

IP65 On/off PIR Motion Sensor (High-bay)

HC049S

On/off Bolt-on/Batten-fit PIR Sensor

HYTRONIK®



IP65

Product Description

HC049S is a high-bay PIR on/off motion sensor, with capability of up to 1.5m installation height. HC049S has a daylight sensor built-in, and is specifically designed for mounting onto a batten style luminaire. All sensor parameters can be programmed through remote controller HRC-11.



Features

- IP65
- Max withstandable in-rush current: 80A@160µs
- Black & White & Gray metal surface mount box option
- Fixing washers accessory
- High-bay (up to 1.5m height)
- Remote controllable
- 5-year warranty

Technical Specifications

Input Characteristics

Model No.	HC049S
Operating voltage	220 ~ 240VAC 50/60Hz
Stand-by power	<0.5W
Load ratings	400VA (capacitive) 800W (resistive)
Max withstandable in-rush current	80A@160µs
Warming-up	30s

Safety and EMC

EMC standard (EMC)	EN55015, EN61547 EN61000-3-21-3-3
Safety standard (LVD)	EN61347-1, EN61347-2-11
Certification	ENEC, CE, EMC, LVD, RCM

Sensor Data

Model No.	HC049S
Sensor principle	PIR detection
Detection range*	Max installation height: 1.5m (forklift)
	1.2m (single person)
	Max detection range: 1.6m (diameter)
Detection angle	360°

* The detection range is heavily influenced by sensor placement (angle) and different walking paces. It may be reduced under certain conditions.

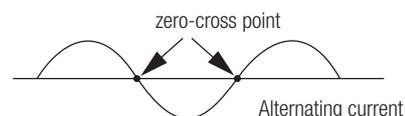
Environment

Operation temperature*	Ta: -35°C* ~ +50°C
IP rating	IP65

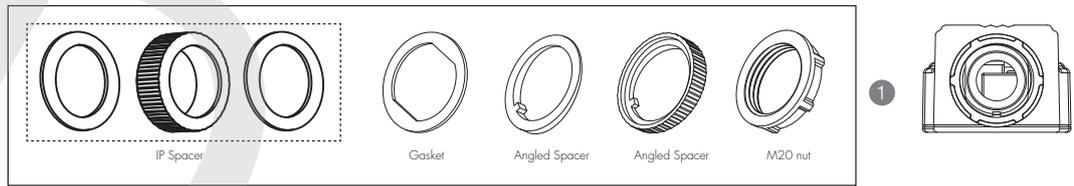
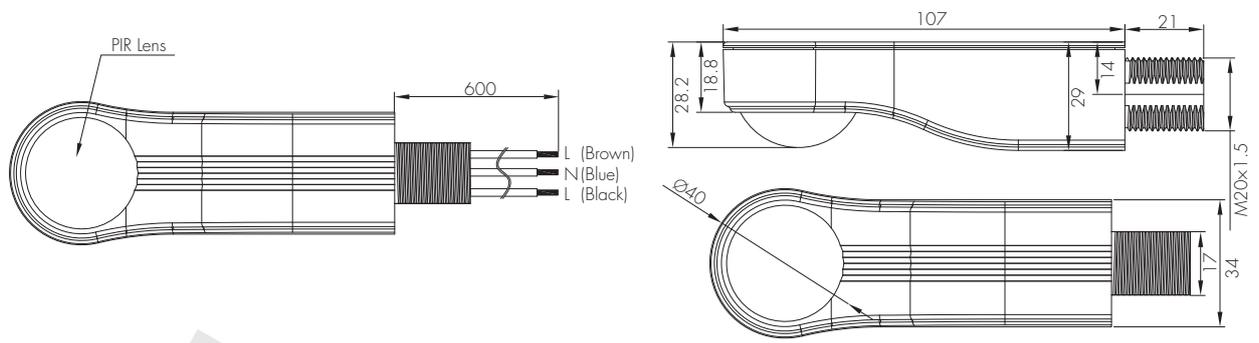
* When used in -35°C ~ -20°C environment, the sensor still functions but the detection range & life-span would be compromised. The optimal Ta would be -20°C ~ +50°C and we apply 5-year guarantee for such usage condition.

Zero-cross Relay Operation

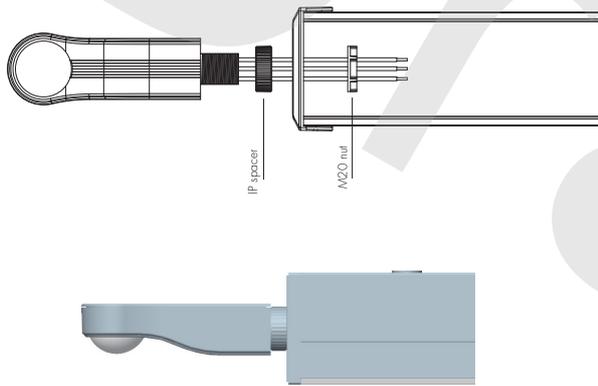
The sensor switches on/off the load right at the zero-cross point, to ensure that the in-rush current is minimised, enabling the maximum lifetime of the relay.



