PIR Motion Sensor for Track System with Bluetooth 5.0 SIG Mesh

HBIR29/TK

DALI Output

HYTRONIK ®

Product Description

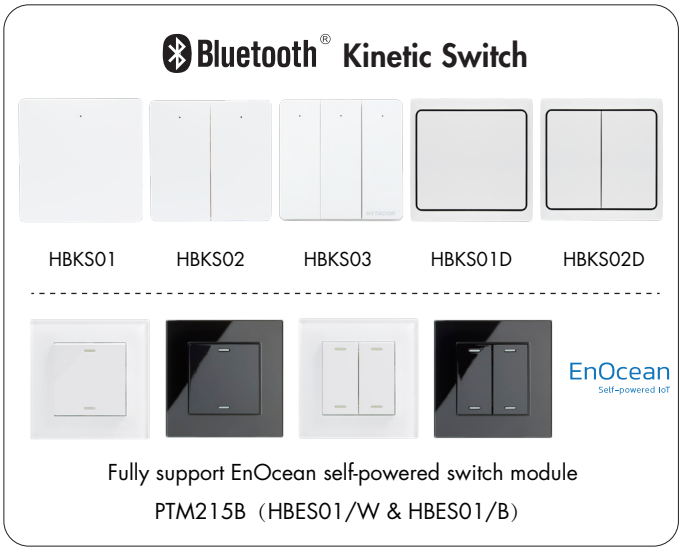
HBIR29/TK is a Bluetooth PIR standalone motion sensors for the track system, with 3-phase dial and one DALI channel output (80mA DALI power supply built in). HBIR29/TK also design with a metal surface box and the installation only requires simple insertion into the track, it is ideal for both commercial and domestic downlight lighting. With Bluetooth wireless mesh networking, it makes communication between luminaires much easier without time-consuming hardwiring, which eventually saves costs for projects (especially for retrofit upgrade projects!). All simple device setup and commissioning can be done via Koolmesh® app.

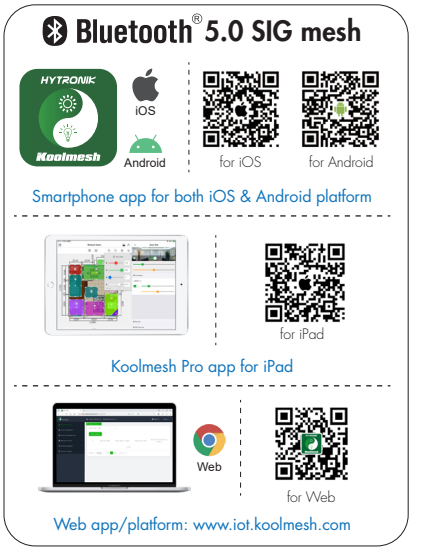
App Features

- 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
- DALI coming soon
- 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)
- Tri-level control
- Daylight harvest
- Circadian rhythm (Human centric lighting)
- Push switch configuration
- 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
- Interoperability with Hytronik Bluetooth product portfolio
- Compatible with EnOcean BLE switches
- Internet-of-Things (IoT) featured
- Device firmware update over-the-air (OTA)
- Continuous development in progress…

Hardware Features

- 80mA DALI broadcast output
- Support to control DT8 LED drivers
- Black & White Metal surface mount box
- Blind inserts / blanking plates option
- User-friendly design for 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

Input & Output Characteristics	
Operating voltage	220~240VAC 50/60Hz
Stand-by power	<1W
DALI bus power supply	I guaranteed : 80mA I max : 250mA U rated : 15VDC
Warming-up	20s

