

HIR62

Bluetooth PIR Lowbay Sensor Head | RJ12 connector | Conduit Screws

HYTRONIK[®]
SENSORS & LIGHTING CONTROL



Benefits

Flexible: Easy upgrade or extension of sensing functions

Wireless: Adds Bluetooth control to conventional lighting systems

Plug-and-play: Enabling fast installation and replacement

Applications

Conduit thread: M 22x1.5mm

Smart Office Lighting

Commercial Indoor Lighting

Check Out the Complete System Solution on the Website:

<https://www.hytronik.com/product/HIR62>



LVD RED



Product Description

HIR62 is a plug-and-play Bluetooth infrared sensor head for standard low-bay applications with a typical mounting height of 2.5 m, designed to work with non-Bluetooth control bases and drivers such as HCD038/P, HCD038, and HCD438. This solution enables conventional lighting systems to be upgraded to Bluetooth wireless control without replacing existing drivers or additional wiring, allowing dimming and daylight-based lighting control. The modular design allows easy extension or upgrading of sensing functions according to project requirements while maintaining system flexibility and simplifying installation.

Functions and Features

See additional details at the end of datasheet



Daylight Harvest



Human Centric
Lighting (HCL)



Koolmesh - See
bluetooth control
below



Magnetic Reset
switch



RJ12 Connection



Tri-level Dimming

HIR62

Bluetooth PIR Lowbay Sensor Head | RJ12 connector | Conduit Screws

Specifications

Main Capabilities

Dimming (Output) Interface	DALI
Connector Type	RJ12

Sensor Data

Detection angle	360°
Lux range	<1000 lux
Max. Detection range (Diameter)	12.0 m
Maximum Mounting Height	3.0 m
Detection area	113 m ²

Electrical Data

Bluetooth frequency	2.4 GHz - 2.483 GHz
Bluetooth range	10-30m
Bluetooth transmit power	4 dBm
Bluetooth system	Koolmesh
Operating voltage range	5 VDC
Warming-up	20 s

HIR62

Bluetooth PIR Lowbay Sensor Head | RJ12 connector | Conduit Screws

Specifications

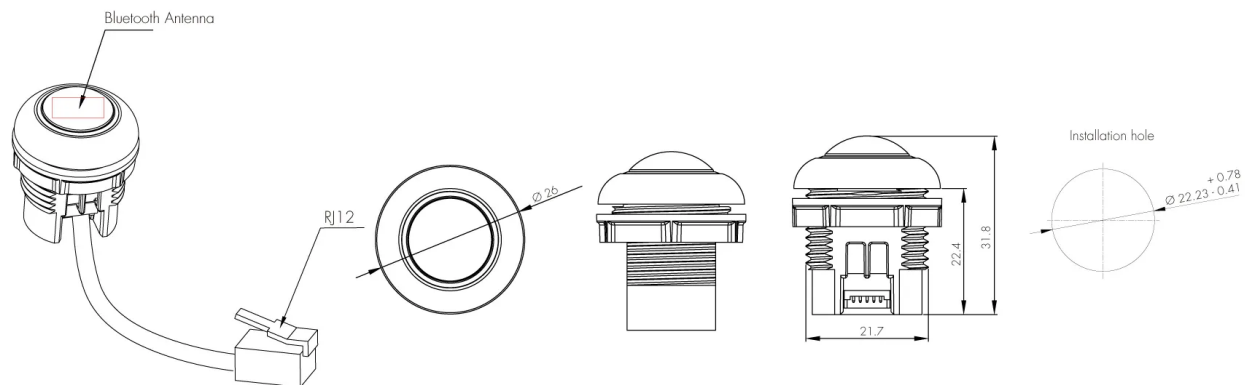
Technical	
Product height	31.8 mm
Product length	26.0 mm
Product width	21.7 mm
Mounting hole	22.0 mm
Cable length	30.0 cm
Ambient temperature	-20 ~ +50 °C
Storage temperature	-40 ~ +70 °C
Humidity max	10 ~ 90%
IP Rate	IP20

Standard	
EMC	EN 55015, EN 61547
LVD	EN 61347-1/-2-11
RED	EN 300328, EN 301489-1/-17, EN 50663

