Built-in HF Sensor for High Bay

HC401SRC/R
On/off Function With Remote Control

HYTRONIK®

Applications

Occupancy detector with tri-level dimming control suitable for indoor use.

Suitable for building into the fixture:

- Warehouse
- Storage room

Use for retrofit and new luminaire designs/installations

Features

- One-touch daylight learning via remote control
- Zero crossing detection circuit reduces in-rush current and prolongs relay life
- Loop-in and loop-out terminal for efficient installation
- 5 Year, 50,000hr Warranty

Technical Data

Input Characteristics

Model No.	HC401S/R
Mains voltage	120~277VAC 50/60Hz
Stand-by power	<0.5W
Load ratings:	
Capacitive	400VA @ 120VAC 800VA @ 230VAC 1000VA @ 277VAC
Warming-up	20s

Sensor Data

Model No.	HC401S/R
Sensor principle	High Frquency (microwave)
Operation frequency	5.8GHz +/- 75MHz
Transmission power	<0.2mW
Detection range	Max. (Ø x H) 16m x 15m
Detection angle	30° ~ 150°
Setting adjustments:	
Sensitivity	10% / 25% / 50% / 75%/ 100%
Hold time	5s ~ 30min (selectable)
Daylight threshold	2 ~ 50 lux, disabled

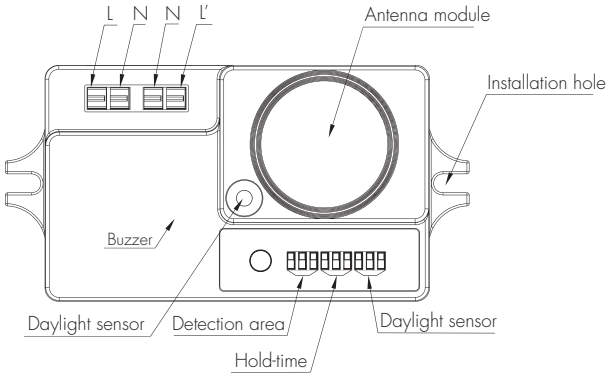
Safety and EMC

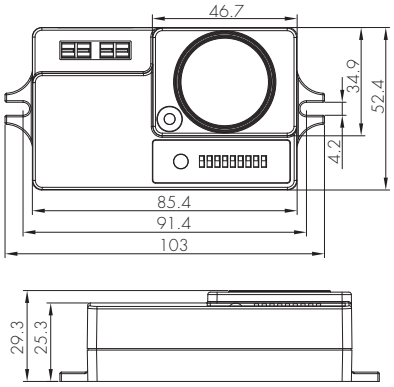
EMC standard (EMC)	EN55015, EN61000
Safety standard (LVD)	EN60669, AS/NZS60669
Radio Equipment (RED)	EN300440, EN301489, EN62479
Certification	Semko, CB, CE , EMC, RED, SAA

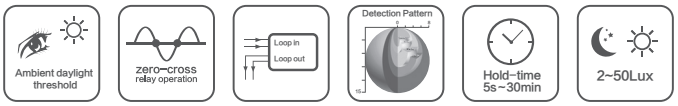
Environment

Operation temperature	Ta: -20°C ~ +60°C
Case temperature (Max.)	Tc: +80°C
IP rating	IP20

CE emc RED SAA CB IP20





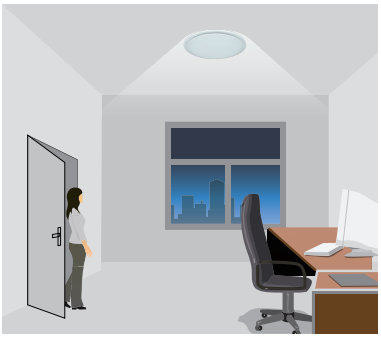


Functions and Features

1 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.

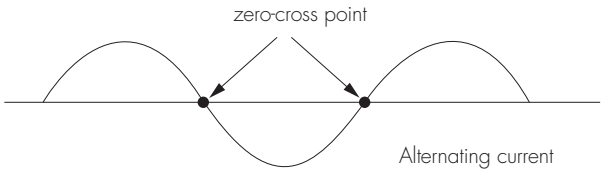


With insufficient natural light, the sensor switches on the light automatically when presence is detected.

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

2 Zero-cross Relay Operation

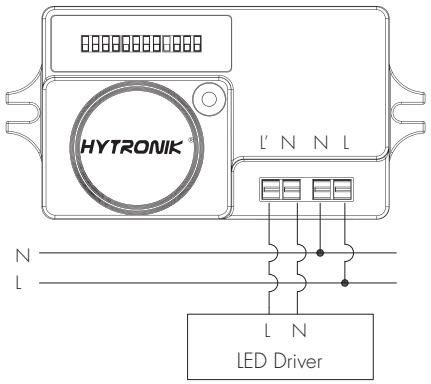
Designed in the software, sensor switches on/off the load right at the zero-cross point, to ensure that the in-rush current is minimised, enabling the maximum lifetime of the relay.



