HIR15/BLE
DALI-2 Output & Tunable white

HYTRONIK®

Product Description

HIR15/BLE is a Bluetooth dimming and tunable white PIR motion sensor. It is compatible with the Zhaga book 18 standard and designed with DALI-2 output and a robust IP65 structure, the capability can be up to 12m installation height, which is ideal for the typical outdoor lamp (such as a streetlight). HIR15/BLE is embedded with a Bluetooth module to achieve dimming control and colour tuning. The Bluetooth wireless mesh networking makes communication much easier without any hardwiring, which eventually adds value to luminaires and saves costs for projects. Meanwhile, simple device setup and commissioning can be done via **Koolmesh**® app.
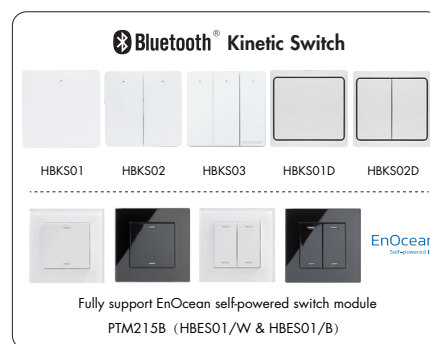
TYPE D

App Features

- Quick setup mode & advanced setup mode
- Tri-level control
- Daylight harvest
- Circadian rhythm (Human centric lighting)
- 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)
- Push switch configuration
- Schedule to run scenes based on time and date
- Astro timer (sunrise and sunset)
- Staircase function (primary & secondary)
- Internet-of-Things (IoT) featured
- Device firmware update over-the-air (OTA)
- Device social relations check
- Bulk commissioning (copy and paste settings)
- Dynamic daylight harvest auto-adaptation
- 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
- Compatible with EnOcean BLE switches
- Continuous development in progress…

Hardware Features

- Input device (Type D)
- Zhaga Book 18 standard
- 15mA DALI-2 Broadcast output
- Tunable white
- IP65 design
- High-bay (up to 12m height)
- 5-year warranty

Bluetooth® Kinetic Switch

HBKS01 HBKS02 HBKS03 HBKS01D HBKS02D

EnOcean Self-powered IoT

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

Bluetooth® 5.0 SIG mesh

iOS
Android

for iOS for Android

Smartphone app for both iOS & Android platform

for iPad

Koolmesh Pro app for iPad

Web

for Web

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

Subject to change without notice.

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	24 VDC
Stand-by power	<0.5W
Output*	I guaranteed: 10mA I max: 15mA U rated: 16VDC
Lux Range	0~1000 lux

*The output default settings is off. If it needs to be turned on, please set it manually after connecting the APP.

Environment	
Operation temperature	Ta: -20°C ~ +50°C
Storage temperature	-30°C ~ +70°C
Relative humidity	10 ~ 90%
IP rating	IP65
Insulation	Class II

Sensor Data	
Sensor principle	PIR
Detection range*	Max installation height: 12m Max diameter: 20m
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, EN55015
Safety standard (LVD)	EN61347-1 EN61347-2-11
RED	EN300328, EN301489-1/-17EN50663
Certification	CE , UKCA

Mechanical Structure & Dimensions

ϕ50.4

43.5

35.3

43.8
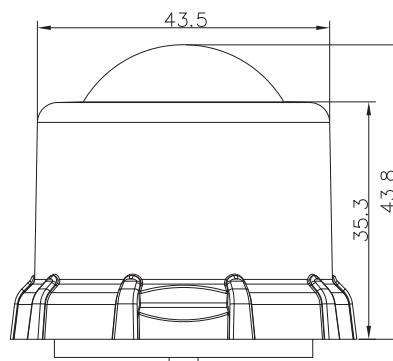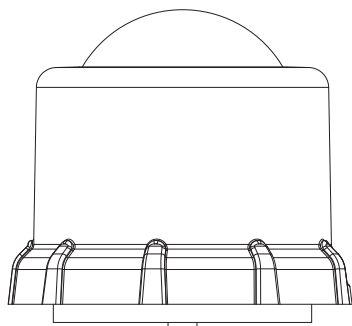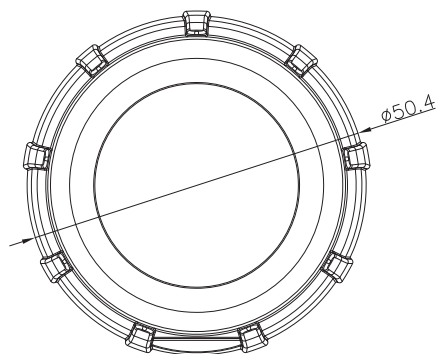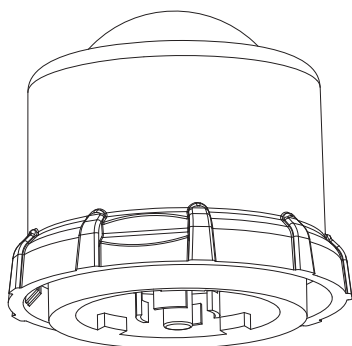
Receptacle Accessory

