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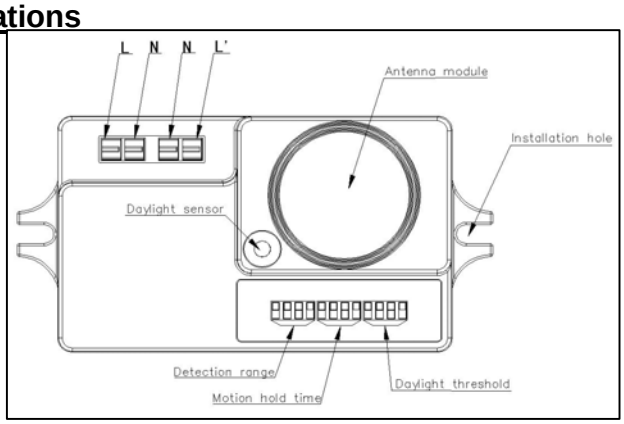
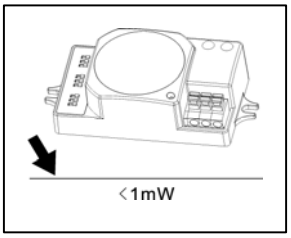
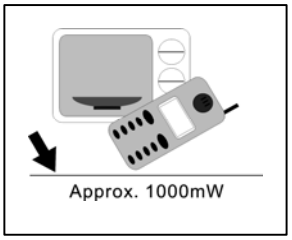
User Manual of Microwave Motion Sensor
Standard version Model no.: HC401S

Technical Specifications

PRODUCT TYPE: Microwave Motion Sensor
OPERATING VOLTAGE: 120-277VAC 60Hz
HF SYSTEM: 5.8GHz ±15MHz
TRANSMISSION POWER: <1mW
RATED LOAD: 120VAC(400W)
277VAC(1000W)(capacitive load)
DETECTION ANGLE: ≤ 150° (without glass louvre)
POWER CONSUMPTION: <1W
DETECTION RANGE: 1-16 meters in diameter, adjustable
TIME SETTING: 10s ~ 30 min.
MOUNTING: Indoors, ceiling & walling mounted
LIGHT CONTROL: 5 ~ 50LUX/disable
Working temperature: -20~ 70℃







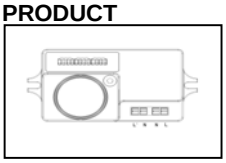
The sensor is an active motion detector; it emits a high-frequency electro-magnetic wave 5.8GHz and receives its echo. The sensor detects the change in echo from movement in its detection zone. A microprocessor then triggers the switch light ON command. Detection is possible through doors, panels of glasses thin walls.

NOTE: the high-frequency output of this sensor is <1mW; approximately just 1% of the transmission power of a mobile telephone or the output of a microwave oven.

IMPORTANT
PLEASE READ THESE INSTRUCTIONS CAREFULLY PRIOR TO INSTALLATION AND RETAIN THIS LEAFLET IN A KNOWN AND SAFE PLACE FOR FUTURE REFERENCE.

