OC-3D Occupancy Module

Making Life Comfortable

Smart temp is a solutions provider for the HVAC industry and as such, has produced the OC-3D occupancy detection module that will compliment the control capabilities of many of the Smart Temp range of thermostats and Zone Control systems

The OC-3D is powered by safe 24VAC, the HVAC industry standard voltage. It has 2 volt free relays that are used to control the Smart Temp thermostats mode or set points as well as other ancillary devices such as room lighting contactors, power circuits or other devices you wish automatically control when the room is un-occupied.

Multiple movement detectors and door switches can be wired into the OS-3D to ensure complete area coverage. Light sensors can also be added to the OC-3D to ensure energy is not wasted by running lighting when there is sufficient ambient lighting available.

Two main modes of operation can be selected to ensure the OC-3D is configured perfectly for your application. "Hotel Room" mode changes the occupancy state only after a door is detected opening and then closing again and then movement is detected while "School Room" mode changes the room occupancy status anytime an absence of movement is detected for a pre-determined period of time.

Installing and setting up the OC-3D is like you would expect from Smart Temp - being a simple and intuitive process. Better still, it will be provided with superb support offered at a price that will impress.

When you need to save energy and reduce your running cost, the OC-3D from Smart Temp is the wise solution. Fully automatic operation that cant be tricked by jamming switches or card readers with slips of paper. If the room is unoccupied then the room energy consumption is reduced.

Completely Automatic

24V powered

Multiple sensor inputs

Door switch logic

10A Ancillary relay

2A Main relay

Small footprint

DIN or surface mount

Status & power LEDS

Manufactured by Smart Temp

5 Year piece of mind warranty

Smart Temp

Installer options

Dip Switch settings

Sw 1 Off = School Mode   On= Hotel Mode
Sw 2 Timer + 2 Mins
Sw 3 Timer + 4 Mins
Sw 4 Timer + 8 Mins
Sw 5 Timer + 16 Mins
Sw 6 Timer + 32 Mins

Regardless of the operational mode, the OC-3D needs to know what period of time it should wait before taking action. This period is set with Sw2 to Sw6.

Simply ADD the switch settings time together to get the desired time period. For example, a 20 min time period is achieved by turning SW 3 & 5 ON.

Operational Modes

Occupied Mode
Relay 1 & 2 are energised - Occupied LED is ON

Un-Occupied Mode
Relay 1 & 2 are de-energised - Occupied LED is OFF

School Room Mode   Sw 1 = OFF
In this mode, the OC-3D will change to occupied mode when ever movement is detected. It will remain in occupied mode until the timer period has expired after the last detected movement. ie, 20 minutes after the last student has exited the room.

Hotel Room Mode   Sw 1 = On
The intent of Hotel Room Mode, is to provide comfort for the occupants even if there is no movement detected in the room, such as during sleeping.

The OC-3D will monitor the door switch. When the door has been detected closing it will attempt to detect movement for the timer period. If movement is detected any time during this timer period then the mode will be latched as "Occupied". So once movement is detected after the door closes the room is "Occupied", even when the guest sleeps.

If once the door closes the OC-3D does not detect movement for the timer period as would be the case when the room is exited, the OC-3D will enter unoccupied mode and reduce the room to a low energy state. If at anytime movement is detected while in un-occupied mode the OC-3D will immediately latch back into occupied mode and bring the room out of its low energy state.

The OC-3D cannot be "fooled" into thinking the room is occupied. Movement must be detected after the door is closed for the system to remain in an occupied state.

Wiring Overview

Connect up to 3 movement detectors.
(loop out unused inputs shown RED)

Lighting / power relay
Thermostat relay
24 VAC power
Door switch

PIR detector

Relay 1
Relay 2

Lighting Contactor

24V Power

Door Switch

HVAC System

W2 G3	Y2 G2	W1 O/B	Y1	G1	R	24	24C	B	A	T	T

Smart Temp thermostat