

PIR Motion Sensor with Bluetooth® 5.0 SIG Mesh

HBIR38DC

SELV (low-volt) DC

HYTRONIK®



Product Description

HBIR38DC is a Bluetooth PIR motion sensor equipped with an RJ45 network port. It connects to SCB01/BLE or SCB02/BLE via an external RJ45 cable and is powered by a 12V DC supply from the SCB01/BLE or SCB02/BLE. With Bluetooth wireless connectivity, communication between devices is more convenient. Meanwhile, simple device setup and commissioning can be done via **Koolmesh®** app.

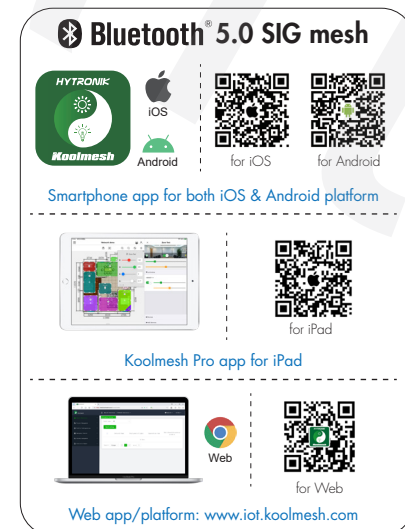
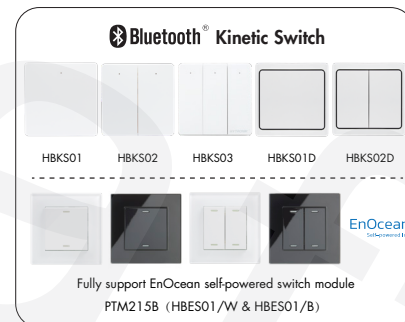


App Features

- Quick setup mode & advanced setup mode
- Web app/platform for project deployment & data analysis
- Koolmesh Pro app on iPad for on-site configuration
- Floorplan feature to simplify project planning
- One-key device replacement
- Device social relations check
- Staircase function (primary & secondary)
- Remote control via gateway support HBGW01
- Heat map
- Dynamic daylight harvest auto-adaptation
- Grouping luminaires via mesh network
- Scenes
- Dusk/Dawn photocell (Twilight function)
- Circadian rhythm (Human centric lighting)
- Detailed motion sensor settings
- Schedule
- Astro timer (sunrise and sunset)
- Power-on status (memory against power loss)
- Offline commissioning
- Bulk commissioning (copy and paste settings)
- Different permission levels via authority management
- Network sharing via QR code or keycode
- Compatible with EnOcean BLE switches
- Interoperability with Hytronik Bluetooth product portfolio
- Internet-of-Things (IoT) featured
- Device firmware update over-the-air (OTA)
- Continuous development in progress...

Hardware Features

- Magnetic Reset Switch
- IP20
- Fixing washers accessory
- 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 |

| Input & Output Characteristics | |
|--------------------------------|-------------------------|
| Operating voltage | 12VDC |
| Stand-by power | <0.5W |
| Power Supply | 12VDC:20MA MAX:<30MA |

