

Built-in Microwave Motion Sensor with  Bluetooth® 5.0 SIG Mesh

HC005S/BT  
ON/OFF CONTROL

**HYTRONIK**®

     RED IP20

## Product Description

HC005S/BT is a Bluetooth built-in microwave motion sensor with ON/OFF control. It is designed for professional lighting manufacturers who would like to incorporate wireless control into their luminaires. HC005S/BT is suitable for any typical indoor applications such as office, classroom, car park, warehouse and other commercial/industrial areas. With Bluetooth wireless mesh networking, it makes communication much easier without any hardwiring, which eventually adds values to luminaires and saves costs for projects. Meanwhile, simple device setup and commissioning can be done via **Koolmesh™** app.



## App Features

-  Grouping luminaires via mesh network
  - Two levels: room & group
  - Synchronization control
-  5 types of scene options to set up:
  - Generic Scenes
  - Lux ON/OFF Scenes
  - Time-based Scene
-  Detailed motion sensor settings
-  Schedule to run scenes based on time and date
-  Astro timer (sunrise and sunset)
-  Floorplan feature to simplify project planning
-  Staircase function (master & slave)
-  Status after re-powered on (memory against power loss)
-  Offline commissioning
-  Different permission levels via authority management
-  Network sharing via QR code or keycode
-  Remote control via gateway support HBGW01
-  Interoperability with Hytronik Bluetooth product portfolio
-  Compatible with EnOcean range of wireless switches
-  Device firmware update over-the-air (OTA)
-  Continuous development in progress...

## Hardware Features

-  Photocell Advance
-  ON/OFF control with load ratings of:
  - 300VA (capacitive)
  - 400W (resistive)
-  Compact design
-  Zero crossing detection circuit to reduce in-rush current and prolong relay lifetime
-  Loop-in and loop-out terminals for efficient installation
-  5-year warranty

## Bluetooth 5.0 SIG mesh



**EnOcean**  
Self-powered IoT

Fully support  
EnOcean switch

## Technical Specifications

Bluetooth Transceiver	
Operation frequency	2.4 GHz - 2.483 GHz
Transmission power	7 dBm
Range (Typical indoor)	10~30m
Protocol	 Bluetooth® 5.0 SIG Mesh

Sensor Data	
Sensor principle	High Frequency (microwave)
Operation frequency	5.8GHz+/-75MHz
Transmission power	<0.2mW
Detection range	Max.(∅ xH) 10mx6m
Detection angle	30°~150°

