HIR04

PIR Lowbay | Photocell Advance | RJ12 connector to control body



Benefits

Compact: Standard rectangular Plug&Play sensor design

All-in-one: Daylight harvest + Tri-level + Photocell Advance

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/HIR04

Product Description

This PIR sensor features passive infrared (PIR) detection with tri-level dimming, Photocell Advance for enhanced sensitivity, and pro-active lux switching and daylight harvesting capabilities. It is suitable for installations up to 3m high with a detection range up to Ø = 6m. Sensor settings can be adjusted via the HRC-11 handset.

Functions and Features

See additional details at the end of datasheet



Lux Off



Manual Override



Photocell Advance



RJ12 Connection



Semi-Automatic Mode (Absence Detection)



Tri-level Dimming

Specifications

Main Capabilities	
Connector Type	RJ12

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

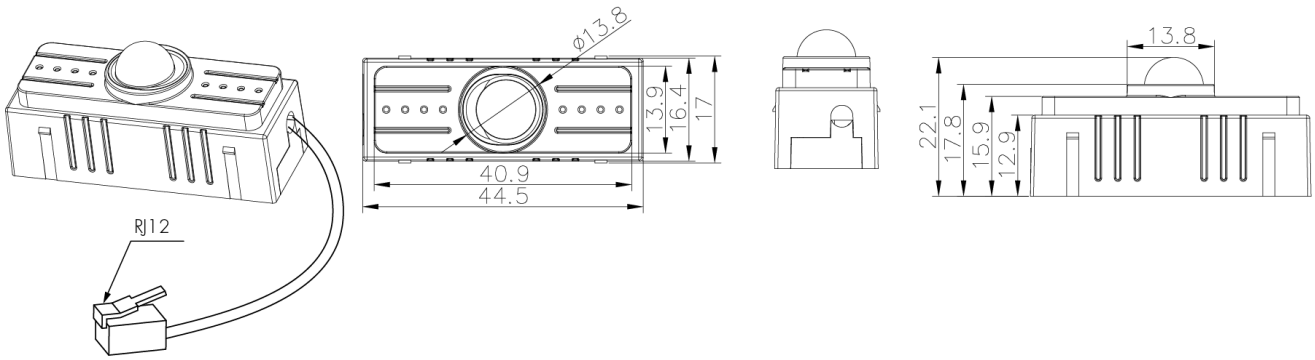
Electrical Data	
Operating voltage range	5 VDC
Stand-by power (Psb)	<0.5W
Warming-up	20 s

Specifications

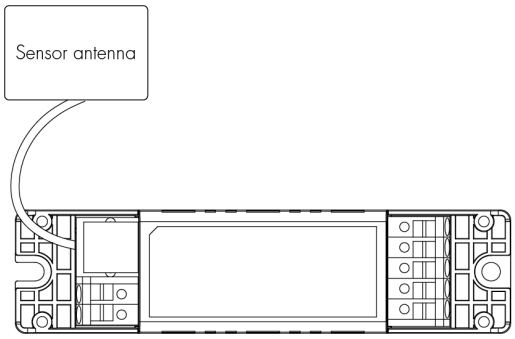
Technical	
Product weight	16.0 g
Product height	19.3 mm
Product length	44.5 mm
Product width	17.0 mm
Ambient temperature	-20 ~ +50 °C
Storage temperature	-40 ~ +70 °C
Humidity max	10 ~ 90%
IP Rate	IP20

Standard	
EMC	EN 55015, EN61000-3-2/-3-3
LVD	AS/NZS 60669-1/-2-1, EN60669-1/-2-1

Technical Drawing



Wiring Diagram

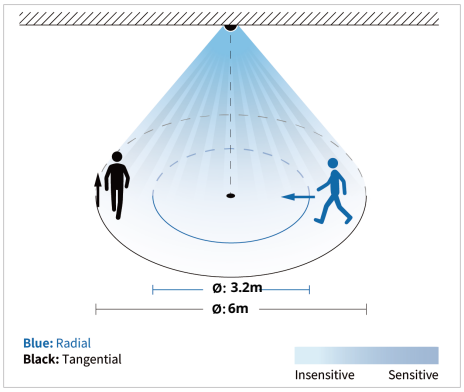


Detection Range

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.

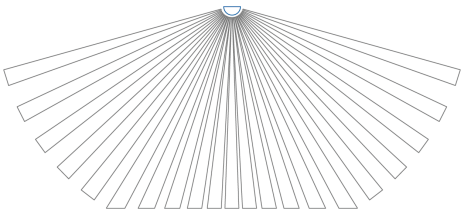
Detection example 3m mounting height:



Tangential Movement	
H[m]	3
Ø[m]	6

Radial Movement	
H[m]	3
Ø[m]	3.2

Detection schematic diagram



Commissioning Instructions and Precautions

A. Installation Note

1. This product should be installed by a qualifed 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-11)

ON/OFF Permanent ON/OFF function

Press button "ON/OFF" to select permanent ON or permanent OFF mode.
* Press button "AUTO", "RESET" or "Ambient" to quit this mode.
The mode will change to AUTO Mode after power failure.

RESET Reset Settings

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

Shift Shift Button

Press button "Shift", the LED on the top left corner is on to indicate mode selection.
All values / settings in RED are valid for 20 seconds.

SEMI-AUTO / AUTO AUTO mode

Press button "AUTO" to initiate automatic mode. The sensor starts working and all settings remain as before the light is switched ON/OFF.