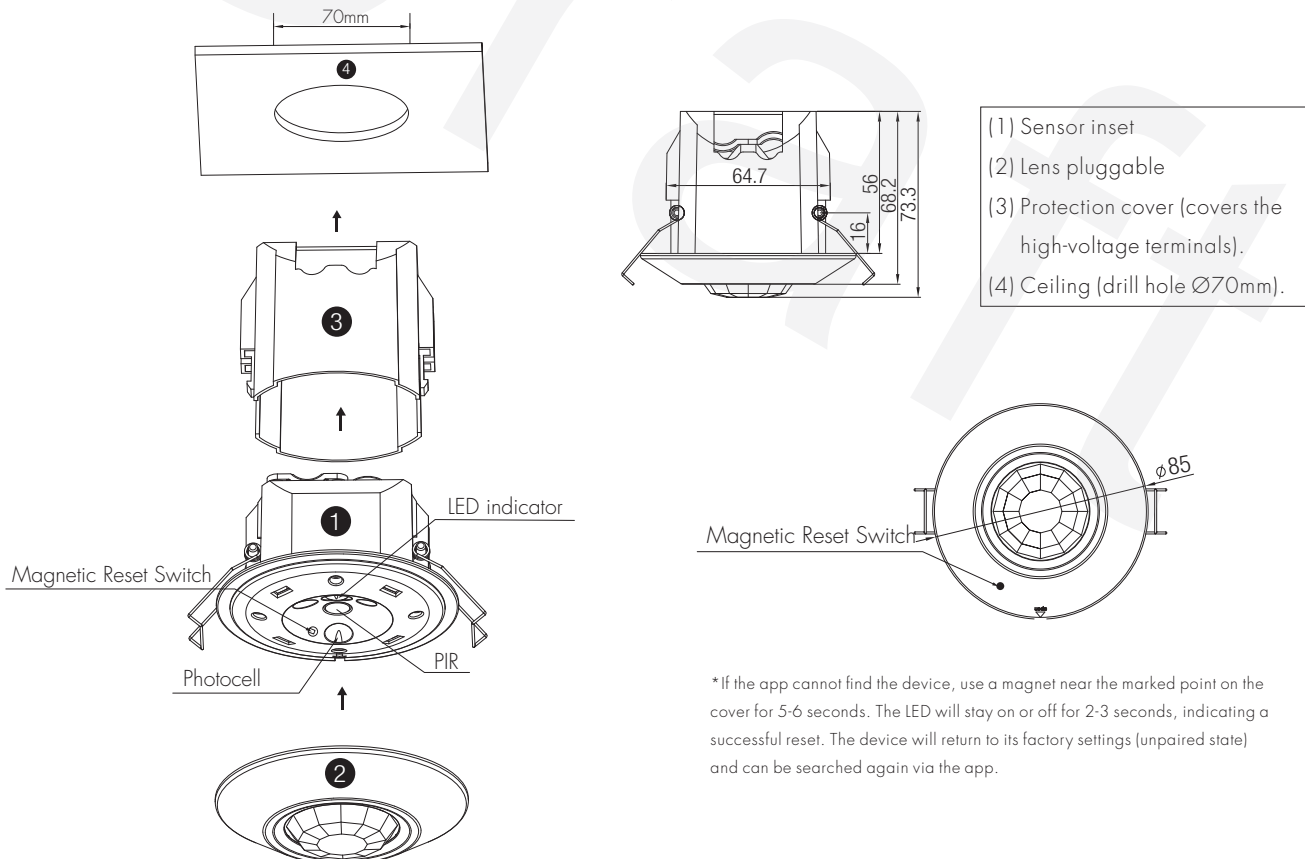
| Environment | |
|-----------------------|-------------------|
| Operation temperature | Ta: -20°C ~ +50°C |
| Storage temperature | -25°C ~ +70°C |
| Relative humidity | 20 ~ 90% |
| IP rating | IP20 |
| Insulation | Class I |

| Sensor Data | |
|------------------------|--|
| Sensor principle | PIR detection |
| Detection range (Max.) | Installation Height : 6m Detection Range(Ø) : 10m |
| Detection angle | 360° |

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

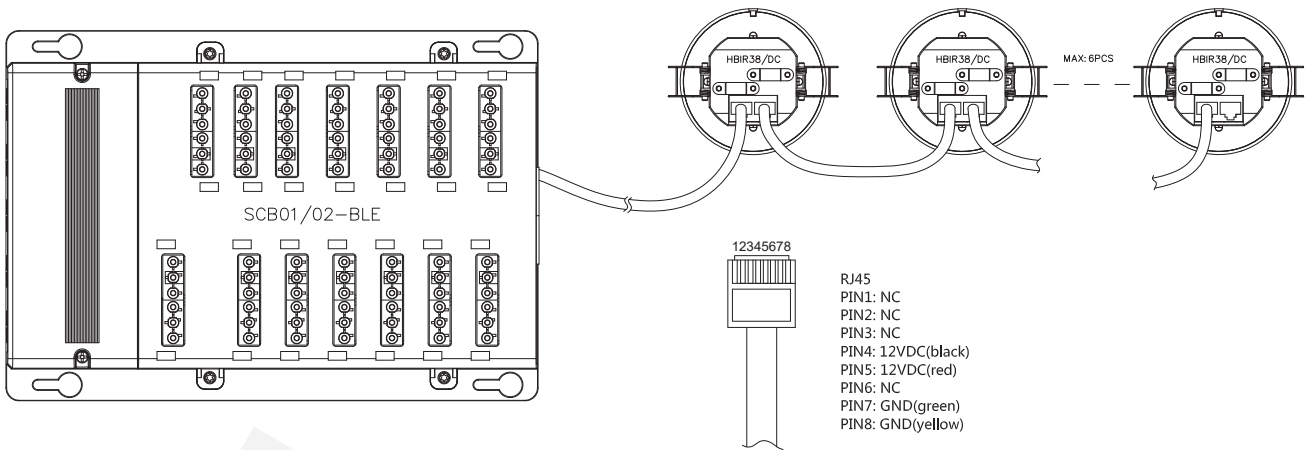
| Safety & EMC | |
|-----------------------|----------------------------|
| EMC standard (EMC) | EN61547 |
| Safety standard (LVD) | EN61347-1, EN61347-2-11 |
| RED | EN300 328, EN301 489-1/-17 |
| Certification | CE, UKCA |