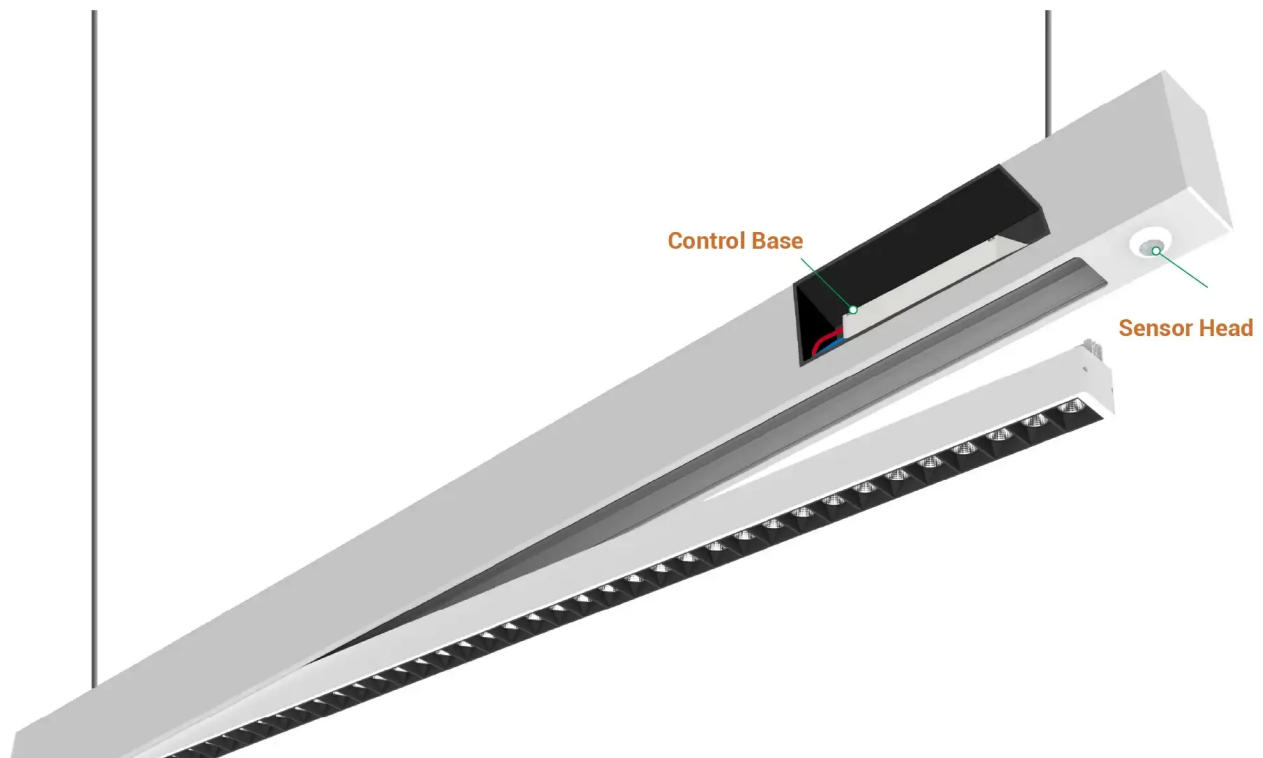
HIR62

Bluetooth PIR Lowbay Sensor Head | RJ12 connector | Conduit Screws

Technical Drawing



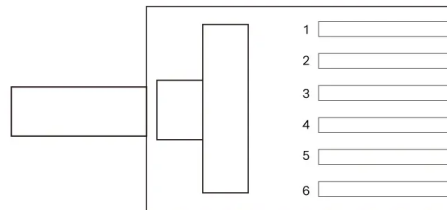
Application Example



HIR62

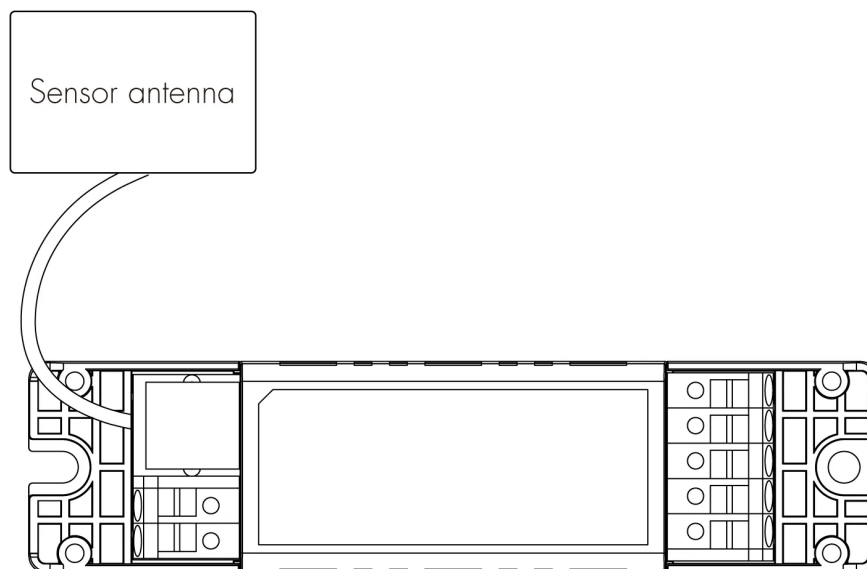
Bluetooth PIR Lowbay Sensor Head | RJ12 connector | Conduit Screws

Wire Preparation



The connector is an RJ12 6P6C plug, with pin assignment as follows: Pin 1 is DALIR, Pin 2 is +5V, Pin 3 is PUSH, Pin 4 is GND, Pin 5 is DALI, and Pin 6 is not connected (NC).

Wiring Diagram



HIR62

Bluetooth PIR Lowbay Sensor Head | RJ12 connector | Conduit Screws

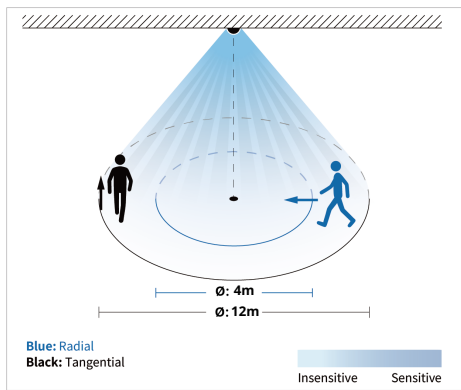
Detection Range

Single Person Walk (Ceiling mount)

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 $T_a = 20^{\circ}\text{C}$
- The testing is conducted in an open and spacious indoor field, without noticeable obstacles or influences that may affect PIR performances.

Detection example 2.5m mounting height:



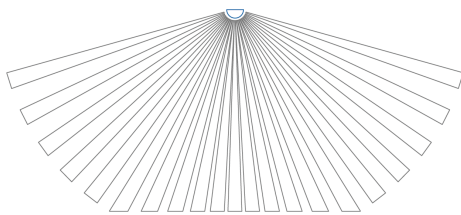
Tangential Movement

H[m]	2.5
Ø[m]	12

Radial Movement

H[m]	2.5
Ø[m]	4

Detection schematic diagram



HIR62

Bluetooth PIR Lowbay Sensor Head | RJ12 connector | Conduit Screws



Commissioning Instructions and Precautions

A. Installation Note

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

B. Bluetooth Antenna Note

1. This product is equipped with a built-in Bluetooth antenna. When the device is installed in a ceiling or recessed environment, ensure that the sensor head remains exposed and is not covered by metal structures or dense building materials, as this may affect Bluetooth communication performance. For optimal signal reliability, avoid installing the device inside fully enclosed metal housings or areas with strong signal interference.

Warning: For additional important documents, including installation precautions, product guidelines, and guarantee conditions, please refer to the official downloads.

<https://hytronik.com/service/downloads>

Dimming Interface Operation Notes

The provided Switch-Dim interface allows for a simple dimming method using commercially available non-latching (momentary) wall switches. Detailed Push switch configurations can be set on Koolmesh app.

Note: Single press, double press, and press-and-hold actions can each be independently assigned to one function via the app. Once configured, each action triggers only its assigned function. Multiple functions cannot be activated by a single press action.

