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Warnings

Installation: This movement detector must only be connected to a 230-240Vac 50Hz supply by a qualified electrician. **Important:** Read all instructions before installation. This instruction manual is to be left at the installation site.

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Troubleshooting

PROBLEM	POSSIBLE CAUSE	SUGGESTED SOLUTION
Light does not switch ON when there is movement in the detection area.	1. No mains voltage.	Check all connections, circuit breakers and switches.
	2. Bulb faulty or missing.	Check and replace if required.
	3. Nearby lighting is too bright.	Redirect the sensor or relocate the unit.
	4. Controls set incorrectly.	Readjust the sensor angle or control knob.
	5. Sensor positioned in wrong direction.	Redirect the sensor and/or adjust.
Light switches ON for no apparent reason (false trigger).	1. Heat from lamp body activating sensor.	Adjust PIR sensor or lamp body to allow a minimum gap of 40mm between lamp body and sensor head.
	2. Heat sources such as air-con, vents, heater flues, barbecues, other outside lighting or moving cars are activating sensor.	Adjust direction of sensor head away from these sources.
	3. Animals/birds e.g. possums or domestic animals.	Redirecting sensor head may help.
	4. Interference from switching off electric fans or lights on the same circuit as your sensor.	Should the false triggering become troublesome, consider: (a) have the other switches checked for arcing faults; (b) replacing noisy fluorescent tubes and/or starters and (c) connecting the sensor to a separate circuit. (In most cases where one or more of the above suggestions have been carried out, false triggering has been reduced).
	5. Reflection from swimming pool or reflective surfaces.	Redirect sensor.
Light remains on.	1. Continuously false triggered.	Redirecting sensor head may help.
	2. Time adjustment is set too long.	Reduce time.
Light switches on during daylight.	Lux control knob is set to daylight position.	Turn the Lux control knob to desired light level setting.
When setting Lux controls in daylight the detection distance becomes shorter.	Interference by sunlight.	Re-test at night.

Warranty

HPM AQUAscan Weatherproof Movement Sensor (cat 630/9) are warranted as here and after appears, against faulty material and/or workmanship for a period of five years from date of purchase. The obligation of the manufacturer, under this warranty, is limited to servicing and replacing defective parts when the unit is returned to the place of purchase.

This warranty becomes void on any unit which has been tampered with or damaged by accident, short circuited, loaded beyond rating or damaged otherwise by improper operation. The warranty is also conditional on the unit being installed by qualified electrical contractor.

All other warranties, whether expressed or implied, and whether arising by operation of law or otherwise are hereby excluded.

Customer Service & Technical Support

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AQUAscan Weatherproof Movement Sensor

CAT 630/9 Series

Instruction Manual

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Specifications

Supply Voltage: 230-240V a.c. 50Hz		
	2 Wire (630/9-2W)	3 Wire (630/9-3W)
Min. Load	10W Incandescent 150VA Fluoro	0W
Max. Load	1200W Incandescent 1200VA Fluorescent	2400W Incandescent 2400VA Fluorescent

Operating Temp.	0 to 50°C
Mounting height	1.8 to 2.4m
Weatherproof rating	IP66
PIR Detection Angle	110 degrees
Contact Status	Normally Open
Range Sensitivity Adjustment	1m to 18 m
Light Sensitivity Adjustment	1 Lux to Full Sun
Timer Adjustment	15 secs to 7 min

