

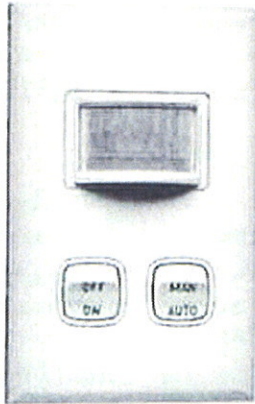
## INSTRUCTIONS



# HPM

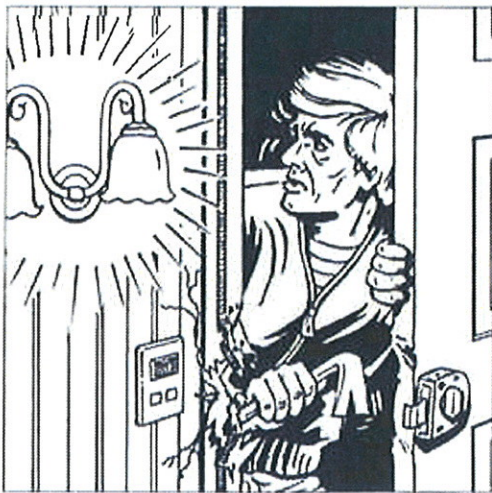
# Automatic Light Switch

## Cat XL632



### Specification (at 25°C):

Supply voltage:	230-240V ac, 50 Hz
Maximum load:	600VA
Minimum load:	7VA
Detection method:	Passive Infrared Sensor
Detection angle:	90 degrees
Detection range:	Up to 5 metres
Time adjustment:	10 sec. to 15 min. (approx)
Light adjustment:	5 Lux to 300 Lux



### Security

*By surprising unwanted intruders the Automatic Light Switch provides extra security whether you are at home or out.*



### Convenience

*Mount the Automatic Light Switch in your garage or beside a nearby door for easier access to your home.*




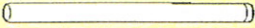



### Efficiency

*Install an Automatic Light Switch in a much frequented room, such as a bathroom, and save money by preventing lights being left on unnecessarily.*



### Versatility

*All lights controlled by the Automatic Light Switch can still be used normally by switching to manual mode and operating the on/off switch. Can also be used to switch exhaust fans.*

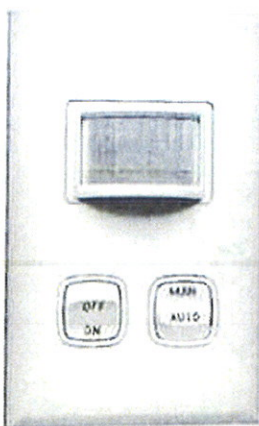
Suitable for the control of	
	Incandescent lamps
	Fluorescent lamps
	Dichroic halogen lamps
	Compact fluorescent lamps
	Exhaust fan motors

## Motion detector operation

The HPM XL632 is designed for indoor use only with loads from 7VA to 600VA. The Cat XL632 is a two wire device and does not require a neutral. It can therefore replace an existing conventional switch or can be installed as a new installation. A detailed wiring diagram and instructions on how to wire the Cat XL632 are given later. The Cat XL632 is controlled by two switches: The ON/OFF switch controls the state of the load; the AUTO/MANUAL switch controls the mode that the sensor is set for. A list of modes and the appropriate switch settings can be seen below.

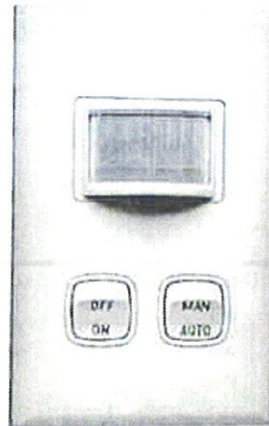
### Manual mode

The AUTO/MAN switch should be set to the 'MAN' position. The light can now be controlled by the ON/OFF switch. In this mode the sensor is disabled and will not detect motion, the state of the load is controlled purely by the ON/OFF switch.



#### Set for manual operation:

The load is controlled by the ON/OFF switch only and the sensor does not detect motion.



#### Set for automatic operation:

The load is controlled by the sensor when motion is detected.

## Unit turned off-load disabled

The ON/OFF switch should be in the 'OFF' position. The unit will be disabled and the load will not come on. In this mode the load cannot be turned on either manually or by the sensor. It will remain cut off until the switch setting is changed to another mode.

