

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

HC005S/BT
ON/OFF CONTROL

HYTRONIK®



Product Description

HC005S/BT is a Bluetooth built-in microwave motion sensor with ON/OFF control. It is designed for professional lighting manufactures 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

-  Quick setup mode & advanced setup mode
-  Floorplan feature to simplify project planning
-  Web app/platform for dedicated project management
-  Koolmesh Pro iPad version for on-site configuration
-  Grouping luminaires via mesh network
-  Scenes
-  Detailed motion sensor settings
-  Dusk/Dawn photocell (Twilight function)
-  Schedule to run scenes based on time and date
-  Astro timer (sunrise and sunset)
-  Staircase function (primary & secondary)
-  Compatible with EnOcean BLE switches
-  Internet-of-Things (IoT) featured
-  Device firmware update over-the-air (OTA)
-  Device social relations check
-  Bulk commissioning (copy and paste settings)
-  Power-on status (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
-  Continuous development in progress...

Hardware Features

-  Photocell Advance
-  ON/OFF control with load ratings of:
 - 300VA (capacitive)
 - 400W (resistive)
-  Max withstandable in-rush current: 80A@160µs
-  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® Kinetic Switch







HBKS01 HBKS02 HBKS03 HBKS01D HBKS02D






Fully support EnOcean self-powered switch module
PTM215B (HBES01/W & HBES01/B)

EnOcean
Self-powered BLE

Bluetooth 5.0 SIG mesh





Smartphone app for both iOS & Android platform




Koolmesh Pro app for iPad




Web app/platform: www.iot.koolmesh.com

Technical Specifications

Bluetooth Transceiver	
Operation frequency	2.4 GHz - 2.483 GHz
Transmission power	4 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 installation height: 6m Max detection range: 10m (diameter)
Detection angle	30°~150°

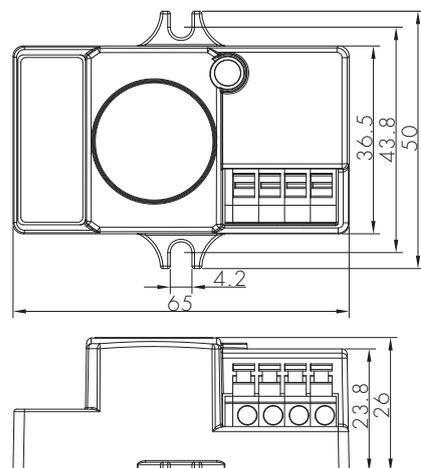
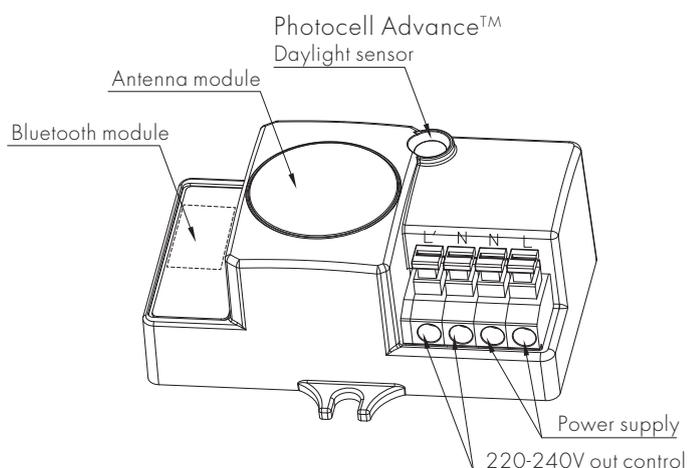
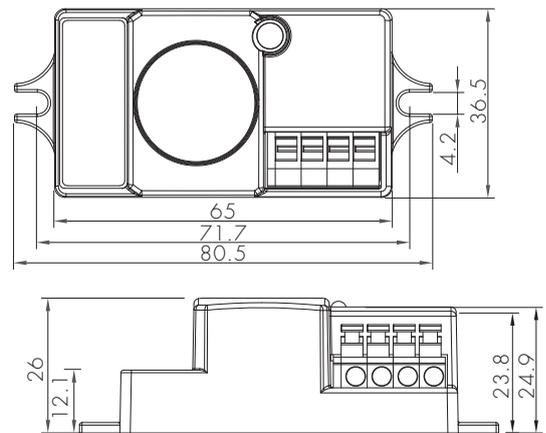
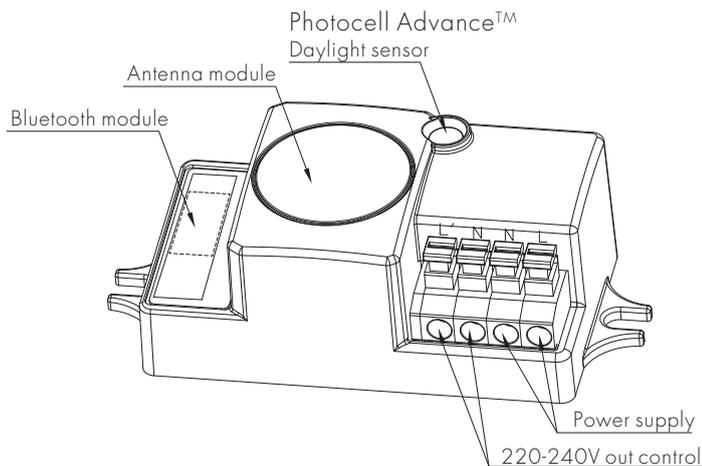
Environment	
Operation temperature	Ta: -20°C ~ +50°C
Case temperature(MAX.)	Tc: +75°
IP rating	IP20