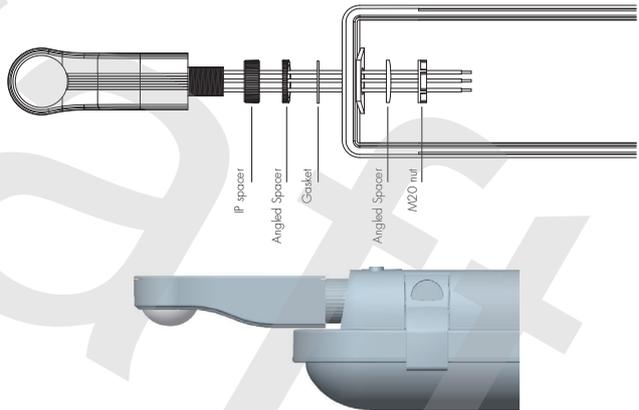
Mechanical Structure & Dimensions



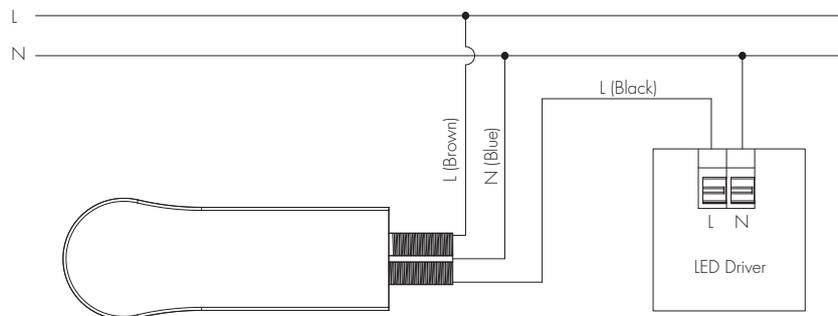
Typical Installation 1



Typical Installation 2



Wiring Diagram



Functions and Features

On/off Control

This sensor is a motion switch, which turns on the light upon detection of motion, and turns off after a pre-selected hold-time when there is no movement. A daylight sensor is also built in to prevent the light from switching on when there is sufficient natural light.



With sufficient natural light, the light does not switch on when presence is detected.

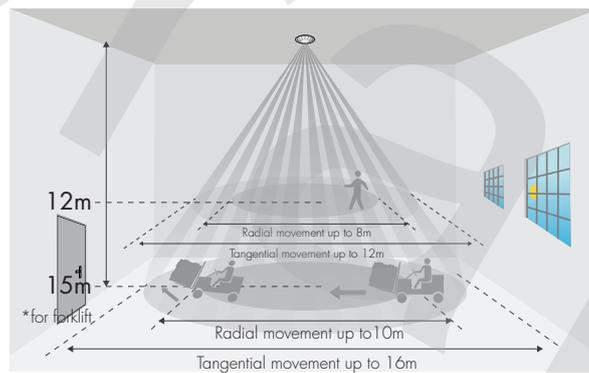


With insufficient natural light, the sensor switches on the light automatically when presence is detected.



The sensor switches off the light automatically after the hold-time when there is no motion detected.

Detection Pattern



*The detection patterns are based upon 5km/h movement speed.

Settings (Remote Control HRC-11)



Permanent ON/OFF function

Press button "ON/OFF" to select permanent ON or permanent OFF mode.

* Press button "AUTO", "RESET" to quit this mode.

The mode will change to AUTO Mode after power failure.



Reset Settings

Press button "RESET", all settings go back to factory default settings.

Hold-time: 5min, daylight threshold: 2lux



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.



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.

Note: the function of Semi-auto is disabled.



Scene program - 1-key commissioning

1. Press button "Start" to program.
2. Select the buttons in "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 daylight threshold Disable, hold-time 5min, the steps should be: Press button "Disable", "Shift", "5min", "Memory". By pointing to the sensor unit(s) and pressing "Apply", all settings are passed on the sensor(s).

Daylight threshold

Press buttons in zone "Daylight threshold" to set daylight sensor at 2Lux/ 10Lux / 50Lux / 100Lux/ 300Lux/ 500Lux or Disable.

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.

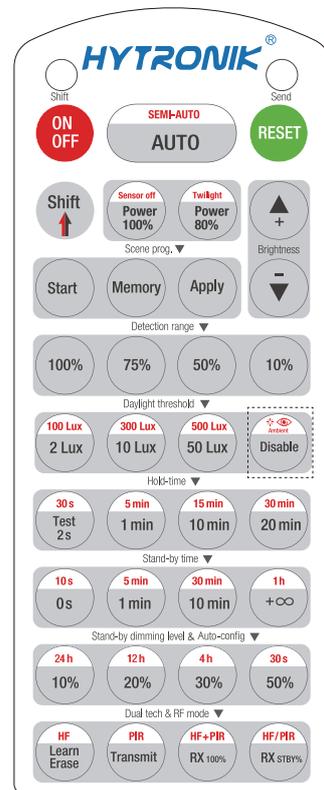
Note: 1. To set hold-time at 30s / 5min / 15min / 30min, press "Shift" button first.

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".

Additional Information / Documents

1. Regarding precautions for PIR sensor installation and operation, please kindly refer to [www.hytronik.com/download ->knowledge ->PIR Sensors - Precautions for Product Installation and Operation](http://www.hytronik.com/download->knowledge->PIR%20Sensors%20-%20Precautions%20for%20Product%20Installation%20and%20Operation)
2. Data sheet is subject to change without notice. Please always refer to the most recent release on [www.hytronik.com/products/Motion Sensors ->Stand-alone Sensor](http://www.hytronik.com/products/Motion%20Sensors->Stand-alone%20Sensor)
3. Regarding Hytronik standard guarantee policy, please refer to [www.hytronik.com/download->knowledge ->Hytronik Standard Guarantee Policy](http://www.hytronik.com/download->knowledge->Hytronik%20Standard%20Guarantee%20Policy)



HRC-11

Load Indication:

The light will flash ONCE rapidly after receiving the command from the remote control successfully.