Detached Motion Sensor with Bluetooth® Mesh

HCD038/CA

Casambi Enabled

HYTRONIK®

Product Description

HCD038/CA can work with a wide range of microwave and PIR sensor heads. It is ideal for plastic luminaires as compared to metal luminaires because Bluetooth signal can transmit through plastic. It is suitable for any typical indoor applications such as office, classroom, car park, warehouse and other commercial/industrial areas.HCD038/CA works with CBU-ASD module for either 1-10V or DALI output. Meanwhile, all commissioning and settings can be done via CASAMBI app.

Free smartphone App for set-up and commissioning

Download on the App Store

GET IT ON Google Play

Hardware Features

- 1 push input for flexible manual control
- Detached linear design to suit luminaires with limited space inside
- Use Casambi app for commissioning
- Device firmware update over-the-air
- 5-year warranty

Technical Specifications

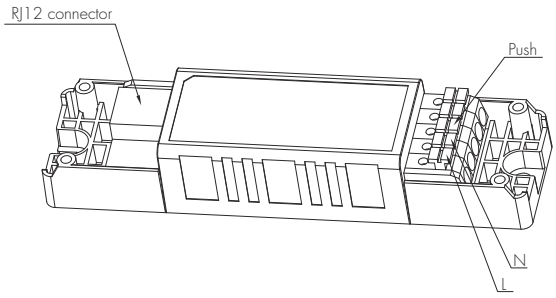
Bluetooth Transceiver	
Operation frequency	2.4 GHz - 2.483 GHz
Transmission power	Max 4dBm
Range (Typical)	10~30m

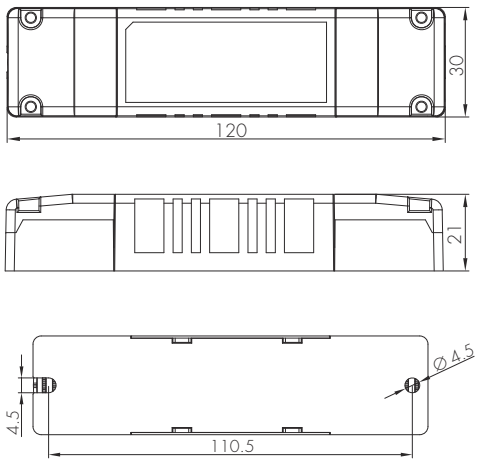
Input Characteristics	
Mains voltage	HCD038/CA: 220~240VAC 50/60Hz
Stand-by power	<0.5W
Warming-up	20s

Environment	
Operation temperature	Ta: -20°C ~ +55°C
Case temperature (Max.)	Tc: +75°C
IP rating	IP20