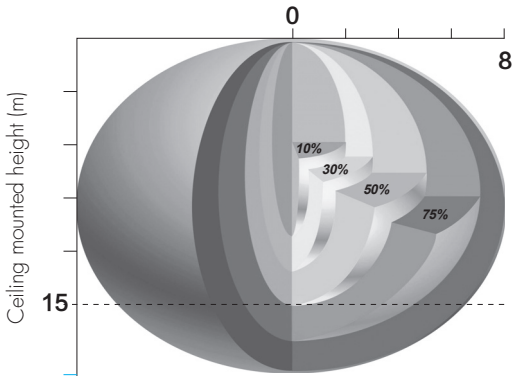
3 Loop-in and Loop-out Terminal

Double L N terminal makes it easy for wire loop-in and loop-out, and saves the cost of terminal block and assembly time.

Wiring Diagram



Detection Pattern



Ceiling mounted detection pattern (m)

Settings (Remote Control HRC-03)

ON/OFF **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.

Auto Mode **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 **Reset function**

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

TEST 2S **Test mode**

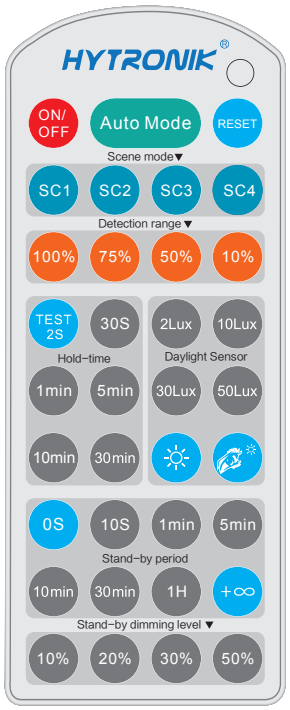
This button is for testing purpose only. The sensor goes to test mode (hold-time is 2s) after commissoning.
* This mode can be ended by pressing "reset", or any button of "scene mode" and "hold-time". The sensor settings are changed accordingly.

Daylight sensor 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.

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.



HRC-03

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

Scene mode

There are 4 scene modes fixed program built-in the remote control:

Scene options	Detection range	Hold-time	Daylight sensor
SC1	100%	1min	2Lux
SC2	50%	5min	10Lux
SC3	100%	10min	10Lux
SC4	100%	30min	50Lux

* End-user can adjust the settings by pressing buttons of detection range/hold-timedaylight sensor. The last setting stays in validity.

Detection range

Press the buttons of "detection range" to set detection range at 100% / 75% / 50% / 10%.

Hold-time

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

Daylight sensor

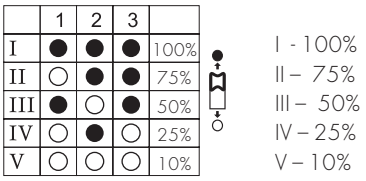
Press the buttons of "daylight sensor" to set daylight threshold at 2Lux / 10Lux / 30Lux / 50Lux.

Note: buttons of "stand-by period" and "stand-by dimming level" are disabled.

DIP Switch Settings

1 Detection Range

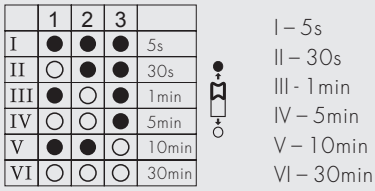
Sensor sensitivity can be adjusted by selecting the combination on the DIP switches to fit precisely for each specific application.



I - 100%
II – 75%
III – 50%
IV – 25%
V – 10%

2 Hold Time

Select the DIP switch configuration for the light on-time after presence detection. This function is disabled when natural light is sufficient.

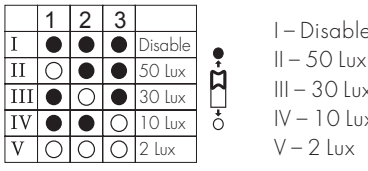


I – 5s
II – 30s
III - 1min
IV – 5min
V – 10min
VI – 30min

3 Daylight Threshold

Set the level according to the fixture and environment. The light will not turn on if ambient lux level exceeds the daylight threshold preset.
Please note that the ambient lux level refers to internal light reaching the sensor.

Disabling the daylight sensor will put the sensor into occupancy detection only mode.



I – Disabled
II – 50 Lux
III – 30 Lux
IV – 10 Lux
V – 2 Lux