

## Kitronik Ltd – [Relay board](#)

### TECHNOLOGY DATA SHEET & SPECIFICATIONS

#### Introduction

This is a versatile board that can easily be configured via jumpers and trimmer potentiometers to do a range of tasks.

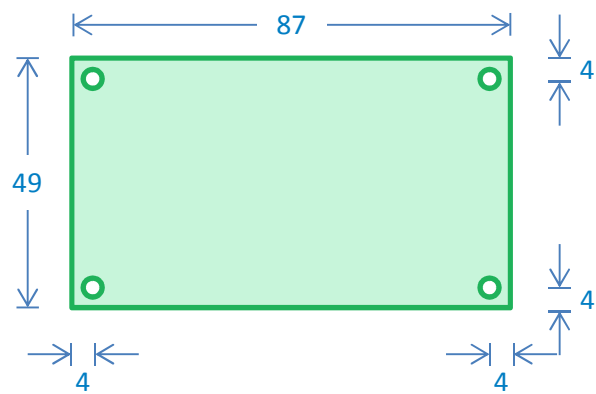
Most sensor and switches can be connected to the input of the board and the trigger level set for the input device. This can be inverted if required, then there is the option to feed this straight to the relay or a timer of up to 25 minutes can be used.

#### Technical information

Operating voltage:	4.5V - 6.0V
Input type:	Switch / resistive sensor
Max sensor resistance: <sup>1</sup>	100KΩ
Sensor threshold:	Set via trimmer
Input inversion:	Via jumper
Output delay on/ off:	Via jumper
Max delay length:	25 minutes
Delay accuracy:	±20%
Outputs:	NO / NC
Max output VDC:	28 V
Max output VAC:	250 V
Max out current NO:	10A
Max out current NC:	7A
Max propagation delay:	15mS
Max operating current:	90mA

1 – This is the maximum allowable sensor resistance at the point where switching takes place

#### Mechanical information

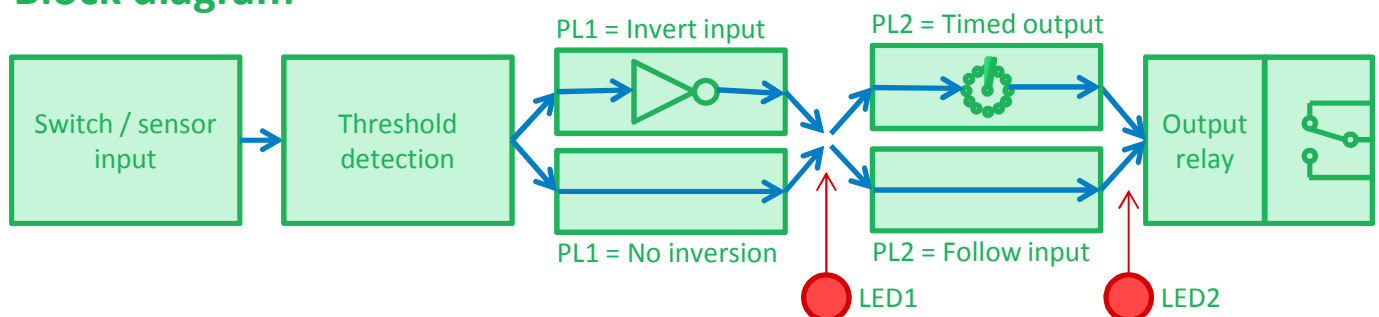


Dimensions in mm.  
Max height of board & components is 18.5 mm.

#### Ordering information

<b>Description:</b>	<b>Stock code:</b>
Relay board – self assembly	2144

#### Block diagram

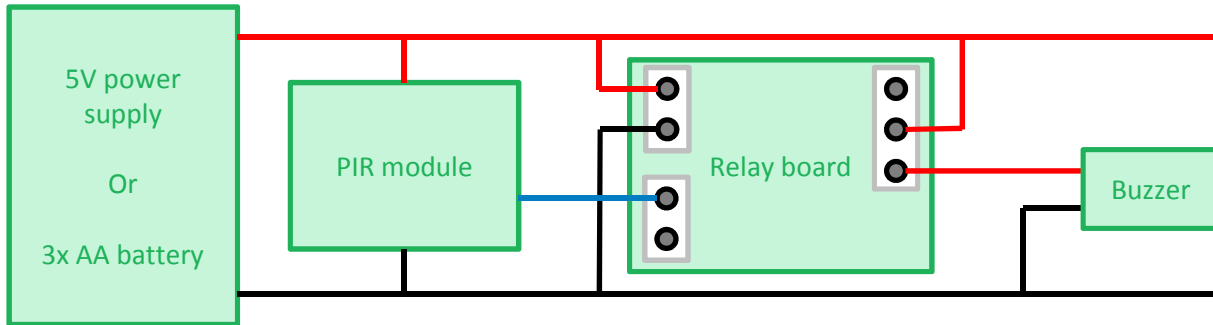


#### Using the relay board

This board is very easy to set-up. 5V should be connected to the power terminal block and a switch or sensor connected to the input terminal block. The sensitivity and duration of the delay are set by potentiometers R4 and R8 respectively. Whether the input is inverted and whether the output is on for a delayed period or follows the sensor state is determined by jumpers PL1 and PL2 respectively. The relay output has connections for the common signal (Com) as well as NO (Normally open) and NC (normally closed).

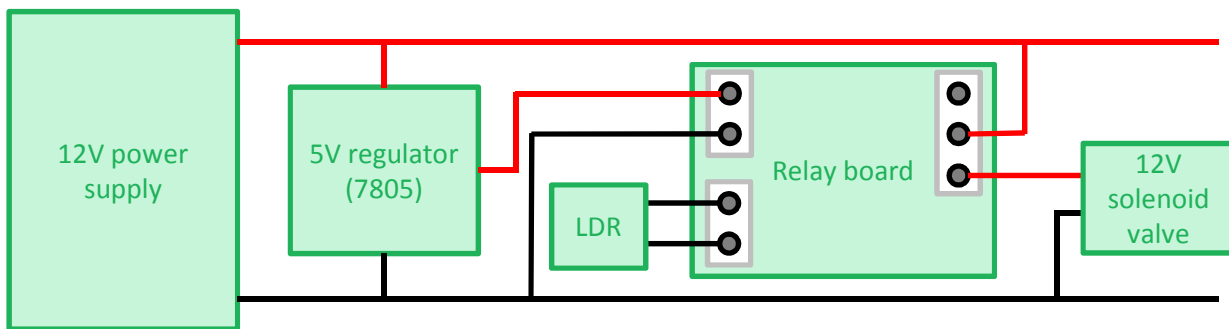
### Example application – PIR triggered sounder

Suppose you want to detect if someone has walked in to a space and audibly sound this else where. Then you could use a PIR module, the relay board and a sounder to do this. The connections would be as follows:



### Example application – Automatic green house plant watering system

Since you don't want to water a green house in the heat of the day, why not automatically do it from a water butt at dusk for a set duration. To do this the relay board would be used as follows:



### Circuit diagram