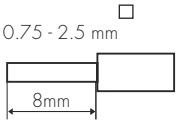
Mechanical Structure & Dimensions

HCD038/CA



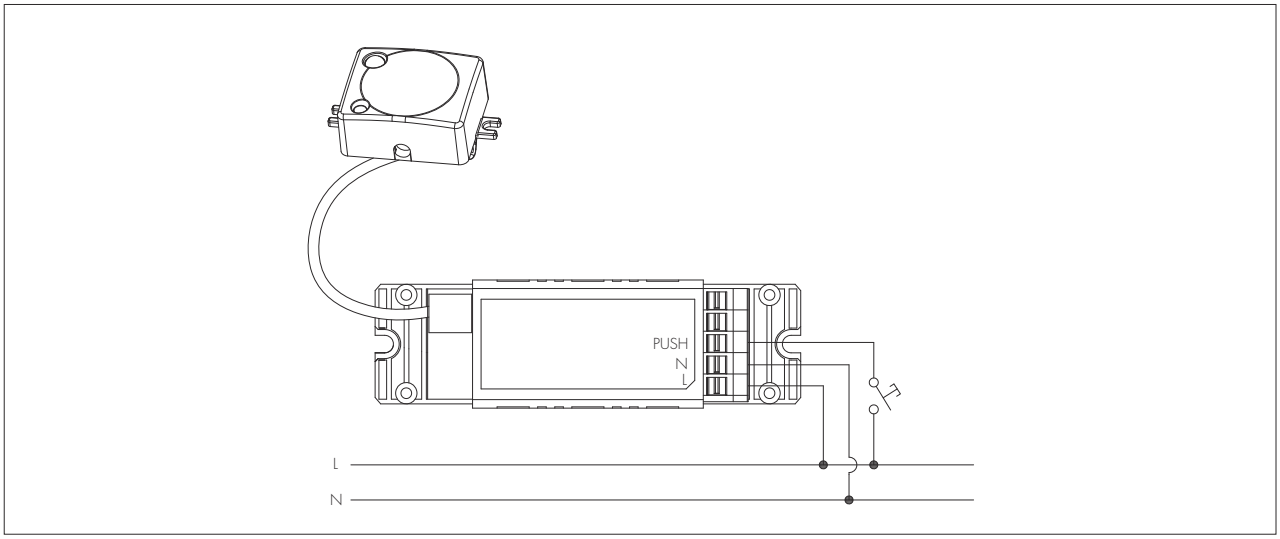


Wire Preparation



To make or release the wire from the terminal, use a screwdriver to push down the button.

Wiring Diagram



Technical Specifications for Sensor Heads

PIR Sensor Properties	
Sensor principle	PIR detection
Operating voltage	5VDC
Detection range *	HIR05 / HIR07 Max installation height: 3m Max detection range: 6m (diameter) HIR11 Max installation height: 15m (forklift) 12m (single person) Max detection range: 24m (diameter) HIR12 Max installation height: 15m (forklift) 12m (single person) Max detection range: 18m * 6m (L * W)

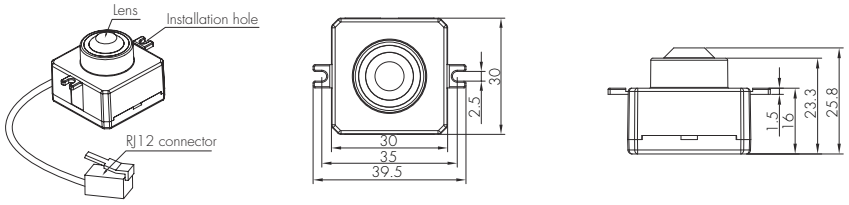
HF Sensor Properties	
Sensor principle	High Frequency (microwave)
Operation voltage	5VDC
Operation frequency	5.8GHz +/- 75MHz
Transmission power	<0.2mW
Detection range *	SAM20 / SAM21 / SAM22 Max installation height: 3m Max detection range: 12m (diameter) SAM23 Max installation height: 15m (forklift) 12m (single person) Max detection range: 20m (diameter)

* The detection range is heavily influenced by sensor placement (angle) and different walking paces. It may be reduced under certain conditions.

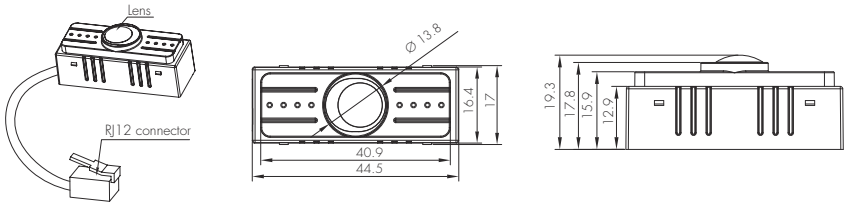
PIR & microwave sensor heads

The range of PIR and microwave sensor heads below with Bluetooth modules built in offers powerful number of Plug'n'Play feature options to expand the flexibility of luminaires design. This approach to luminaire design reduces space requirements and component costs whilst simplifying production.