SEMI AUTO / AUTO SEMI-AUTO mode

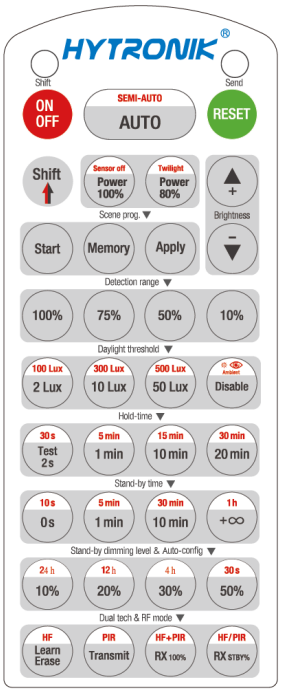
1. Press button "Shift", the red LED flashes for indication.
2. Press button "SEMI-AUTO/AUTO" to initiate semi-auto mode. The fixture is manually turned on by pressing the push-switch, and goes off automatically after stand-by time. (Absence detection mode)

Sensor off / Power 100% / Twilight / Power 80% Power output

Press the buttons to select light output at 80% (at initial 10,000 hours) or 100%.
Note: "Sensor off" and "Twilight" functions are disabled.

+ / - Brightness +/-

Press these two buttons to adjust the light output brightness during hold-time.



HRC-11

Start / Memory / Apply Scene program - *1-key commissioning*

1. Press button "Start" to program.
2. Select the buttons in "Detection range", "Daylight threshold", "Hold-time", "Stand-by time", "Stand-by dimming level" to set all parameters.
3. Press button "Memory" to save all the settings programmed in the remote control.
4. Press button "Apply" to set the settings to each sensor unit(s).

For example, to set detection range 100%, daylight threshold Disable, hold-time 5min, stand-by time +∞, stand-by dimming level 30%, the steps should be: Press button "Start", button "100%", "Disable", "Shift", "5min", "Shift", "+∞", "30%", "Memory". By pointing to the sensor unit(s) and pressing "Apply", all settings are passed on the sensor(s).

Detection range

All buttons in this zone are disabled for HIR04.

Daylight threshold

Press buttons in zone " Daylight threshold" to set daylight sensor at 2Lux/ 10Lux / 50Lux / 100Lux / 300Lux / 500Lux / Disable.
Note: To set daylight sensor at 100Lux / 300Lux / 500Lux, press "Shift" button first.

Commissioning via Remote Control - Page 2

Settings (Remote Control HRC-11)

Ambient daylight threshold

1. Press button "Shift", the red LED starts to flash.
2. Press button "Ambient", the surrounding lux level is sampled and set as the new daylight threshold.

Hold-time

Press buttons in zone "hold-time" to set the hold-time at 2s / 30s / 1min / 5min / 10min / 15min / 20min / 30min.

Note: 1. To set hold-time at 30s / 5min / 15min / 30min, press "Shift" button first.

2. 2s is for testing purpose only, stand-by period and daylight sensor settings are disabled in this mode.

*To exit from Test mode, press button "RESET" or any button in "Hold-time".

Stand-by time (corridor function)

Press buttons in zone "stand-by time" to set the stand-by period at 0s / 10s / 1min / 5min / 10min / 30min / 1h / +∞.

Note: "0s" means on/off control; "+∞" means the stand-by time is infinite and the fixture never switches off.

Stand-by dimming level

Press the button in zone "stand-by dimming level" to set the stand-by dimming level at 10% / 20% / 30% / 50%.

Auto-configuration function

All buttons in this zone are disabled.

Dual tech & RF mode

All buttons in this zone are disabled.

Options

Compatible products (for full functionality)



HC038V

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



HCD038

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



HCD038/P

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



HCD438

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



HRC-11

Sensor remote controller | Diverse function | White color
www.hytronik.com/product/HRC-11

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.

Manual Override

With the help of a push switch, the sensor can be manually overridden by the end user to switch the light on/off or adjust the target lux level, providing greater flexibility and improved user experience.

Short press (<1s): On/Off control
On Off: The light turns off immediately and cannot be re-triggered by motion until the preset hold-time expires, after which the sensor returns to normal operation.
Off On: The light turns on and enters sensor mode, regardless of the ambient light level.

Long press (>1s): Target lux adjustment
The target lux level can be adjusted by dimming the light up or down.
Adjustments via push switch and remote control can overwrite each other, with the last setting stored in memory.

Note: If manual override is not required, the “PUSH” terminal can be left unconnected.

Photocell Advance

This advanced daylight sensing function accurately measures ambient light levels while minimising interference from the luminaire itself, ensuring reliable dusk-to-dawn control and daylight priority over motion detection. It automatically switches lighting on and off and dynamically adjusts brightness in response to available natural light, delivering visual comfort and improved energy efficiency.

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.

Semi-Automatic Mode (Absence Detection)

In semi-automatic mode, the sensor operates as an absence detector, where the lighting must be switched on manually via a wall push switch and remains on while occupancy is detected.
Once the area is vacated, the sensor automatically switches off the lighting after the preset hold-time, improving energy efficiency and ensuring controlled operation.

Manual ON: The light will not turn on automatically and must be switched on manually via the wall switch. The sensor remains inactive while the light is off.
Auto OFF: After the light is switched on, the sensor becomes active and monitors occupancy. When no presence is detected, the light will automatically switch off after the defined delay time.

Note: The wall switch can be configured either for Manual Override or Semi-automatic Mode (Absence Detection), but not both simultaneously. The default setting is Manual Override.

Functions and Features



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