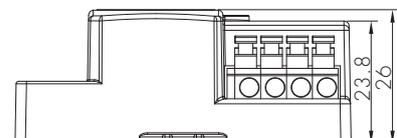
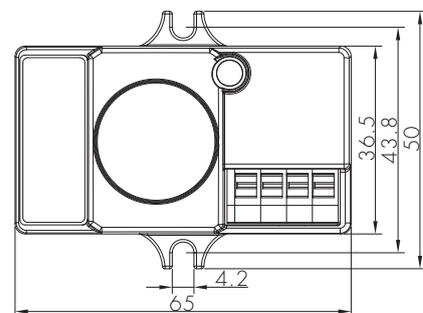
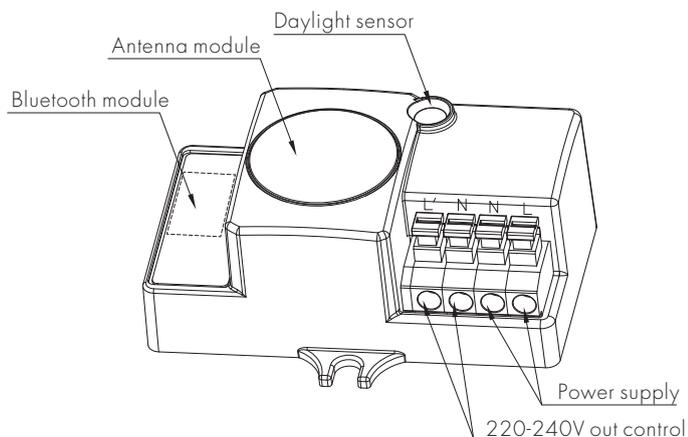
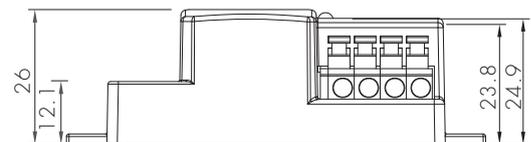
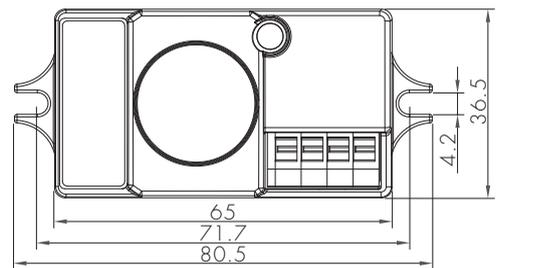
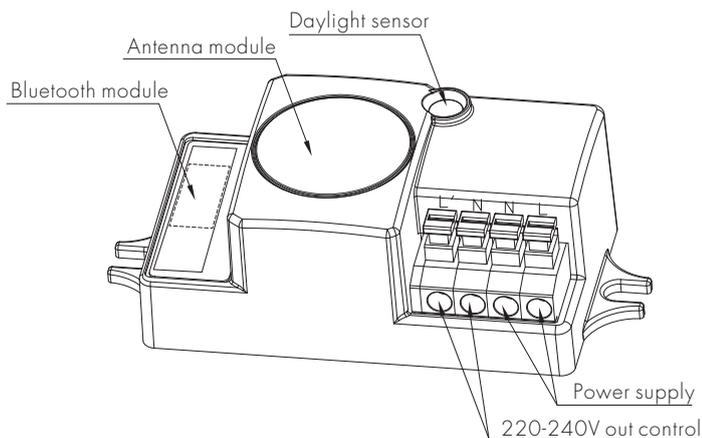
Environment	
Operation temperature	Ta: -20°C ~ +50°C
Case temperature(MAX.)	Tc: +75°
IP rating	IP20

Input & Output Characteristics	
Operating voltage	220~240VAC 50/60Hz
Stand-by power	<0.5W
Load ratings	300VA(capacitive), 400W(resistive)
Warming-up	20s

Safety & EMC	
EMC standard (EMC)	EN55015, EN61000, EN61547
Safety standard (LVD)	EN60669-1/-2-1 AS/NZS 60669-1/-2-1
Radio Equipment (RED)	EN300400, EN301489-1/-3 EN301489-17, EN62479, EN300328
Certification	Semko, CB, CE, EMC, RED, RCM