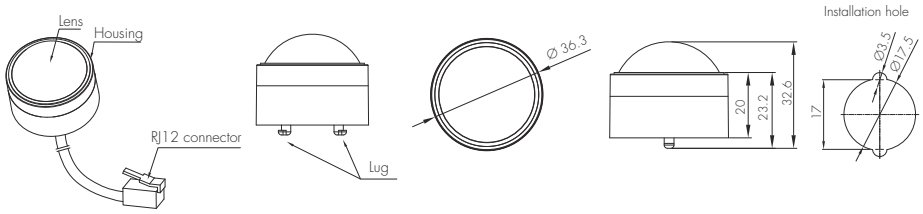
A. HIR05
PIR sensor head
The cable length is around 65cm.



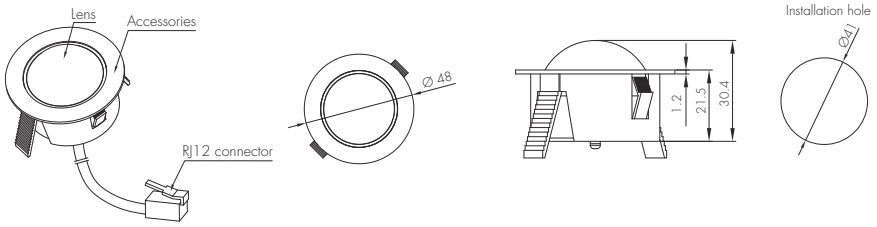
B. HIR07
PIR sensor head
Photocell Advance™
The cable length is around 30cm.



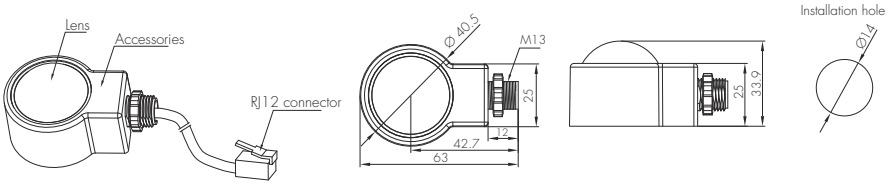
C. HIR11/S
PIR sensor head
Surface mounting
For highbay application
Lens part IP42 (IP64 can be made upon request)
The cable length is around 65cm.



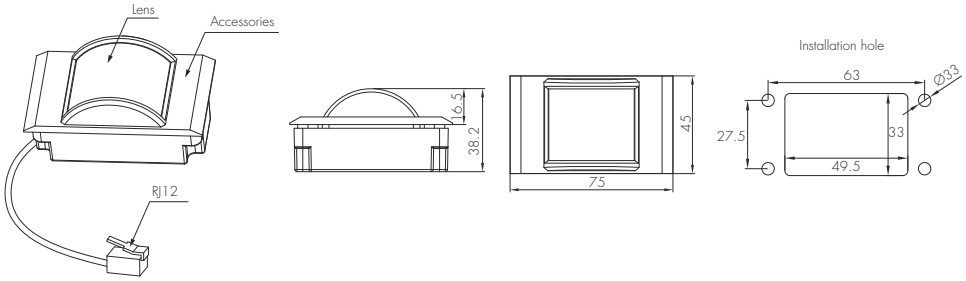
D. HIR11/F
PIR sensor head
Flush mounting
For highbay application
Lens part IP42 (IP64 can be made upon request)
The cable length is around 65cm.



E. HIR11/C
PIR sensor head
Screw to the luminaire by conduit
For highbay application
Lens part IP42 (IP64 can be made upon request)
The cable length is around 65cm.



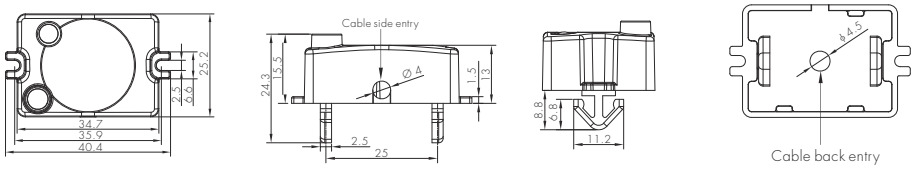
F. HIR12
PIR sensor head
For highbay application
IP65(lens part)
The cable length is around 65cm.