Input & Output Characteristics	
Operating voltage	220~240VAC 50/60Hz
Stand-by power	<1W
Load ratings	300VA(capacitive), 400W(resistive)
Max withstandable in-rush current	80A@160µs
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	CB, CE, EMC, RED, RCM

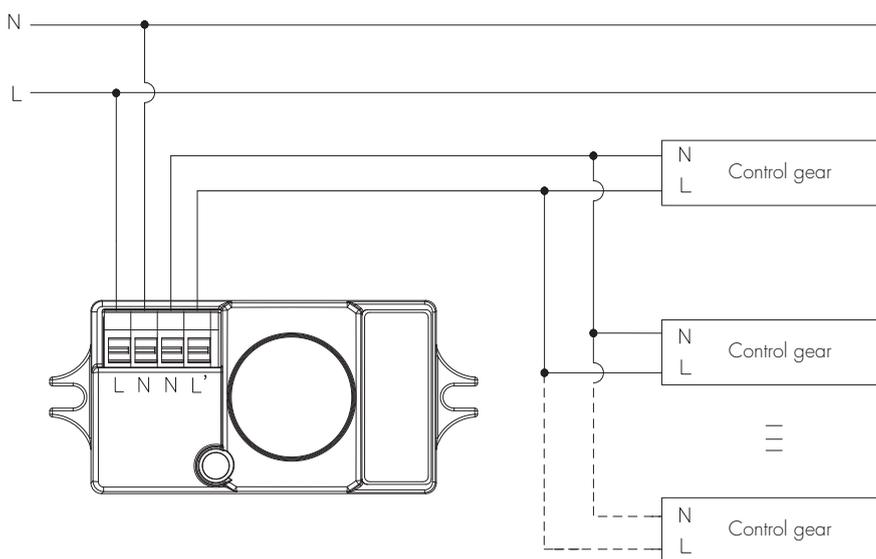
* The detection range is heavily influenced by sensor placement (angle) and different walking paces. It may be reduced under certain conditions.

Mechanical Structure & Dimensions

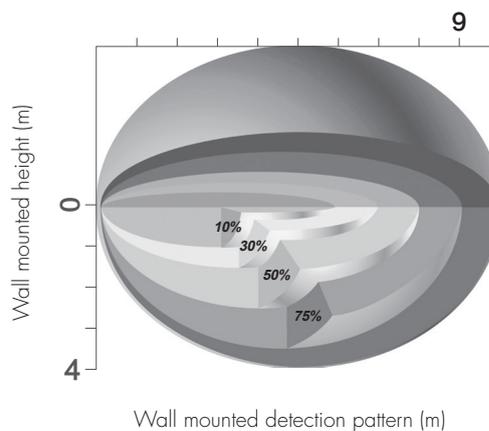
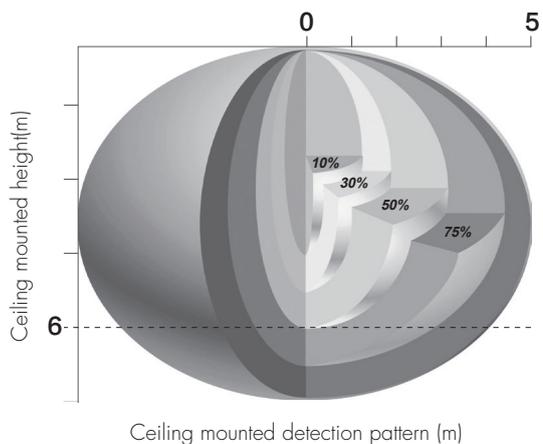


Sensor Installation: In order to ensure good product performance, please avoid sensor being installed at or well below the LED gear tray/aluminum plate. It is highly recommended to expose the antenna part and Photocell Advance™ daylight sensor part by making a cut-out hole. For the Bluetooth module part, 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.

Wiring Diagram



Detection Pattern



Additional Information / Documents

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