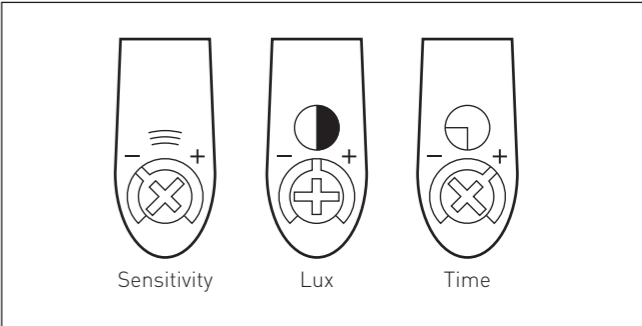
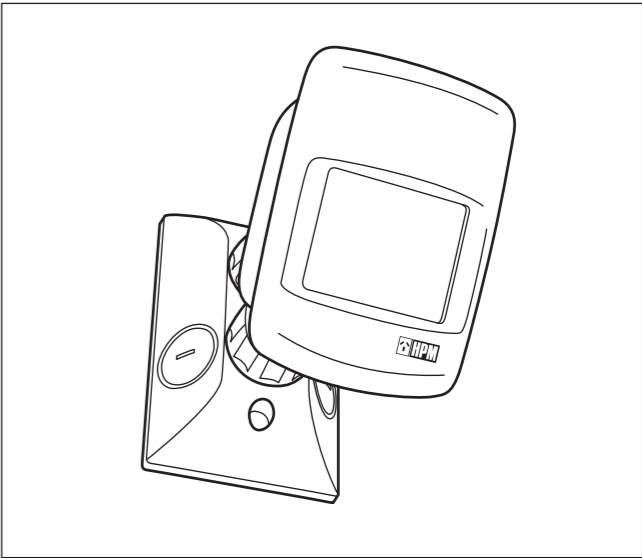


Figure 1 – Adjustment Knobs

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Features

Installation Options: 2-wire (630/9-2W)
 3-wire (630/9-3W)

Note: Due to the phase out of standard incandescent lamps, 3 wire version (CAT 630/9-3W) is recommended for new installations.

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Installation

The Movement Detector has been designed for a harsh climate, complying with the strict IP66 rating and is intended to be used in outdoor installations, however the detector can be installed indoors.

The Detector can be installed on the ceiling surface or on the wall. It can be installed onto a HPM Surface Mounting Block (HPM Cat No 239) or similar with 84mm mounting centre. Some installation sites may allow direct surface installation of the Movement Detector. The recommended mounting height of the Detector is 2.4m.

The head should be oriented in such a way that the expected traffic is moving across the field of view of the Detector and not directly towards it. Refer to Figure 2.

To change the head orientation, loosen the ball joints by unscrewing the nuts, adjust the head position and re-tighten the ball joints. Refer to Figure 3 to see different mounting options.

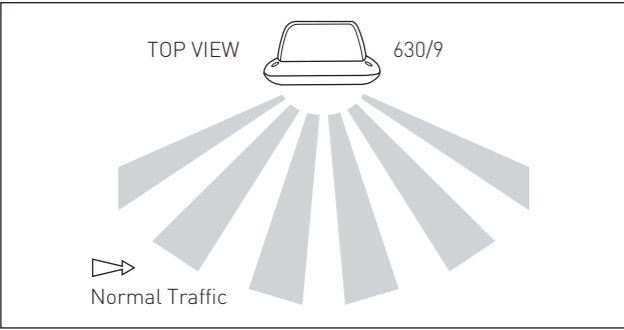


Figure 2

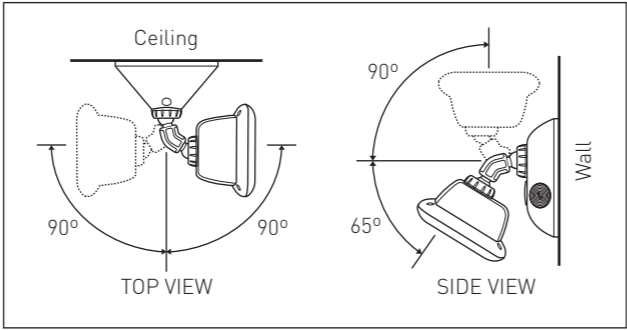


Figure 3

	3 wire	2 wire
Auto		
Auto & ON override		
Auto & OFF override		
Auto & ON & OFF switch		

Figure 4

Two conduit entries on the mounting base can be used for PAR38 light fittings. These light fittings are connected to the detector through the supplied terminals. Alternatively, remote loads can be connected up to the maximum rating. Refer to Figure 4 for electrical connection options.