Switch function	Action	Descriptions
Emergency Self-Test Function	Single press (>0.1s) Double press Press and hold (>= 1s)	• Disable • Function test • Duration test • Erminated test
Fire Alarm Function	Refer to http://faq.koolmesh.com/docu/en/	• Able to connect the Fire Alarm system. • Once the fire alarm system is triggered, all the luminaries controlled by the Push Switch will enter the preset scene (normally it's full on), after the fire alarm system gives the ending signal, all the luminaries controlled by this Push Switch will revert back to normal status.
ON OFF Switch (Latching Switch)	/	• Upgrade a standard on/off control to Bluetooth control, enabling one latching switch to control multiple luminaires or zones, reducing wiring and switch count.
Normal PUSH (Retractive Switch)	Single press (> 0.1s) Double press Press and hold (>= 1s)	• ON/OFF • OFF only • Recall this scene • Sensor take over • Not in use
Sensor-Link	/	• Hold time/scene • Stand-by time/scene • Upgrade a normal on/off motion sensor to a Bluetooth-controlled motion sensor

HIR62

Bluetooth PIR Lowbay Sensor Head | RJ12 connector | Conduit Screws

Options

Accessories



Sensor fixation accessory | Zhaga Book 20 | White color

HA04

www.hytronik.com/product/HA04



Sensor fixation accessory | Zhaga Book 20 | White color

HA05

www.hytronik.com/product/HA05

Compatible products (for full functionality)



HC038V

Control unit | 1-10V | Attachable sensor heads
www.hytronik.com/product/HC038V



HCD438

Control body | DALI with PSU | Attachable sensor heads |
US Certified
www.hytronik.com/product/HCD438



HC438V

Control unit | 1-10V Dimming | Attachable sensor heads |
US Certified
www.hytronik.com/product/HC438V



HEC7030/BF

DALI DT6 LED Driver (CC) 30W | Dimmable | Built-in version
www.hytronik.com/product/HEC7030-BF



HCD038

Control unit | DALI with PSU | Attachable sensor heads
www.hytronik.com/product/HCD038



HED1025

DALI LED Driver 25W (CC) | Dimmable | Built-in version
www.hytronik.com/product/HED1025



HCD038/P

Control unit | DALI with PSU | Attachable sensor heads
www.hytronik.com/product/HCD038-P



HED8045

DALI-2 DT8 LED Driver 45W (CC) | Tunable white |
Built-in/Stand alone
www.hytronik.com/product/HED8045

HIR62

Bluetooth PIR Lowbay Sensor Head | RJ12 connector | Conduit Screws

Koolmesh - Operating guide

Bluetooth 5.0 SIG Mesh



Smartphone(ios)



Smartphone (Android)



iPad



Web

For additional information, including project and network, device, and scenes, please refer to: <http://faq.koolmesh.com/faq/en/index.html>

Shared Koolmesh App Features

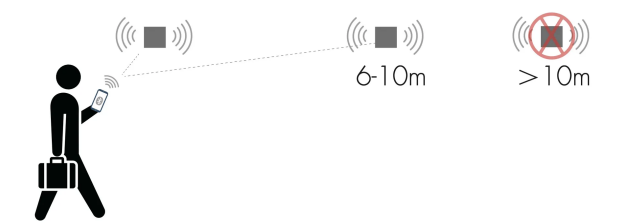
- | | |
|--|---|
|  Alert for excess lux / temperature / humidity via multi-meter HBLM01 |  Koolmesh Pro iPad for on-site configuration |
|  Astro timer (sunrise and sunset) |  Network sharing via QR code or keycode |
|  Bulk commissioning (copy and paste settings) |  Offline commissioning |
|  Compatible with Shelly energy metering |  One-key device replacement |
|  Continuous development in progress... |  Quick setup mode & advanced setup mode |
|  Device firmware update over-the-air (OTA) |  Remote control via Hytronik gateway & touch screen HPAD-TSJASE1 |
|  Device social relations check |  Scenes |
|  Different permission levels via authority management |  Schedule |
|  Floorplan feature to simplify project planning |  Staircase function for quick setup |
|  Grouping luminaires via mesh network |  Test mesh network connection quality |
|  Internet-of-Things (IoT) featured |  Web platform for project deployment & data analysis |

