

Occupancy Detection Information



- With 312 Internal PIR
- Absence Or Presence
- 3 Step Functionality
- Adjustable Timeouts
- Exit Delays
- Energy Saving

Further Reading:

Data Sheet 7860047

Installation Sheet i420m1

Digidim Guide to Specification

Overview

Occupancy detection is typically used where automatic operation is required to control the artificial lighting within the area on an ad hoc basis.

It maximises energy efficiency by ensuring that the lighting is only on when required. This being particularly useful in unmanned areas such as garages, plant rooms, and storerooms, where they could be unoccupied for long time periods. Other areas such as corridors, lift lobbies and stairwells, where a traditional switch would normally be on throughout the day, regardless of the area's occupancy can also benefit.

Sensors can be configured as absence only, so a manual operation may be required to turn on the lighting, with automatic switch off. Conversely a sensor that is set as presence only would allow automatic switch on, with a manual off. The use of both parameters would give "true" occupancy detection in the strictest sense.

Sensors allow on and off levels with adjustable time outs, although some have an additional intermediate level prior to the off being selected.

For buildings fitted with air conditioning systems there is an additional saving associated with avoiding the need to remove waste heat.

Considerations

Of the numerous technologies that exist, the Helvar 312 employs the use of passive infra red (PIR), essentially body heat detection, for occupancy control. With PIR care must be taken to ensure the sensor is not situated near heating ducts or positioned in direct sunlight, as high levels of background heat can disrupt the infra red detection pattern.

It is also important during the planning stage to ensure sufficient sensors are allowed to provide suitable coverage within an area, and that the positioning is such that no area is obscured from the detector. If this is not possible then additional units must be installed to compensate.

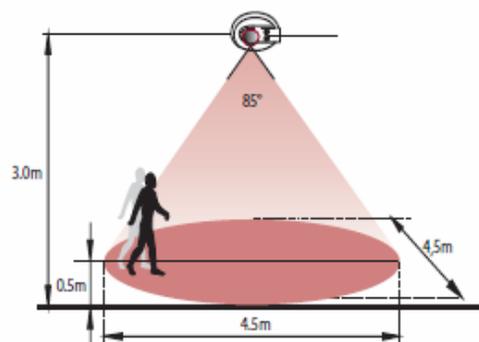
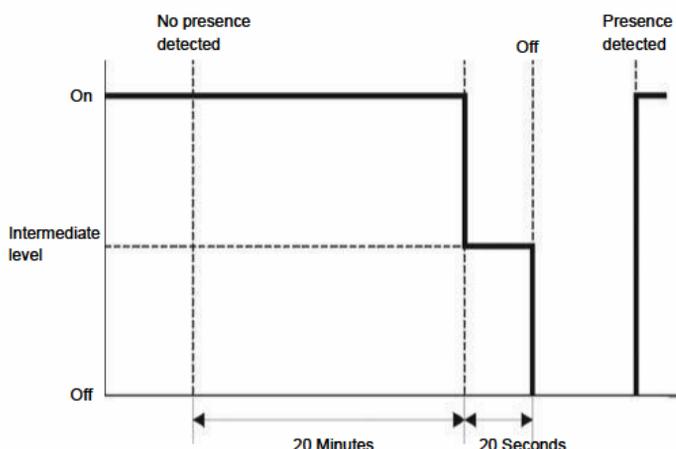
In an open plan office a slight overlap of the detection zones can be made to ensure adjacent areas are also lit upon entry without the occupant needing to move completely within that area, although this can mean more lights than necessary are active, it can also be more comfortable for the end user as the feeling of isolation is much reduced.

In addition to the above, the 312 also has an "exit" delay that prevents switch on by PIR action for a configurable time period when a manual off has been executed. This is used, for Example, with lecture room presentations.

Detector dynamics can be changed such that the operation is only during specific times, or allows control of different areas. Normal circumstances could be during office hours, but only notional corridors are controlled during the night for security purposes.

Control Flow

312 Default Settings



Sensor is installed at maximum ceiling height of 3 metres.

Sensor is installed where it cannot be lit by direct sunlight or near heating ducts.

Sensor should be sited to provide coverage of all areas.

Contact your local Helvar representative or visit us online at www.helvar.com
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