

Power Consumption

6.1 uA with No Alarm
 52mA uA with Alarm and Relay energized,

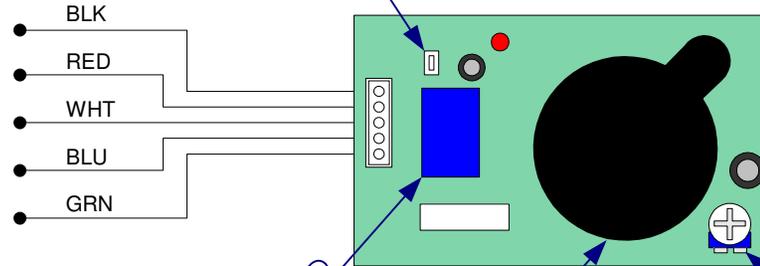
Test Switch

Holding for 2 to 3 sec causes relay to change states - red light flashes

Sequence:

- Red light flash after approx second
- Relay fire after another second

Wire	Function
BLK	Ground
RED	+ 9vdc
WHT	Normally Open
BLU	Relay Common
GRN	Normally Closed



Output Relay
 3A @ 250VAC
 3A @ 30VDC

Detector
 Uses MC145012DW smoke detector chip. In fact, the entire circuit is based off of the example given in the data sheet

Potentiometer to adjust sensitivity
 Has approx 180 degree range. Best results we achieved with sensitivity set to mid range.

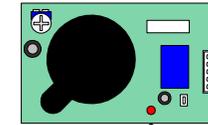
Behavior was erratic with potentiometer set fully CCW or fully CW.

Design Notes

As mentioned, circuit is based off of data sheet example. The potentiometer in the circuit is identified as R9. Per the datasheet... "When R9 is used, noise pickup is increased due to antenna effects. Shielding may be required."

The "false trips" noted in the yellow flag warning could be a problem. Additional testing could be warranted.

SMOKE TEST



Took Approx 20 seconds for relay to fire
 Took approx 45 seconds after smoke was removed for alarm state to reset.

Yellow Flag Warning

During the course of testing, the alarm went off twice when there was no smoke present.

However, to be perfectly fair, the alarms went off shortly after performing the smoke test.