Device-specific Koolmesh App features

- | | |
|--|---|
|  Adjustable motion & static sensitivity & Adjustable sensing distance |  Dynamic daylight harvest auto-configuration |
|  Detailed motion sensor settings |  Motion sensor range test |
|  Dusk/Dawn photocell (Twilight function) |  Motion sensor trigger diagnosis |

Smart Phone to Device Range

1. The smart device with the installed App typically has a range of 10m, which may vary between devices.
2. During the commissioning process, the installer must be within range of the devices while searching for them to add to the network.
3. Once the devices are added to the network via the App, they will begin communicating within the wireless mesh.
4. After the network is complete, all devices can be accessed from the smart device within a 20m range of a single point.



Bluetooth Network Components



HBGW02

Bluetooth Mesh Gateway | Ethernet or Wi-Fi 2.4GHz | wall/flat surface mounting
www.hytronik.com/product/HBGW02



HBGW02/D

Bluetooth Mesh Gateway | Dual-band Wi-Fi | wall/flat surface mounting
www.hytronik.com/product/HBGW02-D



HBGW03/R

BACnet Gateway | Dual-band Wi-Fi or Ethernet | DIN rail/wall/flat surface mounting
www.hytronik.com/product/HBGW03-R



HBKS01/W

Bluetooth Kinetic Switch | One-gang | Wireless Control
www.hytronik.com/product/HBKS01-W



HBKS01D/W

Bluetooth Kinetic Switch | Single Rocker | White Color
www.hytronik.com/product/HBKS01D-W



HBKS02/W

Bluetooth Kinetic Switch | Two-gang | White Color
www.hytronik.com/product/HBKS02-W



HBKS02D/W

Bluetooth Kinetic Switch | Double Rocker | White Color
www.hytronik.com/product/HBKS02D-W



HBKS03/W

Bluetooth Kinetic Switch | Three-gang | White Color
www.hytronik.com/product/HBKS03-W



HBLM01

Multi-meter | Bluetooth & NFC | Lux Measurements
www.hytronik.com/product/HBLM01



HPAD-TS/APP

Bluetooth Touch Tablet | Switch Boxes | Smart Lighting Management
www.hytronik.com/product/HPAD-TS-APP

Functions and Features



Daylight Harvest

Right time, right place and the right amount of light! Daylight harvest (Also known as daylight regulating or daylight interaction) is a must in the future lighting norms. It automatically measures available natural light and adjusts artificial lighting output to maintain the target illuminance level. Using daylight sensor feedback, control signals are transmitted to the LED drivers via DALI or 0–10V interfaces, ensuring the required light output is delivered only when needed, improving visual comfort and reducing energy consumption.



Human Centric Lighting (HCL)

Human Centric Lighting (HCL) helps reduce energy consumption while supporting human wellbeing and productivity in artificially lit environments. Through Hytronik's decentralised tunable white control with integrated time-based operation, HCL enables cost-effective circadian rhythm lighting without the complexity of centralised lighting systems. Designed as a simple and flexible solution, it is ideal for offices, schools, and healthcare applications requiring dynamic white light adjustment throughout the day.



Magnetic Reset Switch

The product features a magnetic reset function that restores factory default settings by applying a magnet (40 Gs) to the designated reset area within 10 mm for approximately 5 seconds. The omnipolar magnetic detection supports both north and south poles, enabling quick and convenient on-site reset and reconfiguration without physical access to switches or buttons.



RJ12 Sensor Connection

The product features an RJ12 plug-and-play connection interface, enabling quick, tool-free installation and easy maintenance. The standardized connector supports flexible integration between drivers, sensor bases and sensor heads, ensuring reliable communication and simplifying replacement or system expansion. This modular connection method enhances installation efficiency and reduces wiring complexity in both new and retrofit applications.



Tri-level Dimming

Hytronik's tri-level dimming products offer 3 levels of light control: 100% dimmed light off, with settable time periods between each phase, as well dimming level and daylight threshold.

*All Hytronik's tri-level dimming products can also be configured as bi-level control (by setting the stand-by period to infinity), so that the light always remains in the dimmed mode in absence for areas where there are safety, security or enhanced comfort requirements.

Check out for further explanation of features

<https://hytronik.com/solutions/lighting-control-features>