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Arduino KY-032 IR “Obstacle Avoidance” Sensor

As the project is designed to contain a room occupancy sensor, this requires an infrared sensor to be put in place, tracking any movement that could be used to detect the number of people in a room and/ or trigger the climate control to turn on or off, depending on how long it has been since the sensor has detected movement.

The Arduino KY-032 is one of these sensors. With a maximum range of 40cm, installation would be bound very close to the entrance(s) of the room (as its original use was for a wheeled robot, ensuring it didn’t roll into any obstructions). The range is adjustable, but it is likely that in this design, it will be set to maximum (or close to max) distance. A working voltage of 3.3-5V and current minimum of 20mA means the Arduino microcontroller itself can probably power the sensor, creating a much simpler interface between the two devices than what could have been with a more power hungry sensor. Arduino lists the I/O interface at 4-wires (which is also obvious from the included picture of the sensor), instead of the simplified I2C/ TWI. When there is an obstacle, output from the sensor will go low, and will otherwise go high.