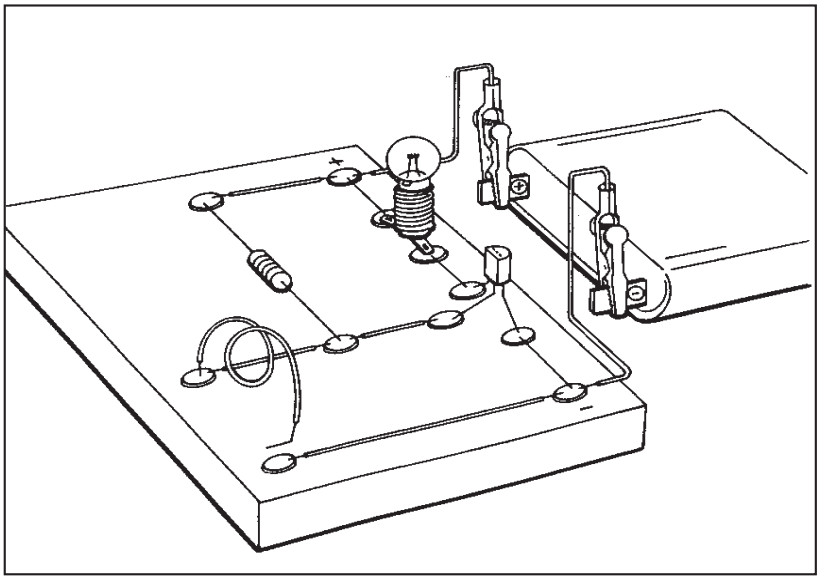
110.028

Intruder Alarm



Necessary tools:

Soldering iron 30W
Multi core solder
Wire stripper
Wire snips

Contents

1x Insulated wire	0,5 metre
1x Transistor	BC 548 or BC 547
1x Resistor	6,8 kΩ
1x Bulb holder	E 10
1x Bulb	3,8 V / 0,07 A

General Notes

To construct this circuit we reccommend using the following methods.

1. Mounting the components on plaster board (Order No 873.017) using drawing pin heads to solder the components on. (the pins are easily inserted by hand)

2. Mounting the components on strip type circuit board. Order No 241.067.

3. Mounting on copper coated circuit board. Order No 241.171/241.207

Description:

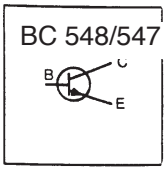
This circuit will work from a 4,5 V battery.
A small current flows through the 6,8 kΩ resistor via the security wire to minus. When the security wire is broken the current then flows to the base of the transistor which in turn is activated and the bulb lights up. Only when the security wire is reconnected does the bulb go out again.

Please Note

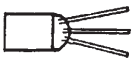
The OPITEC range of projects is not intended as play toys for young children.They are teaching aids for young people learning the skills of Craft, Design and Technolo- gy.These projects should only be undertaken and tested with the guidance of a fully qualified adult. The finished projects are not suitable to give to children under 3 years old. Some parts can be swallowed. Dan- ger of suffocation!

Please Note

Due to the manufacturing process of the bulb holders, the inner contact tab may stand a little proud.
We recommend pressing the contact tab down with a small screwdriver, before inserting the bulb.

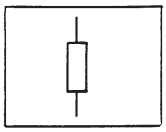


Transistor NPN
Layout of leads E, B and C:

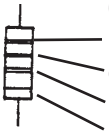


E = Emitter
B = Base
C = Collector

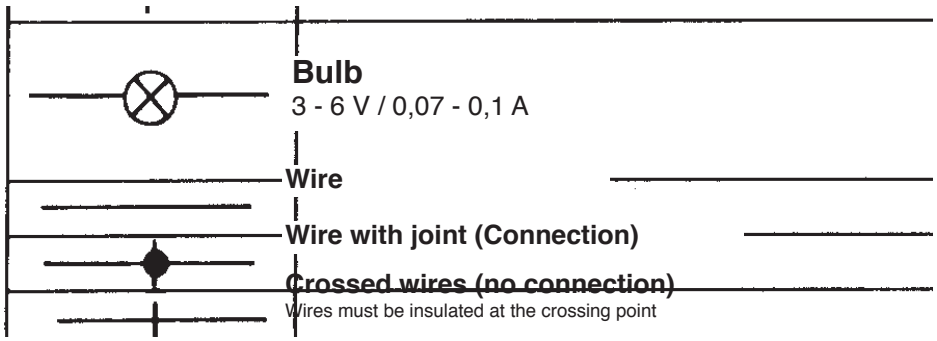
Transistors are easily damaged if connected incorrectly.



Resistor
Determination of resistor



6,8 kΩ
blue
grey
red
silver/gold



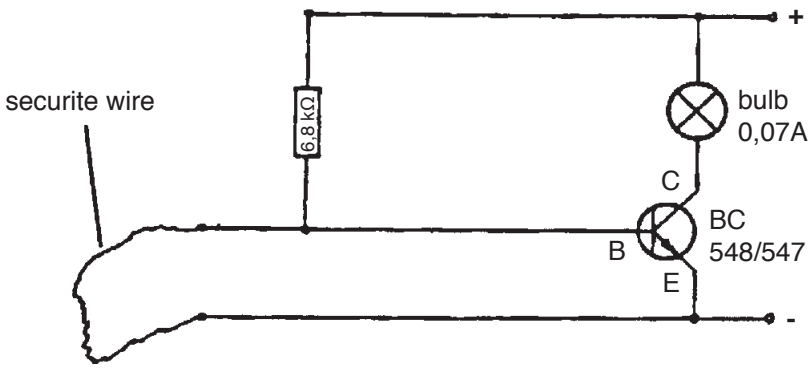
Bulb
3 - 6 V / 0,07 - 0,1 A

Wire

Wire with joint (Connection)

Crossed wires (no connection)
Wires must be insulated at the crossing point

Schematic diagram



A LED can be used instead of the lamp with a 150 Ω resistor or a relay can be operated.

Connection strip