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

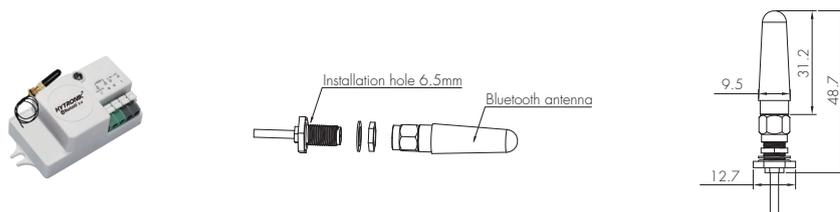
## Mechanical Structure & Dimensions



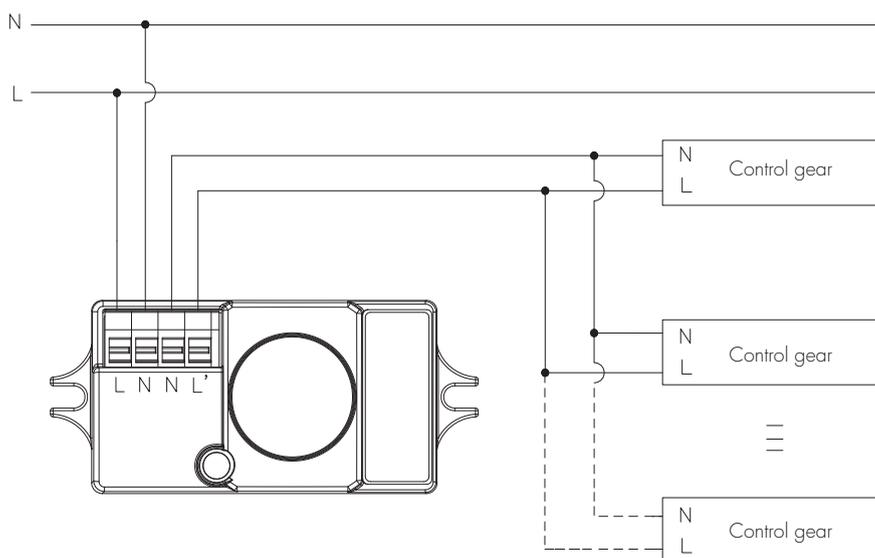
Sensor Installation: In order to ensure good product performance, please avoid sensor being installed at or well below the LED gear tray/aluminum plate. It is highly recommended to expose the antenna part and daylight sensor part by making a cut-out hole. For the Bluetooth module part, the cut-out hole is also recommended when the luminaire design is in a very confined metal environment where the Bluetooth signal transmission can be potentially blocked or affected.

### Optional accessory: Reinforced Bluetooth antenna

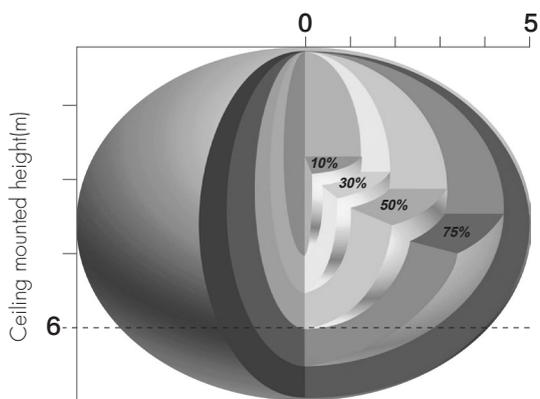
For some special Applications, customers may need a larger Bluetooth transmission for both smartphone to device and device to device. Thanks to the reinforced Bluetooth antenna, with it being added to the sensor, the transmission distance (smartphone to device) enlarges to 20m, the distance of device to device is around 50m.



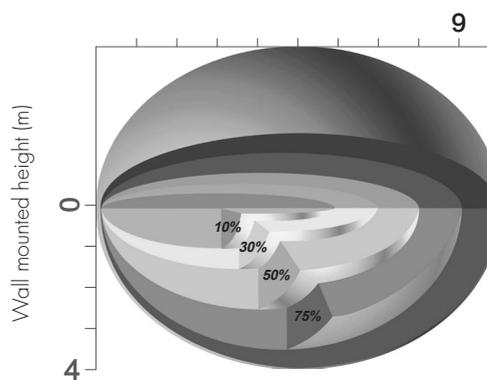
### Wiring Diagram



### Detection Pattern



Ceiling mounted detection pattern (m)



Wall mounted detection pattern (m)

## Additional Information / Documents

1. For full explanation of Hytronik Photocell Advance™ technology, please kindly refer to [www.hytronik.com/download](http://www.hytronik.com/download) ->knowledge ->Introduction of Photocell Advance
2. To learn more about detailed product features/functions, please refer to [www.hytronik.com/download](http://www.hytronik.com/download) ->knowledge ->Introduction of App Scenes and Product Functions
3. Regarding precautions for Bluetooth product installation and operation, please kindly refer to [www.hytronik.com/download](http://www.hytronik.com/download) ->knowledge ->Bluetooth Products - Precautions for Product Installation and Operation
4. Regarding precautions for microwave sensor installation and operation, please kindly refer to [www.hytronik.com/download](http://www.hytronik.com/download) ->knowledge ->Microwave Sensors - Precautions for Product Installation and Operation
5. Data sheet is subject to change without notice. Please always refer to the most recent release on [www.hytronik.com/products/bluetooth technology](http://www.hytronik.com/products/bluetooth%20technology) ->Bluetooth Sensors
6. Regarding Hytronik standard guarantee policy, please refer to [www.hytronik.com/download](http://www.hytronik.com/download) ->knowledge ->Hytronik Standard Guarantee Policy