**Note:** The AUTO/MANUAL switch can be set in either position. It will not affect the unit because the load is already turned off by the ON/OFF switch.

## Auto Mode

The AUTO/MANUAL switch should be set in the 'AUTO' position and the ON/OFF switch should be set in the 'ON' position. This tells the sensor to detect motion (Auto mode) and allows the load to be turned on, (ON/OFF switch in the 'ON' position). In this mode the load will be turned on, and will stay on for the set time whenever the sensor detects motion. **Note:** The time delay is reset whenever further motion is detected so the load will turn off in the set time, after the last detected motion.

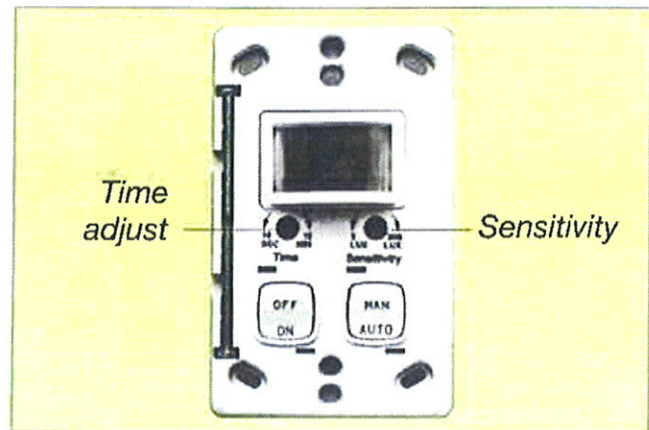


Fig 1. Sensitivity and Time controls

## Understanding the controls

The Cat XL632 has two variable controls: Sensitivity and Time.

### Sensitivity adjustment

The sensitivity control determines what light level the unit will function in. To set the unit to work in daylight and darkness the sensitivity should be set to the maximum range – ie: 300 Lux. With the sensor set to work at 300 Lux, the load will be turned on when motion is detected night and day. (This feature is useful in bathrooms or toilets to switch on an exhaust fan when someone enters.) The unit can also be set to work in darkness only. To do this the sensitivity is set to the minimum range – ie: 5 Lux. The XL632 can also be set to work at any light levels between these two points.

## Time Adjustment

The Time adjustment determines how long the light will stay on after the last detected movement. The time delay can be set anywhere between 10 seconds and 15 minutes. If movement is detected the unit will turn on and the time delay will start timing out. If another movement is detected then the time delay will be reset. The timer will reset with every detection of movement and will only time out if no movement is detected for the duration of the time delay.

## Installation

The Cat XL632 is a two wire device and can be used to replace an existing switch or as a new installation. The Cat XL632 will fit into a standard Cat 429 wall box and can be mounted into wallboard (gyprock) using the HPM Cat 711 or 712 mounting clip. The Cat XL632 uses conventional mounting centres and can be installed on a Cat 140 mounting block if necessary.

## Wiring

*(Not suitable for two-way switching)*

Before beginning installation disconnect power to the location where the unit will be installed by shutting off the circuit breaker or removing the fuse at the fuse box. The Cat XL632 is a two wire device wired in series with the load on the active side of the circuit as can be seen in Fig 2. The Cat XL632 has two terminals, one marked 'Active' and the other marked 'Load'. The active wire should be terminated into the terminal marked 'Active' and the switched active, or load wire should be terminated into the terminal marked 'Load'.

**CAUTION:** Must be installed by a licensed electrician or a similarly qualified person.

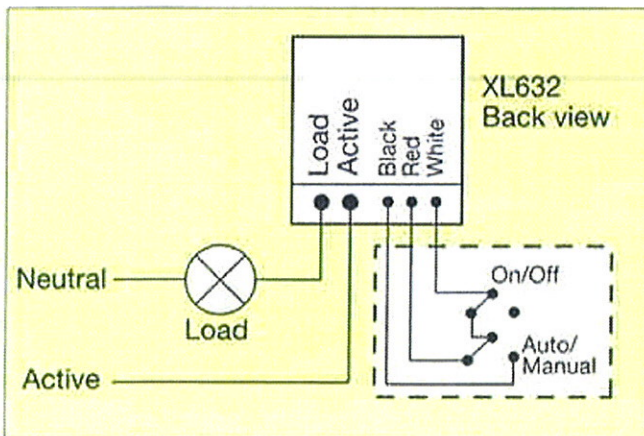


Fig 2. Wiring diagram

## How the Cat XL632 works

The Cat XL632 uses passive infrared to detect a moving heat source. The unit will automatically set itself to ambient temperature and if a heat source outside ambient is detected in the field the sensor will activate the light. Passive infrared detection relies on a difference of temperature to activate the sensor. In the case of the Cat XL632 the difference in temperature is the human body compared to the ambient temperature.