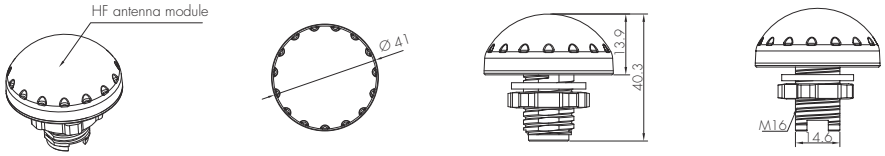
Installation for HIR12

We suggest that the metal plate thickness to be 0.8mm~1.6mm to ensure perfect focal length for the PIR lens.

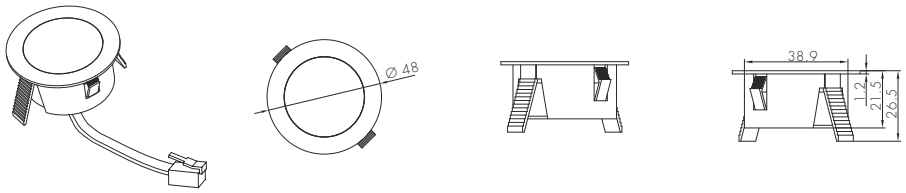
H. SAM20
HF sensor head
Photocell Advance™
The cable length is around 30cm.



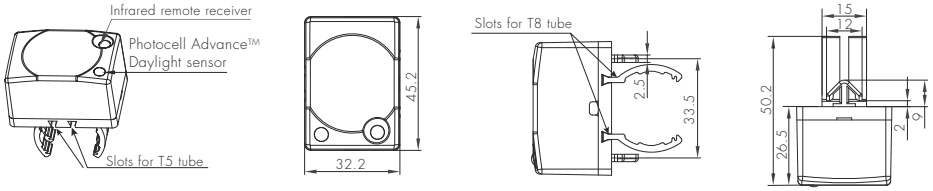
I. SAM21
HF sensor head
IP65
The cable length is around 65cm.



J. SAM22
HF sensor head
Flush mount
The cable length is around 65cm.

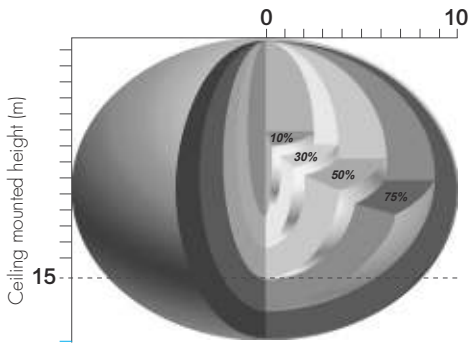


K. SAM23
HF sensor head
Photocell advance™
For highbay application
The cable length is around 30cm.



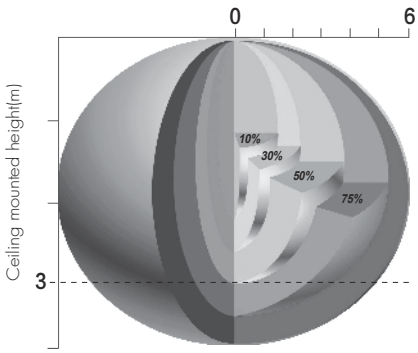
Detection Pattern

SAM23



Ceiling mounted detection pattern (m)

SAM20 / SAM21 / SAM22



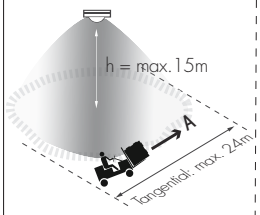
Ceiling mounted detection pattern (m)

HIR11 (High-bay)

