Installation and Instruction Manual

HYTRONIK®

IP65 PIR Zhaga Book 18 Standard Motion Sensor with Bluetooth® 5.0 SIG Mesh

D4i Certified, High-Bay

HIR15/BLE

1. Technical Specifications

Operation frequency	2.4 GHz - 2.483 GHz
Transmission power	4 dBm
Range (Typical indoor)	10~30m
Protocol	Bluetooth® 5.0 SIG Mesh
Operating voltage	24 VDC
Stand-by power	<0.5W
Output*	I guaranteed: 10mA I max: 15mA U rated: 16VDC
Lux Range	0~1000 lux
Sensitivity	10% / 30% / 50% / 75% / 100%
Sensor principle	PIR
Detection range*	Max installation height : 15m (forklift) 12m (person) Max diameter(Ø) : 24m (forklift) 20m (person)
Detection angle	360°
Operation temperature	Ta: -20°C ~ +50°C
Storage temperature	-25°C ~ +70°C
Relative humidity	10 ~ 90%
IP rating	IP65
Insulation	Class II

2. Download the App

Free App for set-up and commissioning

Bluetooth® 5.0 SIG mesh

HYTRONIK Koolmesh — iOS — Android — for iOS — for Android

Smartphone app for both iOS & Android platform

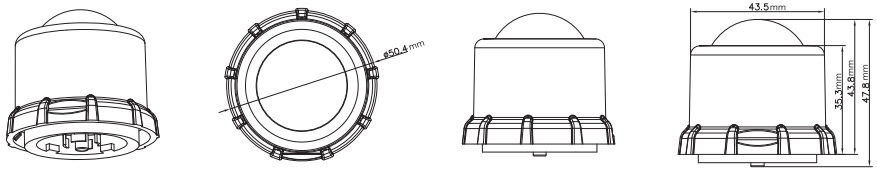
for iPad

Koolmesh Pro app for iPad

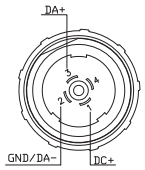
Web — for Web

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

3. Mechanical Structure & Dimensions



4. Wiring Diagram

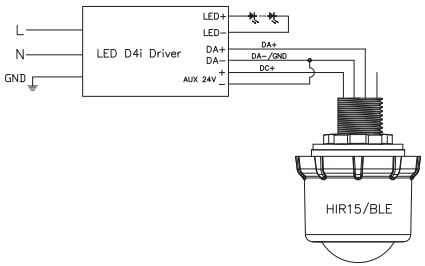


Note:

1. Terminal block 4 is left unpopulated by default. No wiring required.
2. During wiring, it is imperative to ensure that the DALI bus current does not exceed 250mA.
3. Multiple master devices should not be connected in parallel.
4. 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.
5. Ensure that only one device (either the LED D4i Driver or the HIR15/BLE sensor) has the DALI power supply enabled. By default, the DALI power supply of the HIR15/BLE sensor is disabled If activation is required, it must be done manually via the Koolmesh app.

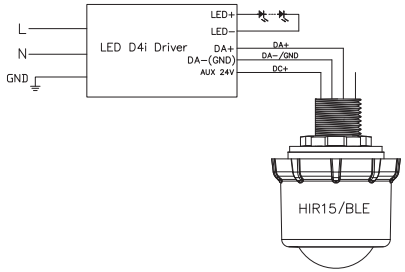
Wiring Diagram 1

D4i Driver with Common Negative



Wiring Diagram 2

D4i Driver with Isolated Negative



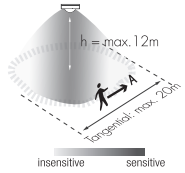
----This product should be installed by a qualified electrician.

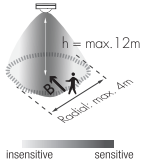
5. Detection Range

*The sensor detection area shown in this table is relevant for an empty space.
In areas with hard surfaces such as metal racking and/or glass corridors then the detection range can be extended from these internal reflections by up to 30%.

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.

