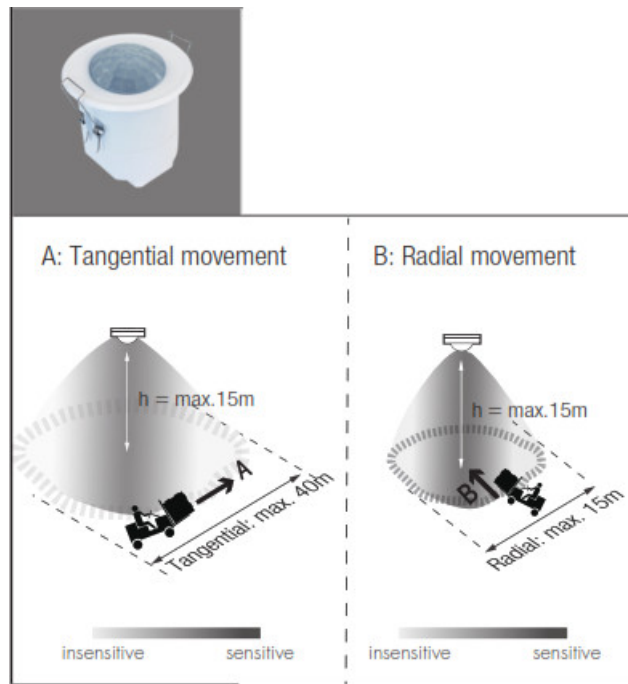
HBHC25/R: Low-bay convex lens detection pattern for single person @ Ta = 20°C
(Recommended ceiling mount installation height 2.5m-6m)

Mount height	Tangential (A)	Radial (B)
2.5m	max 79m2 ($\varnothing = 10m$)	max 20m2 ($\varnothing = 5m$)
3m	max 79m2 ($\varnothing = 10.1m$)	max 20m2 ($\varnothing = 5m$)
4m	max 64m2 ($\varnothing = 9m$)	max 20m2 ($\varnothing = 5m$)
5m	max 50m2 ($\varnothing = 8m$)	max 20m2 ($\varnothing = 5m$)
6m	max 50m2 ($\varnothing = 8m$)	max 20m2 ($\varnothing = 5m$)



3. HBHC25/H (High-bay)

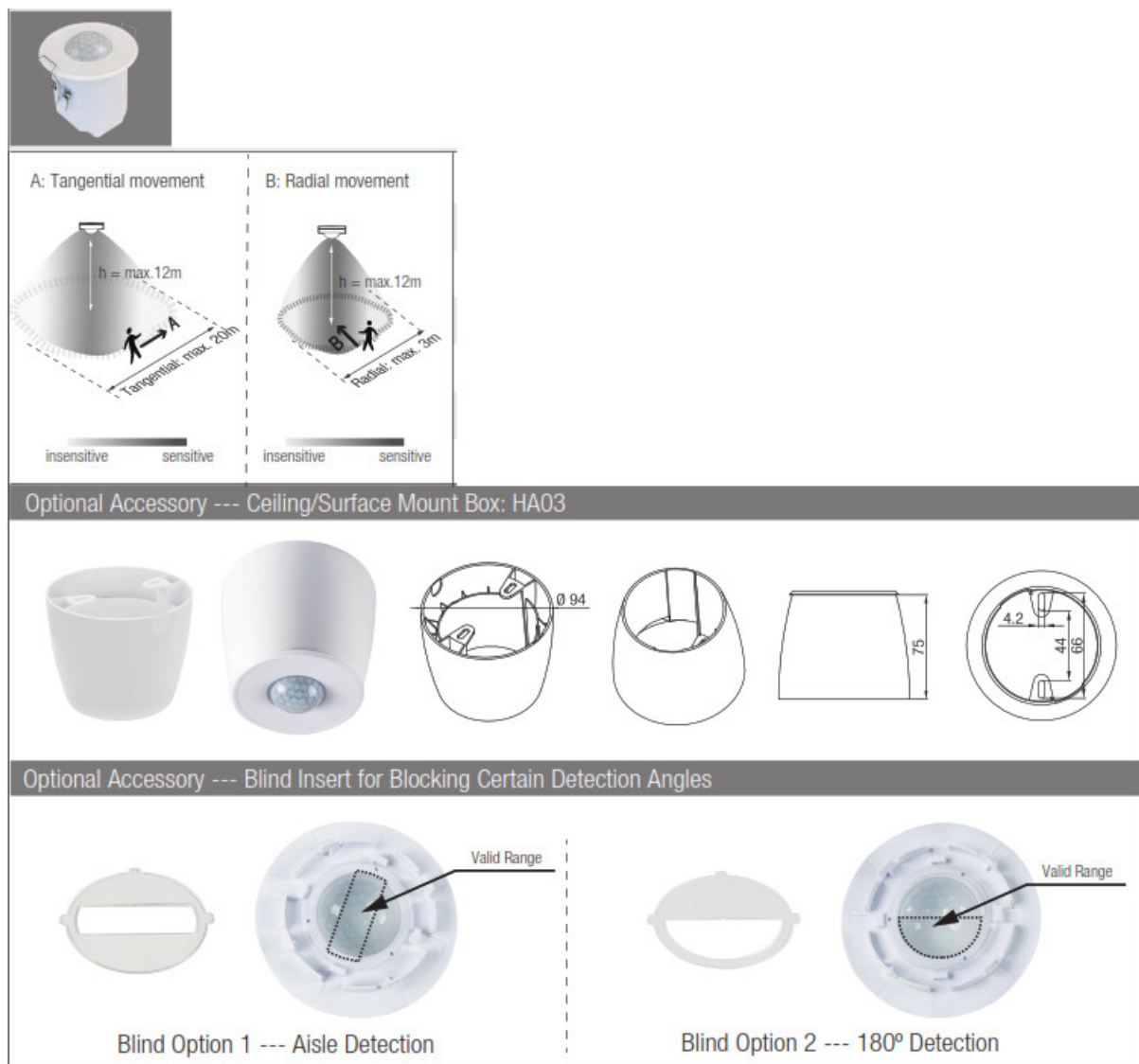
HBHC25/H: High-bay lens detection pattern for forklift @ $T_a = 20^\circ C$
(Recommended ceiling mount installation height 10m-15m)