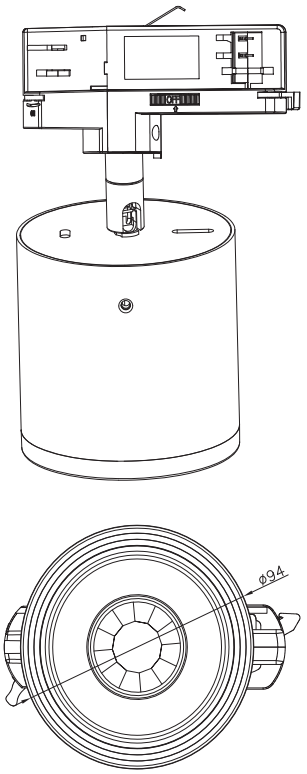
Sensor Data	
Sensor Model	PIR detection
HBIR29/TK	Installation Height : 6m Detection Range(Ø) : 10m
Detection angle	360°

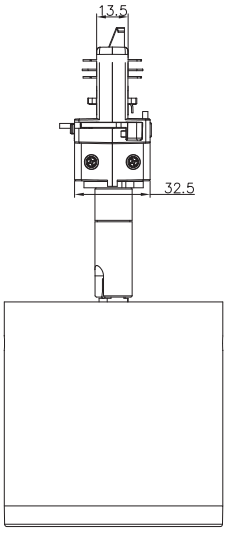
* For more details of detection range, please refer to "detection pattern" section.

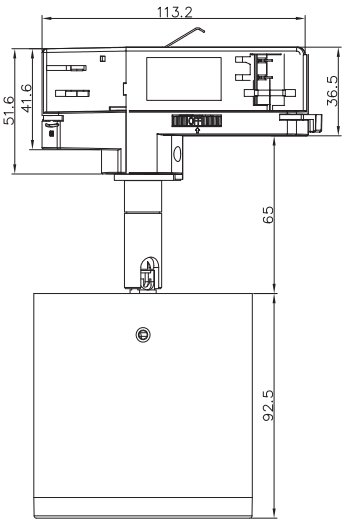
Safety & EMC	
EMC standard (EMC)	EN55015, EN61000-3-2/-3-3, EN61547
Safety standard (LVD)	EN60669-1, EN60669-2-1 EN60570, EN61347-1/2-11
RED	EN300328, EN301489-1/-17 EN50663
Certification	CE, UKCA, RED, RCM

Environment	
Operation temperature	Ta: -20°C ~ +50°C
IP rating	IP20

Mechanical Structure & Dimensions

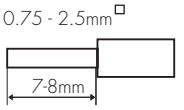






By rotation, the 3-phase dial can be able to select the phase LI, L2, and L3 to distribute the single luminaires in the track system.

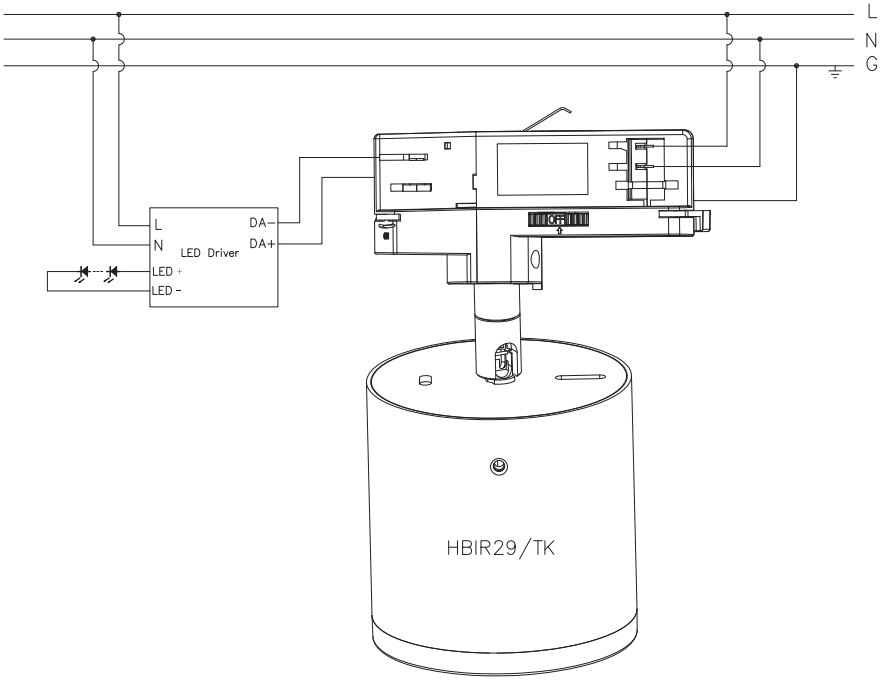
Wire Preparation



Pluggable screw terminal. It is recommended to make connections to the terminal before fitting to the sensor.