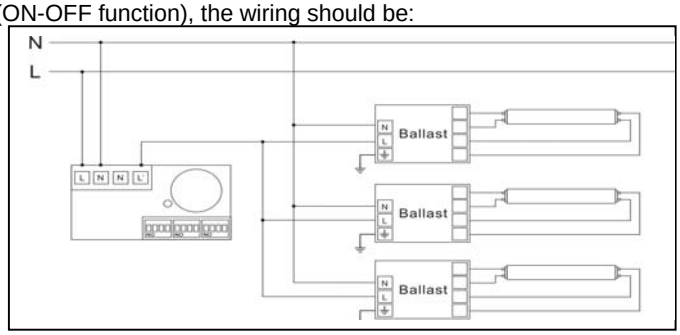
SECTION 1 INSTALLATION & WIRING

2.0 ENSURE THAT THE ELECTRICITY SUPPLY IS SWITCHED OFF COMPLETELY BEFORE INSTALLING OR SERVICING THIS PRODUCT

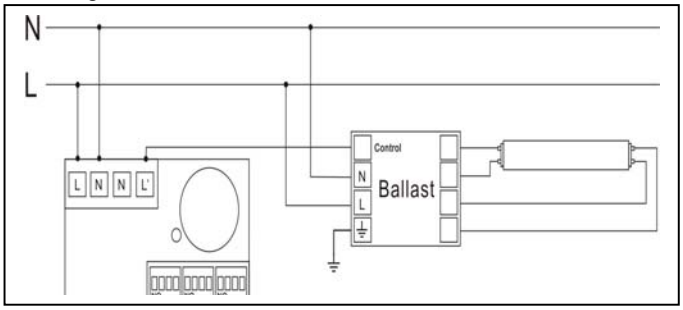


The sensor works with a main voltage of 120-277VAC 60Hz.
The sensor has a 4-wire electrical interface:
N (neutral / 120-277V AC)
L (phase / 120-277 V AC)
L' (switched phase / output)

To connect standard ballast with sensor (ON-OFF function), the wiring should be:



To connect Hytronik sensorDIM ballast with sensor the wiring should follow the below schematic:



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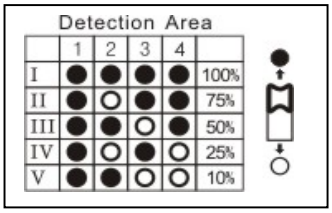
2.1 This sensor is suitable for indoor use, and is also designed for installation at max. 4 meters in height.
* While sensor use with Hytronik sensorDIM ballast or other dimming ballast, please keep the sensor antenna module from the ballast and lamp filament by at least 80mm.

SECTION 2 SETTINGS

Detection range:

This determines the effective range of the motion detector and is set by DIP switches at the sensor itself, refer to figure. Note that reducing the sensitivity will also narrow the detection range.
The following settings are available:

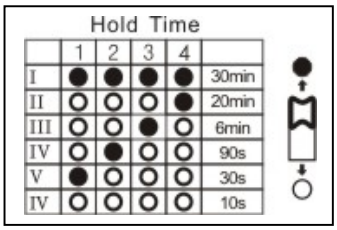
I - Detection range 100%
II – Detection range 75%
III – Detection range 50%
IV – Detection range 25%
V – Detection range 10%



Hold time:

This determines the time the fitting remains at 100% level on motion detection and is set with DIP switches at the sensor itself, refer to figure. The walk test setting is useful when installing the fitting to establish correct operation and range.
The following settings are available:

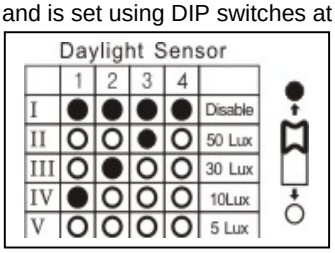
I – 30 minutes
II – 20 minutes
III – 6 minutes
IV – 90S
V – 30S
VI – 10S



Daylight sensor:

This setting holds off the 100% light output should there sufficient daylight and is set using DIP switches at the sensor, refer to figure. The following settings are available:

I – Photocell disabled
II – 50 lux daylight operation
III – 30 lux daylight operation
IV – 10 lux twilight operation
V – 5 lux darkness operation only



*In daylight setting the lamp(s) will always be on with motion detected and operate at 100% light output, even in bright daylight.

SECTION 3 TROUBLE SHOOTING

MALFUNCTION CAUSE REMEDY	CAUSE	REMEDY
The load will not work	Incorrect light-control setting selected	Adjust setting
	Load faulty	Replace load
	Mains switch OFF	Switch ON
The load is always on	Continuous movement in the detection zone	Check zone setting
The load is on without any identifiable movement	The sensor is not mounted for reliably detecting movement	Securely mount enclosure
	Movement occurred, but not identified by the sensor (movement behind wall, movement of small object in immediate lamp vicinity etc.)	Check zone setting
The load will not work despite movement	Rapid movements are being suppressed to minimize malfunctioning or the detection radius is too small	Check zone setting

FCC Caution

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.