

## HC419S/BT

ON/OFF CONTROL

# HYTRONIK®

### Product Description

HC419S/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. HC419S/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.

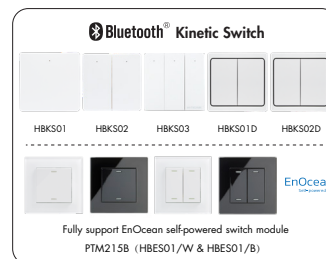


### App Features

-  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 (master & slave)
-  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:
  - 150VA @ 120VAC
  - 350VA @ 277VAC
-  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



## 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             |                            |
|-------------------------|----------------------------|
| Detection technology    | High Frequency (microwave) |
| Operation frequency     | 5.8GHz+/-75MHz             |
| Transmission power      | <0.2mW                     |
| Max installation height | 6m                         |
| Max Detection range     | 10m (Diameter)             |
| Detection angle         | 30°~150°                   |

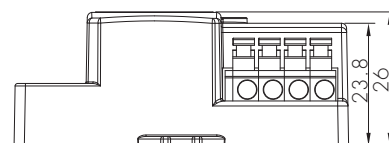
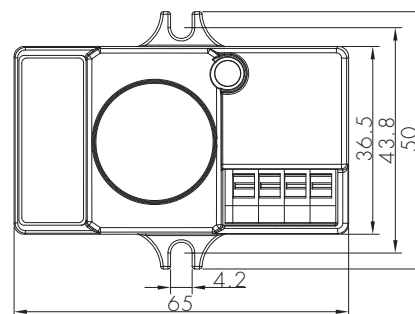
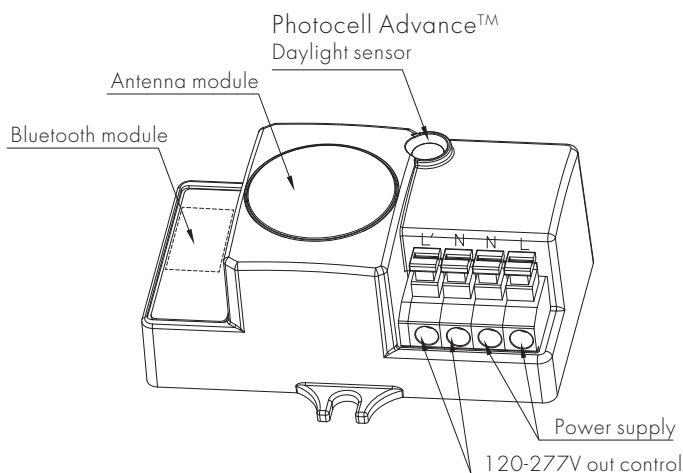
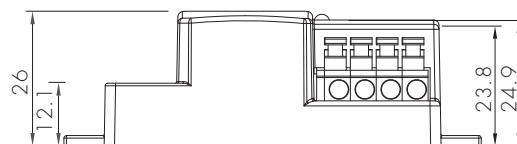
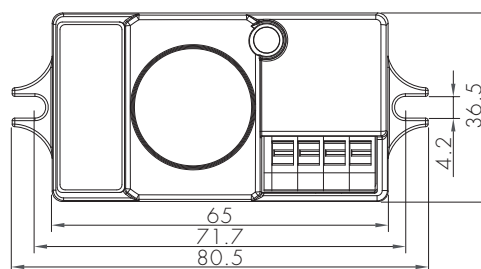
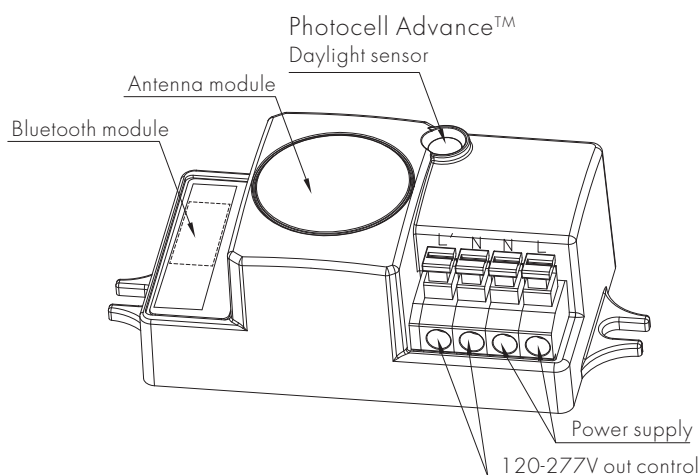
| Input & Output Characteristics    |                                   |
|-----------------------------------|-----------------------------------|
| Operating voltage                 | 120~277VAC 50/60Hz                |
| Stand-by power                    | <0.5W                             |
| Load ratings                      | 300VA(capacitive),400W(resistive) |
| Max withstandable in-rush current | 80A@160μs                         |
| Warming-up                        | 20s                               |