Mechanical Structure & Dimensions (unit:MM)



* If the app cannot find the device, use a magnet near the marked point on the cover for 5-6 seconds. The LED will stay on or off for 2-3 seconds, indicating a successful reset. The device will return to its factory settings (unpaired state) and can be searched again via the app.

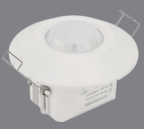
Wiring Diagram



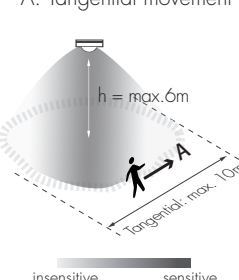
* An SCB01/02BLE can only support up to 8 HBR38DC devices.

HBR38DC (Low-bay)

HBR38DC: Low-bay flat lens detection pattern for single person @ $T_a = 20^\circ\text{C}$
 (Recommended ceiling mount installation height **2.5m-6m**)

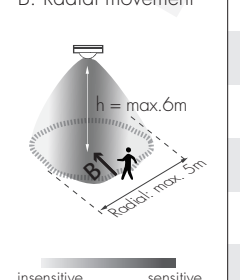


A: Tangential movement



insensitive sensitive

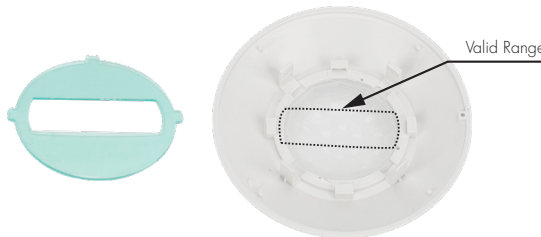
B: Radial movement



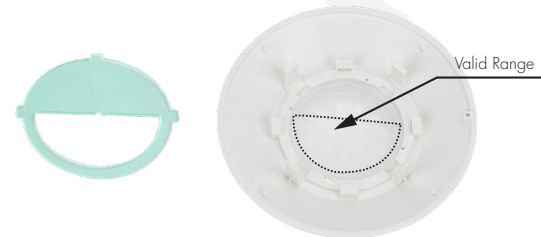
insensitive sensitive

| Mount height | Tangential (A) | Radial (B) |
|--------------|--------------------------------|---------------------------------|
| 2.5m | max 79m ² (Ø = 10m) | max 20m ² (Ø = 3m) |
| 3m | max 79m ² (Ø = 10m) | max 20m ² (Ø = 3.5m) |
| 4m | max 64m ² (Ø = 9m) | max 20m ² (Ø = 4m) |
| 5m | max 50m ² (Ø = 8m) | max 20m ² (Ø = 4.5m) |
| 6m | max 50m ² (Ø = 8m) | max 20m ² (Ø = 5m) |

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



Blind Option 1 --- Aisle Detection



Blind Option 2 --- 180° Detection

Placement Guide and Typical Range

Smart Phone to Device Range



The smart device with the App installed will have a typical range of 10m, but varies from device to device. During commissioning, the installer will need to be in range of the devices when searching for devices to add to the network.

Once the devices have been added to the network via the App, the devices will start communicating within the wireless mesh. This means that once the network is complete, all devices are accessible from the smart device when in a 20m range of a single point.

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](http://www.hytronik.com/download->knowledge->Introduction%20of%20App%20Scenes%20and%20Product%20Functions)
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](http://www.hytronik.com/download->knowledge->Bluetooth%20Products%20-%20Precautions%20for%20Product%20Installation%20and%20Operation)
3. Regarding precautions for PIR sensor installation and operation, please kindly refer to [www.hytronik.com/download ->knowledge ->PIR Sensors - Precautions for Product Installation and Operation](http://www.hytronik.com/download->knowledge->PIR%20Sensors%20-%20Precautions%20for%20Product%20Installation%20and%20Operation)
4. 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)
5. 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)