Note: Different connection and configuration options are possible, e.g. for remote control of Detector's operation. All wiring for such circuits must be done by a qualified electrician.

4 Setting Up

- Before the Detector is commissioned for operation it should be tested by a "Walk test":
1. Set Sensitivity and Lux adjustment knobs, see figure 1, to fully clockwise position and Time knob to fully anti-clockwise position.
 2. Turn the power on and allow 2 minutes for the sensor to warm up before proceeding.
 3. Adjust the head position as required.

4. Walk across the Detector's view range to ensure the light turns on and off.

To setup the Detector for day-to-day operation adjust the knobs so that their settings reflect the desired mode of operation. Note: Adjusting for the correct light level is dependent on the ambient light and it could take several days until the right light level setting is found.

5 Operation

The detector will turn the load on if a warm body moves in its viewing range. The Range Sensitivity adjustment knob determines the range.

The Movement Detector can be setup so that it only turns the load on when it is dark. The setting of the Lux adjustment knob determines the light level at which the Detector starts operating the load.

The load stays turned on for a predetermined amount of time. The time that the load stays turned on depends on the setting of the Timer adjustment knob.

Range Sensitivity

The Detector can be adjusted to react to different levels of movement and at different distances.

At its most sensitive setting it may detect a small child or animal at a full distance. At the least sensitive setting it may require a large person at a close distance to detect movement.

The Detector may detect movement under certain conditions that could be interpreted as false operation. Ensure you place the detector carefully, taking into consideration surrounding objects that may be detected by the sensor, such as passing cars, waves in the swimming pool, tree branches moving in the wind or any other movement of warm objects or warm air.

These conditions may cause unwanted operation of the Detector, while the Detector itself is still working correctly. The user has to be aware of these conditions and should take measures to minimize the possibility of their occurrence.

Note: The range of movement detection depends on external conditions such as the ambient temperature, body temperature, clothing, speed of movement, etc.

Light Sensitivity

The Movement Detector can be setup to operate during different light conditions, such as night only or day and night. At the minimum 'Lux' control setting the sensor will detect movement only when it is dark. At the maximum setting the sensor will operate during day and night. In that way users can adjust the operating conditions to suit their needs and save energy.

Note: A small plastic screwdriver is supplied as an adjustment tool.

Timer

The time that the load stays turned on can be varied from 15 secs to 7 mins. Rotating the 'Time' knob anti-clockwise reduces load 'ON' duration. This feature allows the user to balance energy savings and convenience.

6 2-Wire (630/9-2W) Option

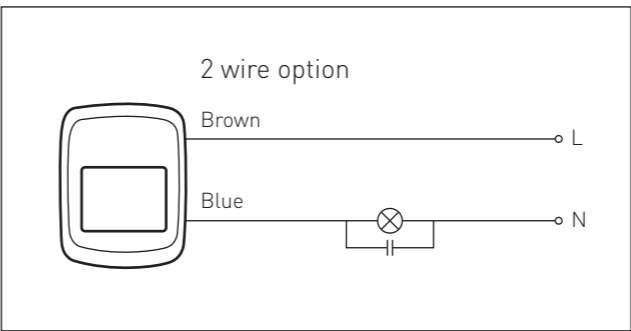


Figure 5

Two-wire devices draw their power through the load. Some loads might not provide enough power for the Detector to operate or are sensitive to high off-state leakage currents e.g. relays. In such cases a mains voltage rated capacitor of 2-10uF should be connected in parallel with the load. Refer to Figure 5 for information on how to connect the capacitor.

For some inductive loads this capacitor could cause resonance, seen as a high off-state voltage across the load. In such case the value of the capacitor should be changed.