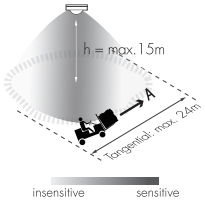


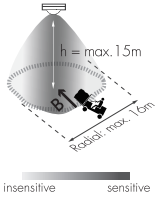


A: Tangential movement	B: Radial movement	Mount height	Tangential Movement (A)	Radial Movement (B)
		3m	max 50m² (Ø = 8m)	max 7m² (Ø = 3m)
		5m	max 79m² (Ø = 10m)	max 7m² (Ø = 3m)
		8m	max 154m² (Ø = 14m)	max 13m² (Ø = 4m)
		12m	max 314m² (Ø = 20m)	max 13m² (Ø = 4m)

The data above is tested under following conditions:

- Forklift driving at a speed of 15km/h;
- Sensor not connected to any driver that may have soff on period;
- Testing tempercture Ta = 20°C;

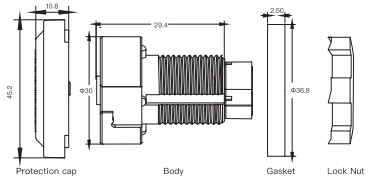




A: Tangential movement	B: Radial movement	Mount height	Tangential (A)	Radial (B)
		10m	max 380m² (Ø = 22m)	max 201m² (Ø = 16m)
		11m	max 452m² (Ø = 24m)	max 201m² (Ø = 16m)
		12m	max 452m² (Ø = 24m)	max 201m² (Ø = 16m)
		13m	max 452m² (Ø = 24m)	max 177m² (Ø = 15m)
		14m	max 452m² (Ø = 24m)	max 133m² (Ø = 13m)
		15m	max 452m² (Ø = 24m)	max 113m² (Ø = 12m)

6. Optional Accessories

Zhaga Book 18 standard interface (HA18SKT)

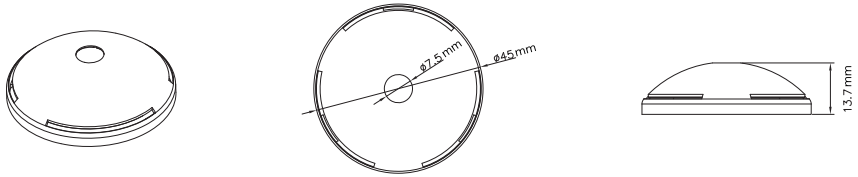


For more details, please refer to https://hytronik.com/product/ha18skt

Note: HA18SKT not included in the package.

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.

Shielding Accessory (HAS15 included in the package.)



Installation Instruction

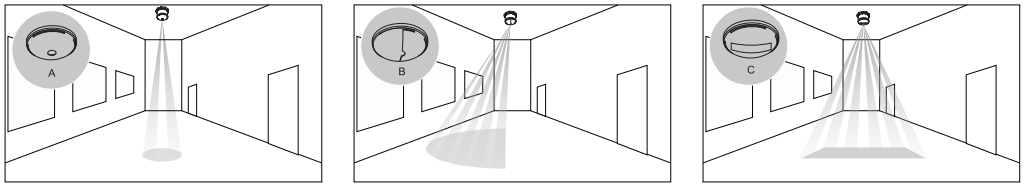
Step 1: Installation

Align the HAS15 cover with the HIR15 series sensor and press down evenly with two fingers. Once an audible sound is heard, the cover is securely installed.

Step 2: Removal

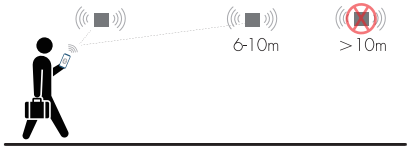
To detach the HAS15 cover, locate the release notch on the edge. Gently lift the cover upward from the notch to remove it.

Picture Application Example



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.

7. Additional Information / Documents

1. To learn more about detailed product features/functions, please kindly refer to https://hytronik.com/product/hir15-ble

2. Regarding precautions for Bluetooth product installation and operation, please kindly refer to https://hytronik.com/service/downloads （Bluetooth Products Precautions for Product Installation and Operation）

3. Regarding precautions for PIR Sensors installation and operation, please kindly refer to https://hytronik.com/service/downloads （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 https://hytronik.com/products/motion-daylight-sensors

5. Regarding Hytronik standard guarantee policy, please kindly refer to https://hytronik.com/service/downloads （Guarantee Conditions document）