\*The Max withstandable in-rush current tested under 50% I<sub>peak</sub> / 230Vac

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

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

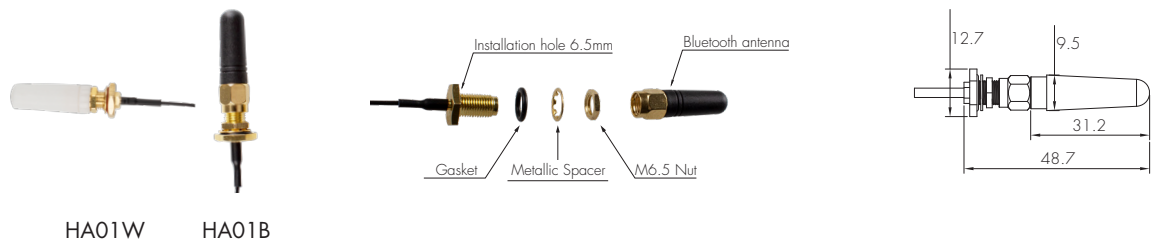
## Mechanical Structure & Dimensions



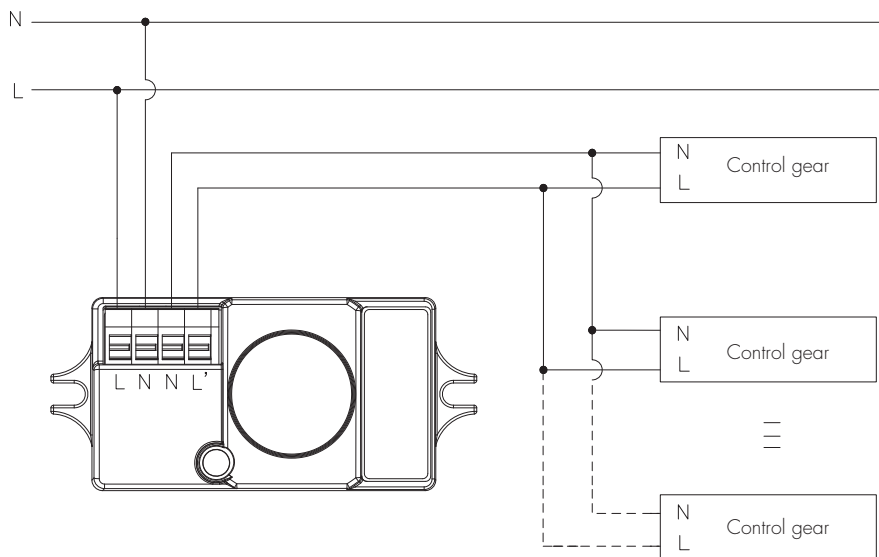
Sensor Installation: In order to ensure good product performance, please avoid sensor being installed at or well below the LED gear tray/aluminum plate. It is highly recommended to expose the antenna part and Photocell Advance™ daylight sensor part by making a cut-out hole. For the Bluetooth module part,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

### Optional accessory: Reinforced Bluetooth antenna

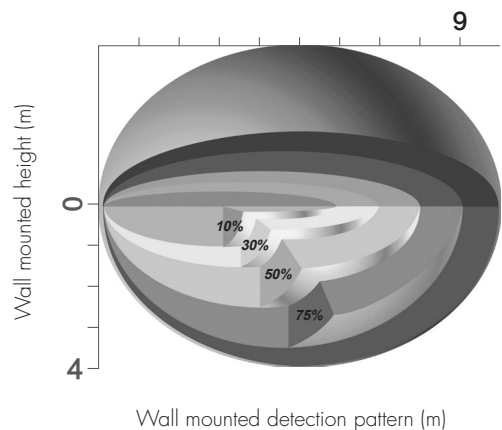
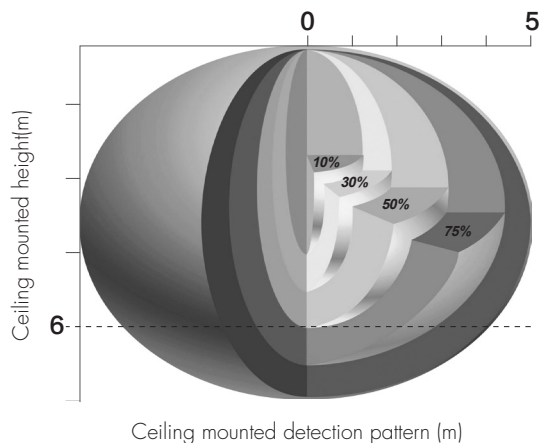
For some special Applications, customers may need a larger Bluetooth transmission for both smartphone to device and device to device. Thanks to the reinforced Bluetooth antenna (optional black or white color to choose from), with it being added to the sensor, the transmission distance (smartphone to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



### Wiring Diagram



### Detection Pattern



## 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)