

# HF Sensor for Triac Dimmer

HC402S/T  
Flush Mount Version

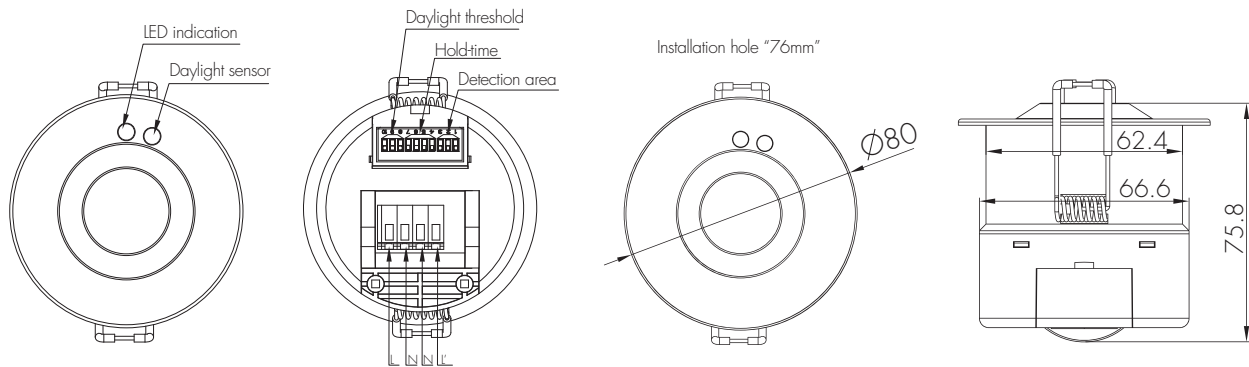


## Applications

Occupancy detector suitable for integrating in triac dimmer system. The output of the dimmer is connected to the motion sensor, which then pass through the user level to the connected luminaires whilst motion is detected. The benefits of this solution are:

- Simple on/off control upon motion detection
- The triac dimmer controls the lighting level (10-100%)
- No additional wiring is needed
- One sensor can control a group of luminaires up to 400W

Use for retrofit and new building installations



Note: We recommend the mounting distance between sensor to sensor should be more than 2m to prevent sensors from false-triggering.

## Technical Data

### Input Characteristics

Model No.	HC402S/T
Mains voltage	120~277VAC 50/60Hz
Stand-by power	<0.5W
Load ratings	400VA(capacitive) 800W(resistive)
Max withstandable in-rush current	80A@160µs
Warming-up	20s

\*The Max withstandable in-rush current tested under 50% I<sub>peak</sub> / 230Vac

### Safety and EMC

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

### Sensor Data

Model No.	HC402S/T
Sensor principle	High Frequency (microwave)
Operation frequency	5.8GHz +/- 75MHz
Transmission power	<0.2mW
Detection range	Max. (Ø x H) 12m x 6m
Detection angle	30° ~ 150°
DIP Switch Settings:	
Sensitivity	10% / 25% / 50% / 75% / 100%
Hold-time	5s ~ 30min (selectable)
Daylight threshold	2 ~ 50 lux, disabled

### Environment

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

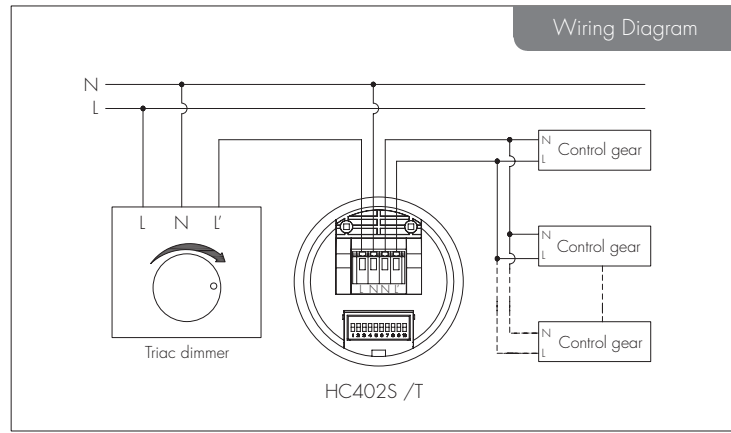


## Function and Feature

### On/off Control

This sensor is a motion switch, which turns on the light at pre-set brightness level 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.



## 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.

	1	2	3	
I	●	●	●	100%
II	○	●	●	75%
III	●	○	●	50%
IV	●	●	○	25%
V	○	○	○	10%

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.

	1	2	3	4	
I	●	●	●	●	5s
II	○	●	●	●	30s
III	●	○	●	●	1min
IV	●	●	○	●	5min
V	●	●	●	○	15min
VI	○	○	○	○	30min

I – 5s  
 II – 30s  
 III – 1min  
 IV – 5min  
 V – 15min  
 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.

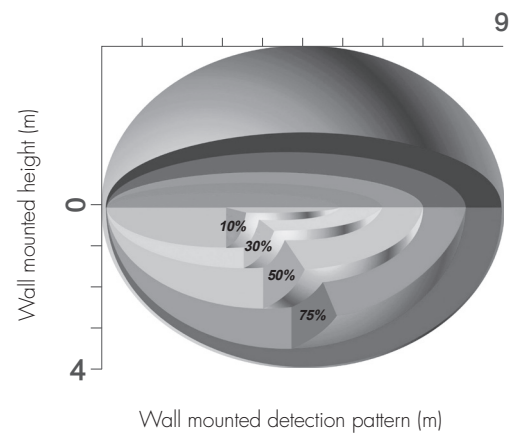
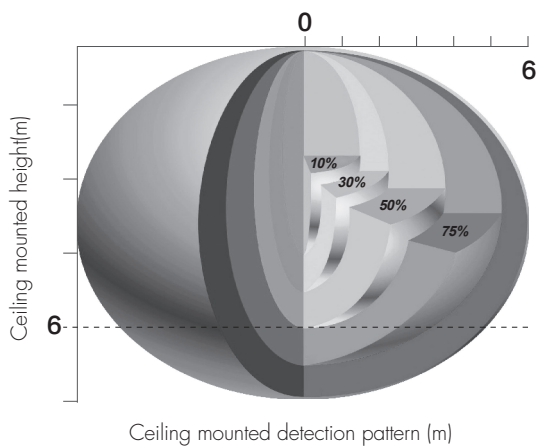
*Please note that the ambient lux level refers to internal light reaching the sensor.*

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

	1	2	3	
I	●	●	●	2 Lux
II	○	●	●	10 Lux
III	●	○	●	30 Lux
IV	●	●	○	50 Lux
V	○	○	○	Disabled

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

## Detection Pattern



## Additional Information / Documents

1. Regarding precautions for microwave sensor installation and operation, please kindly refer to [www.hytronik.com/download ->knowledge ->Microwave Sensors - Precautions for Product Installation and Operation](http://www.hytronik.com/download->knowledge->Microwave+Sensors+-+Precautions+for+Product+Installation+and+Operation)
2. Regarding Hytronik standard guarantee policy, please refer to [www.hytronik.com/download ->knowledge ->Hytronik Standard Guarantee Policy](http://www.hytronik.com/download->knowledge->Hytronik+Standard+Guarantee+Policy)