Mount height	Tangential (A)	Radial (B)
10m	max 380m ² (Ø = 22m)	max 201m ² (Ø = 16m)
11m	max 452m ² (Ø = 24m)	max 201m ² (Ø = 16m)
12m	max 452m ² (Ø = 24m)	max 201 m ² (Ø = 16m)
13m	max 452m ² (Ø = 24m)	max 177m ² (Ø = 15m)
14m	max 452m ² (Ø = 24m)	max 133m ² (Ø = 13m)
15m	max 452m ² (Ø = 24m)	max 113m ² Ø= 12m)

HBHC25/H: High-bay lens detection pattern for single person @ Ta = 20°C
(Recommended ceiling mount installation height 2.5m-12m)

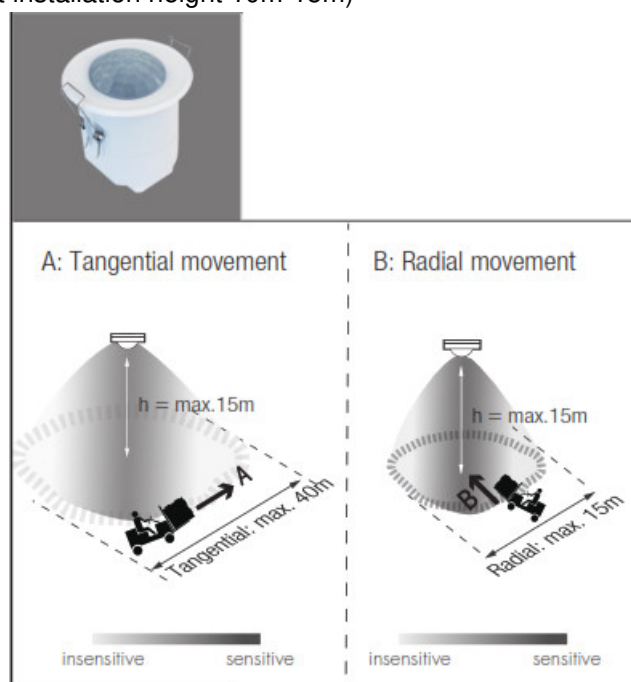
Mount height	Tangential (A)	Radial (B)
2.5m	max 50m ² (Ø = 8m)	max 7m ² (Ø = 3m)
6m	max 104m ² (Ø = 11.5m)	max 7m ² (Ø = 3m)
8m	max 154m ² (Ø= 14m)	max 7m ² (Ø = 3m)
10m	max 227m ² (Ø = 17m)	max 7m ² (Ø = 3m)
11m	max 269m ² (Ø= 18.5m)	max 7m ² (Ø= 3m)
12m	max 314m ² (Ø = 20m)	max 7m ² (Ø = 3m)



