

HIR02

PIR Lowbay | Tri-level dimming | RJ12 connector to control body



Benefits

Compact: Standard rectangular Plug&Play sensor design

Simple: Tri-level dimming with photocell

User-Friendly: With one-key commissioning with IR controller

Applications

Master luminaire with sensor

Classrooms

Offices

Check Out the Complete System Solution on the Website:
<https://www.hytronik.com/product/HIR02>

Product Description

HIR02 is a PIR sensor head and compatible with the Tri-level Dimming. It can work with the linear shaped control base such as HCD038V and HCD038. It offers powerful number of Plug'n'Play feature options to expand the flexibility of luminaires design.

Functions and Features

See additional details at the end of datasheet



Lux Off



RJ12 Connection



Tri-level Dimming

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Specifications

Main Capabilities

Connector Type	RJ12
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Sensor Data

Detection angle	360°
Max. Detection range (Diameter)	6.0 m
Maximum Mounting Height	3.0 m
Detection area	28 m ²

Electrical Data

Operating voltage range	5 VDC
Warming-up	20 s

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Specifications

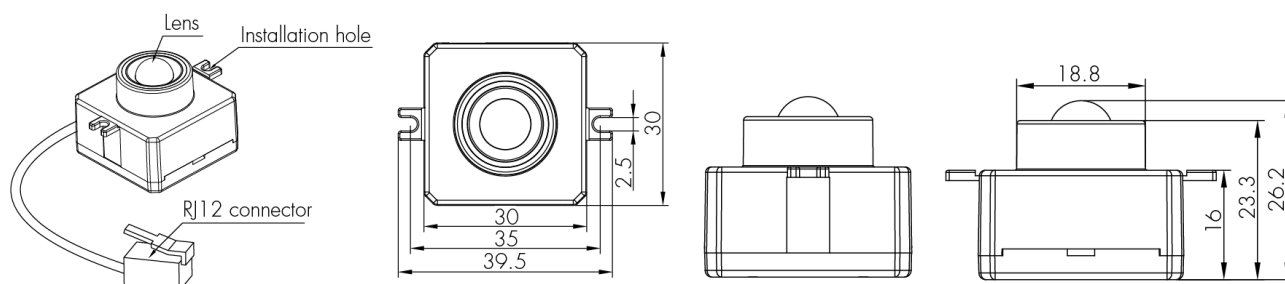
Technical	
Product weight	20.0 g
Product height	48.0 mm
Product length	39.5 mm
Product width	20.3 mm
Ambient temperature	-20 ~ +50 °C
Storage temperature	-40 ~ +70 °C
Humidity max	10 ~ 90%
IP Rate	IP20

Standard	
EMC	EN 55015, EN 61000-3-2, EN61000-3-3
LVD	AS/NZS60669-1/-2-1, AS/NZS 60669-1/-2-1
RED	EN 300440, EN301489-1, EN301489-3, EN 62479

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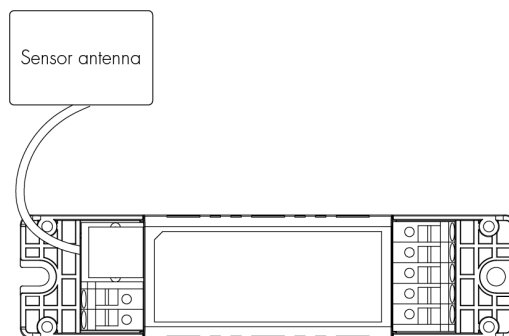
Technical Drawing



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Wiring Diagram

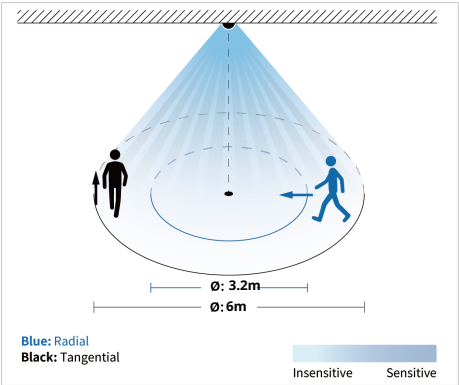


Detection Range

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 Ta = 20°C
 - The testing is conducted in an open and spacious indoor field, without noticeable obstacles or influences that may affect PIR performances.