## Where to mount

When deciding where to mount the Cat XL632 a number of factors should be considered.

1. Passive infrared detectors work much better when the heat source is moving across the field. (See Fig 3. below)

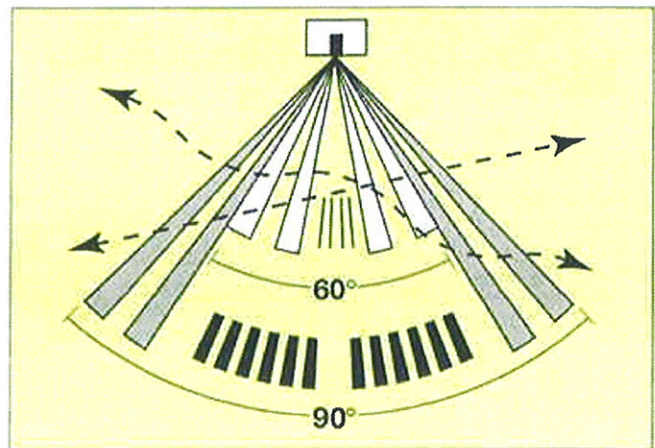


Fig 3. Movement across the field of view

2. The Cat XL632 should be mounted in a position where it can view the whole working area.
3. The Cat XL632 has a range of up to 5 metres. Be sure not to point the sensor at anything that may cause unwanted triggering.

The Cat XL632 should be mounted approximately 1.3 metres from the floor. This will allow the unit to have maximum range.

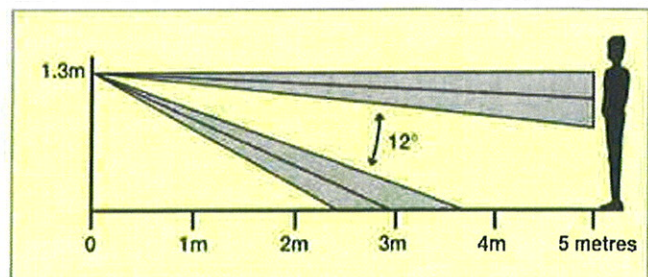


Fig 4. Field of view

## Trouble shooting guide:

### Light switching on during daylight when not wanted

Sensor Lux setting may be set for daytime operation (300 lux).

Set sensor to appropriate Lux setting.

For night operation set to only 5 Lux.

**Note:** The sensor can be set anywhere between 5 and 300 Lux.

### Light staying on

Sensor may be set to Manual mode. If so, set sensor to Auto mode so that the light can be operated by the sensor.

### Sensor activated by movement in adjoining halls or rooms

Cover part of the sensor lens with tape so that the sensor cannot detect motion on that part of the field. Refer to Figs 3 & 4 (field of view diagrams.)

### Sensor does not detect motion

Check Sensitivity setting. Be sure that the Lux setting is set to appropriate level. The sensor will not detect movement in daylight if the Lux setting is set to 5 Lux for night operation.

Sensor may be turned off. Check that the switch positions are correct for the desired mode of operation. Put sensor into AUTO mode, and refer to instructions.

### Fluorescent light flickers when turned off

If the load is a single standard (not compact) fluorescent lamp less than 18W, flickering of the lamp may occur when it is turned off. If flickering occurs, connect a resistive load of at least 7W in parallel with the lamp. This can be, for example, an incandescent lamp.

**WARNING:** Lamp failure of incandescent globes mounted in the upright position, such as candle globes, may damage the unit. This is caused by the broken filament falling down and shorting out the globe.



It is therefore recommended that incandescent globes be mounted in the **normal position**.



### Warranty

HPM Cat XL632 is warranted as here and after appears, against faulty material and/or workmanship for a period of one year 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 HPM Industries, or the distributors in your state, freight pre-paid.

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 a licensed electrical contractor.

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

HPM Industries Pty Ltd.



Cat XL632

Made in Australia by  
HPM industries Pty. Ltd.