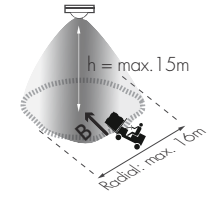
HIR11: High-bay lens detection pattern for **forklift** @ Ta = 20°C

(Recommended installation height **10m-15m**)

A: Tangential movement



B: Radial movement

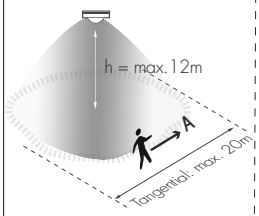


Mount height	Tangential (A)	Radial (B)
10m	max 380m² (Ø = 22m)	max 201m² (Ø = 16m)
11m	max 452m² (Ø = 24m)	max 201m² (Ø = 16m)
12m	max 452m² (Ø = 24m)	max 201m² (Ø = 16m)
13m	max 452m² (Ø = 24m)	max 177m² (Ø = 15m)
14m	max 452m² (Ø = 24m)	max 133m² (Ø = 13m)
15m	max 452m² (Ø = 24m)	max 113m² (Ø = 12m)

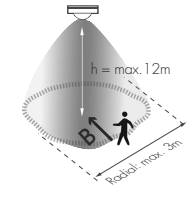
HIR11: High-bay lens detection pattern for **single person** @ Ta = 20°C

(Recommended installation height **2.5m-12m**)

A: Tangential movement

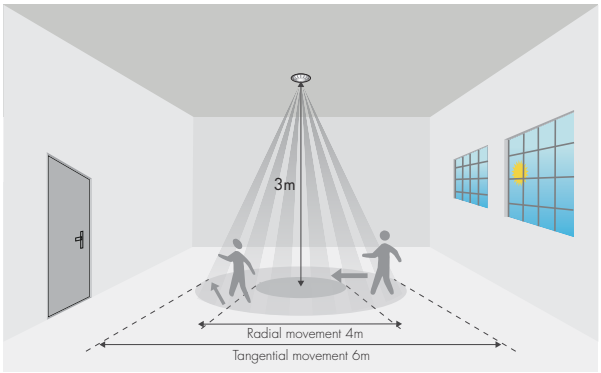


B: Radial movement

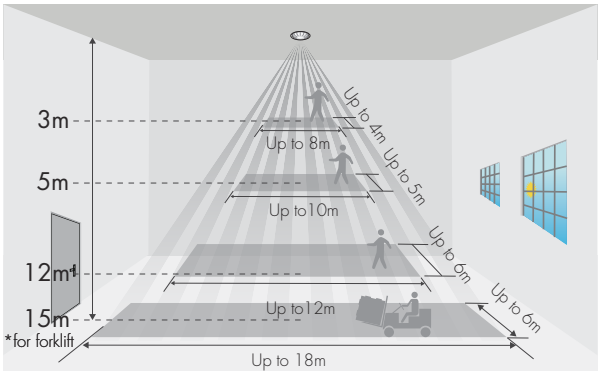


Mount height	Tangential (A)	Radial (B)
2.5m	max 50m² (Ø = 8m)	max 7m² (Ø = 3m)
6m	max 104m² (Ø = 11.5m)	max 7m² (Ø = 3m)
8m	max 154m² (Ø = 14m)	max 7m² (Ø = 3m)
10m	max 227m² (Ø = 17m)	max 7m² (Ø = 3m)
11m	max 269m² (Ø = 18.5m)	max 7m² (Ø = 3m)
12m	max 314m² (Ø = 20m)	max 7m² (Ø = 3m)

HIR05 / HIR07



HIR12



Additional Information / Documents

1. Data sheet is subject to change without notice. Please always refer to the most recent release on www.hytronik.com/products/Bluetooth 5.0 SIG mesh system ->Partnership

2. Regarding Hytronik standard guarantee policy, please refer to www.hytronik.com/download ->knowledge ->Hytronik Standard Guarantee Policy