1. 200 metres (total) max. for 1mm² CSA (Ta = 50℃)
2. 300 metres (total) max. for 1.5mm² CSA (Ta = 50℃)

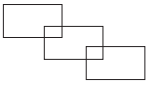
Wiring Diagram



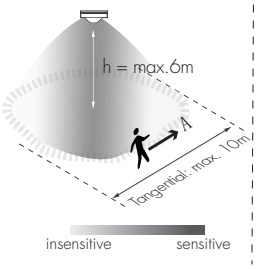
Detection Pattern & Optional Accessory

The data below is tested under following conditions:

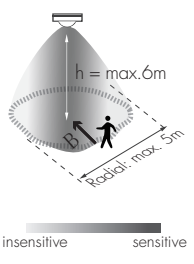
- Single person walking;
- Sensor not connected to any driver that may have soft-on period;
- Testing temperature Ta = 20°C;
- The testing is conducted in an open and spacious indoor field, without noticeable obstacles or influences that may affect PIR performances.



A: Tangential movement



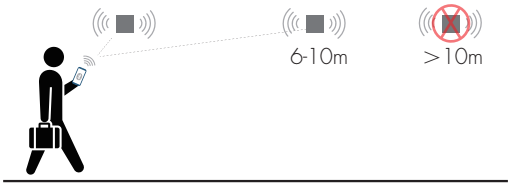
B: Radial movement



Mount height	Tangential (A)	Radial (B)
2.5m	max 79m² (Ø = 10m)	max 20m² (Ø = 5m)
3m	max 79m² (Ø = 10m)	max 20m² (Ø = 5m)
4m	max 64m² (Ø = 9m)	max 20m² (Ø = 5m)
5m	max 50m² (Ø = 8m)	max 20m² (Ø = 5m)
6m	max 50m² (Ø = 8m)	max 20m² (Ø = 5m)

Placement Guide and Typical Range

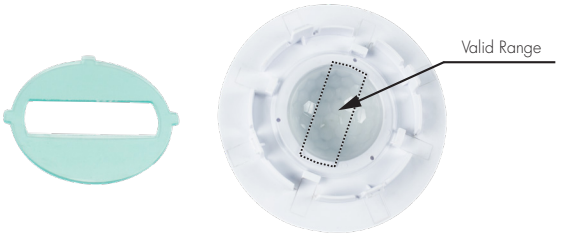
Smart Phone to Device Range



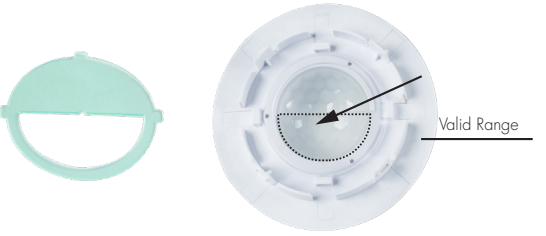
The smart device with the App installed will have a typical range of 10m, but varies from device to device. During commissioning, the installer will need to be in range of the devices when searching for devices to add to the network.

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.

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



Blind Option 1 --- Aisle Detection



Blind Option 2 --- 180° Detection

Additional Information / Documents

1. To learn more about detailed product features/funcvtions, please refer to www.hytronik.com/download ->knowledge ->Introduction of App Scenes and Product Functions
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
3. Regarding precautions for PIR Sensors installation and operation, please kindly refer to www.hytronik.com/download ->knowledge ->PIR Sensors - Precautions for Product Installation and Operation
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
5. Regarding Hytronik standard guarantee policy, please refer to www.hytronik.com/download ->knowledge ->Hytronik Standard Guarantee Policy