4. HBHC25/RH (Reinforced High-bay with 3-Pyro)

HBHC25/RH: Reinforced high-bay lens detection pattern for forklift @ $T_a = 20^\circ\text{C}$

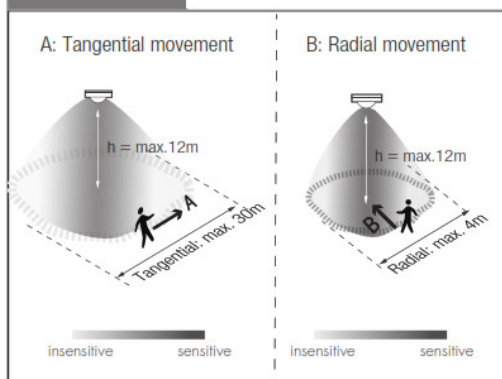
(Recommended ceiling mount installation height 10m-15m)



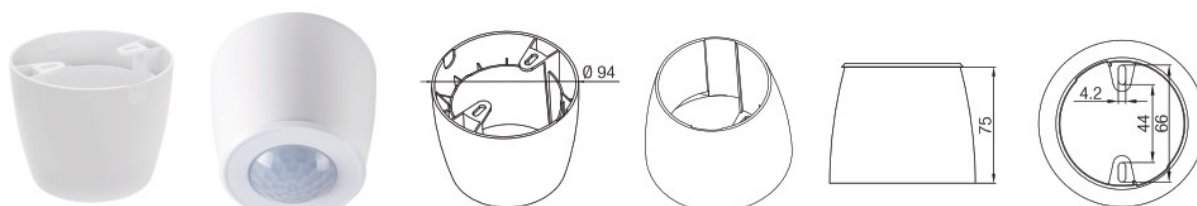
Mount height	Tangential (A)	Radial (B)
10m	max 346m ² (Ø = 21m)	max 177m ² (Ø = 15m)
11 m	max 660m ² (Ø= 29m)	max 177m ² (Ø = 15m)
12m	max 907m ² (Ø = 34m)	max 154m ² (Ø = 14m)
13m	max 962m ² (Ø = 35m)	max 154m ² (Ø = 14m)
14m	max 1075m ² (Ø = 37m)	max 113m ² (Ø = 12m)
15m	max 1256m ² (Ø = 40m)	max 113m ² (Ø = 12m)

HBHC25/RH: Reinforced high-bay lens detection pattern for single person @ Ta = 200C
(Recommended ceiling mount installation height 2.5m-12m)

Mount height	Tangential (A)	Radial (B)
2.5m	max 38m ² (Ø = 7m)	max 7m ² (Ø = 3m)
6m	max 154m ² (Ø = 14m)	max 7m ² (Ø = 3m)
8m	max 314m ² (Ø= 20m)	max 7m ² (Ø = 3m)
10m	max 531 m ² (Ø = 26m)	max 13m ² (Ø = 4m)
11m	max 615m ² (Ø = 28m)	max 13m ² (Ø = 4m)
12m	max 707m ² (Ø = 30m)	max 13m ² (Ø = 4m)



Optional Accessory --- Ceiling/Surface Mount Box: HA03



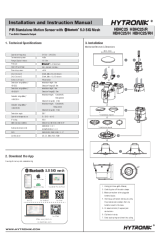
Additional Information / Documents

1. To learn more about detailed product features/functions, please refer to www.hytronik.com/download ->knowledge ->Introduction of App Scenes and Product Functions
2. Regarding precautions for Bluetooth product installation and operation, please kindly refer to www.hytronik.com ->download/knowledge ->Bluetooth Products – Precautions for Product Installation and Operation
3. Datasheet is subject to change without notice. Please always refer to the most recent release on www.hytronik.com/products/bluetooth technology ->Bluetooth Sensors
4. Regarding Hytronik standard guarantee policy, please refer to www.hytronik.com/download ->knowledge ->Hytronik Standard Guarantee Policy.

Subject to change without notice.

HBHC25-20200302-A0

Documents / Resources

	<p>HYTRONIK HBHC25 PIR Standalone Motion Sensor [pdf] Instruction Manual HBHC25, HBHC25-R, HBHC25-H, HBHC25-RH, PIR Standalone Motion Sensor</p>
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[Manuals+](#).