The HA18SKT receptacle is designed to be compatible with the SAM15 and HIR15 series products. It provides a Zhaga Book 18 standard interface, suitable for roadway lighting, area lighting, and occupancy lighting applications.
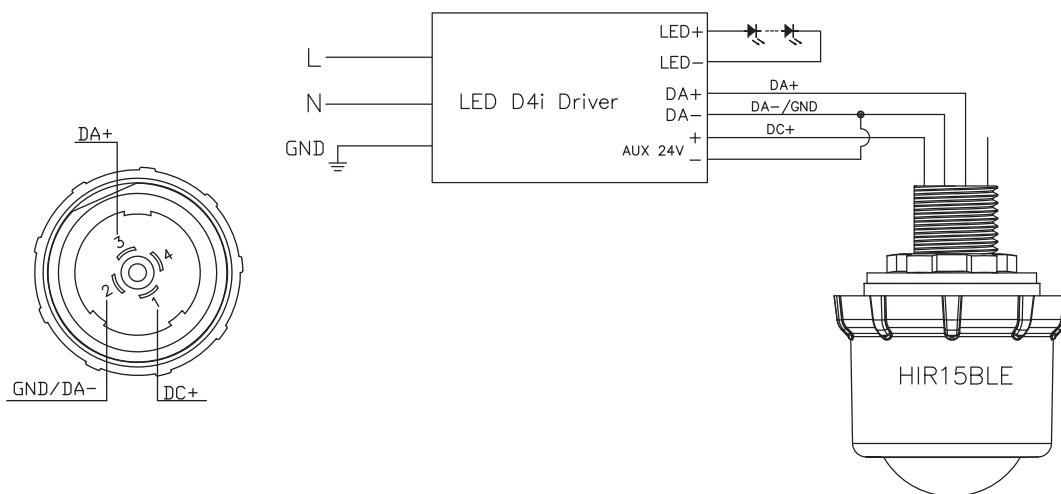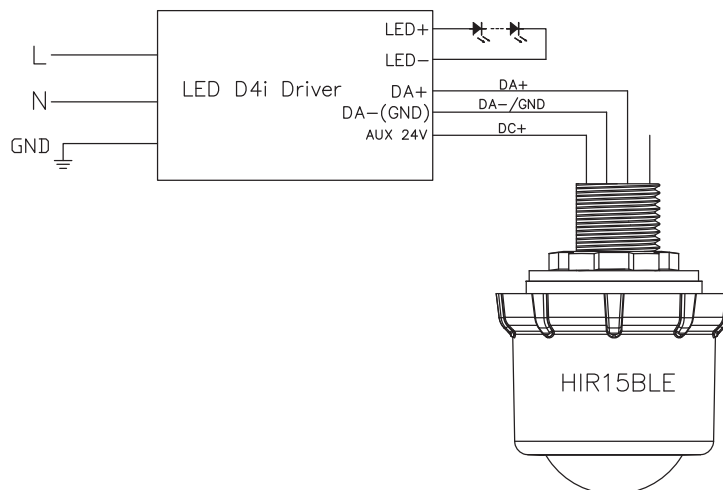
Mechanical Structure & Dimensions

Protection cap	Body	Gasket	Lock Nut
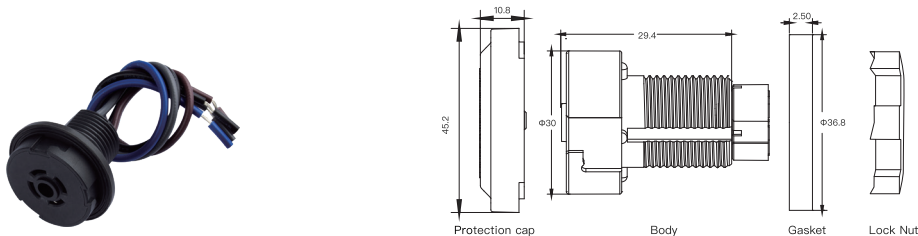
For more details, please refer to https://hytronik.com/product/ha18skt
Note: HA18SKT not included in the package.
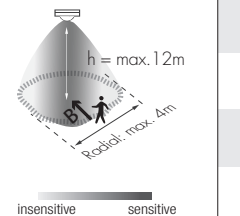
Wiring Diagram 1

Wiring Diagram 2

Note:
1. During wiring, it is imperative to ensure that the DALI bus current does not exceed 250mA.
2. Multiple master devices should not be connected in parallel.
3. When utilizing a single HIR15/BLE, refrain from connecting more than 3 D4i drivers to prevent potential equipment damage due to exceeding the DALI bus current.

Detection Range

The data below is tested under following conditions:
- Single person walking;
- Sensor not connected to any driver that may have soft-on period;
- The testing is conducted in an open and spacious indoor field, without
- noticeable obstacles or influences that may affect PIR performances.

		Mount height	Tangential Movement (A)	Radial Movement (B)
A: Tangential movement	B: Radial movement	3m	max 50m² (∅ = 8m)	max 13m² (∅ = 4m)
		5m	max 79m² (∅ = 10m)	max 13m² (∅ = 4m)
		8m	max 154m² (∅ = 14m)	max 13m² (∅ = 4m)
		12m	max 314m² (∅ = 20m)	max 13m² (∅ = 4m)

h = max.12m   Tangential. max. 20m

h = max.12m   Radial. max. 4m

insensitive — sensitive   insensitive — sensitive

Placement Guide and Typical Range

Smart Phone to Device Range

6-10m   >10m

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

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