Detection example 3m mounting height:



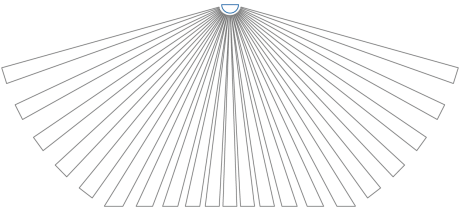
Tangential Movement

H[m]	3
Ø[m]	6

Radial Movement

H[m]	3
Ø[m]	3.2

Detection schematic diagram



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Commissioning Instructions and Precautions

A. Installation Note

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

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

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

Commissioning via Remote Control - Page 1

Settings (Remote Control HRC-05)



Permanent ON/OFF function

Press the "ON/OFF" button, the light goes to permanent on or permanent off mode, and the sensor is disabled.

* Press "Auto Mode", "RESET" or "Scene mode" buttons to quit this mode.
The mode will change to AUTO Mode after power failure.



Sensor mode

Press "Auto Mode" button, the sensor starts to function and all settings remain the same as the latest status before the light is switched on/off.



Reset function

Press "RESET" button, all settings go back to default settings.
Detection range: 100%; Hold-time: 5min; Stand-by period: 10min;
Stand-by dimming level: 10%; Lux disabled



Dim +/-

Long press "Dim +" or "Dim -" to adjust the light brightness during hold-time. "+" means dimming up, "-" means dimming down.



Test mode

This button is for testing purpose only. The sensor goes to test mode (hold-time is 2s) after commissioning, meanwhile the stand-by period and daylight sensor are disabled.

* This mode can be ended by pressing "reset", or any button of "scene mode" and "hold-time". The sensor settings are changed accordingly.



Power output

By pressing these two buttons, the output shifts between 80% (at initial 10,000 hours) and 100%, for energy saving purpose.



Ambient daylight threshold

Press this button, the latest surrounding lux value overwrites the previous lux value learned, and it is set as the daylight threshold. This feature enables the fixture to function well in any real application circumstances.



Lux disable

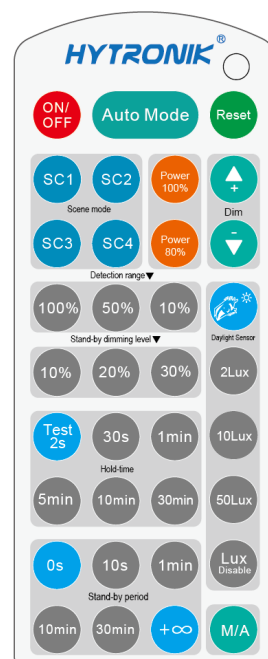
Press this button, the built-in daylight sensor stops working, and all motion detected could turn on the lighting fixture, no matter how bright the natural light is.



Auto mode / Semi-auto mode (absence detection)

By pressing this button, the sensor goes to Auto mode or Semi-auto mode (absence detection) function.

* For HIRO2, the LED indicator flashes if it's Auto mode function, and is on for 2 seconds if it shifts to Semi-auto mode (absence detection).



HRC-05

Note: the buzzer beeps one time when RC receives signal successfully.

Commissioning via Remote Control - Page 2

Settings (Remote Control HRC-05)

Scene mode

There are 4 scene modes fixed program built in the remote control to choose for different applications:

Scene options	Detection range	Hold-time	Stand-by period	Stand-by dimming level	Daylight sensor
SC1	100%	1 min	10min	10%	2Lux
SC2	100%	5min	10min	10%	2Lux
SC3	100%	10min	30min	10%	10Lux
SC4	100%	10min	+∞	10%	50Lux

* End-user can adjust the settings by pressing buttons of detection range/hold-time/stand-by period/stand-by dimming level/daylight sensor. The last setting stays in validity.

Hold-time

Press the buttons of "hold-time" to set hold-time at 30s / 1 min / 5min / 10min / 30min.

Daylight sensor

Press the buttons of "daylight sensor" to set daylight threshold at 2Lux / 10Lux / 50Lux.

Stand-by period (corridor function)

Press the buttons of "stand-by period" to set stand-by period at 0s / 10s / 1 min / 10min / 30min / +∞.

* "0s" means on/off control; "+∞" means bi-level dimming control, the fixture never switches off when daylight sensor is disabled.

Stand-by dimming level

Press the buttons of "stand-by dimming level" to set the stand-by dimming level at 10% / 20% / 30%.

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Options

Compatible products (for full functionality)



HC038V

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



HEM09

Emergency Driver Max.30w | Constant Current | Attachable sensor heads
www.hytronik.com/product/HEM09



HC438V

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



HRC-05

Sensor remote controller | Dimming control | White color
www.hytronik.com/product/HRC-05



HCD038

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

Functions and Features



Lux Off

Lux Off disables lighting output when the measured ambient light level exceeds the preset lux threshold. In this condition, lighting remains off regardless of occupancy detection, ensuring artificial lighting is not activated when sufficient daylight is available, thereby reducing unnecessary energy consumption.



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>