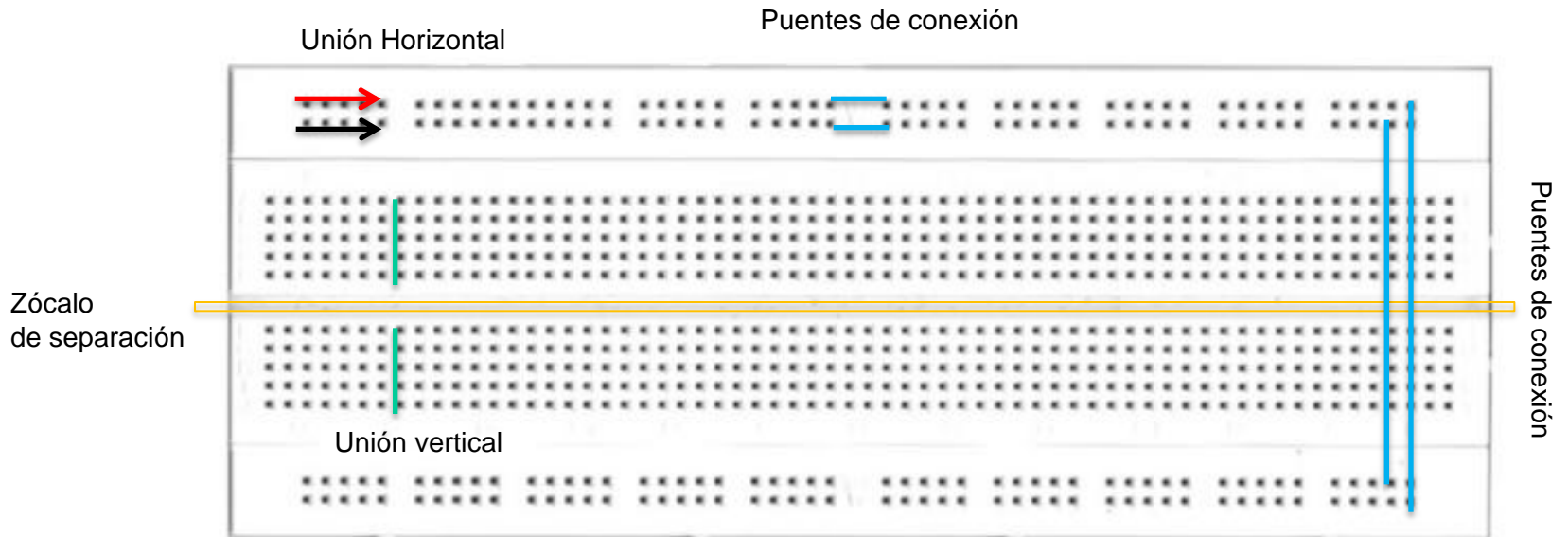


**Algunos esquemas importantes**



Protoboard



Protoboard  
¿cómo funciona?

Puentes de conexión

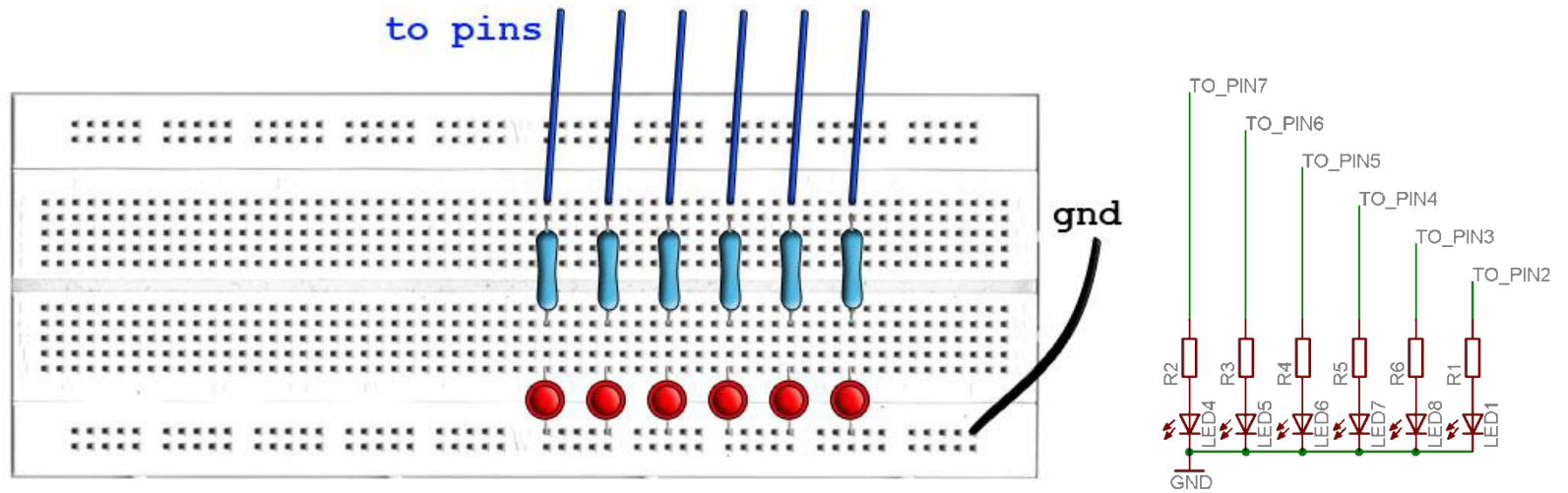


Puentes de conexión

# Protoboard

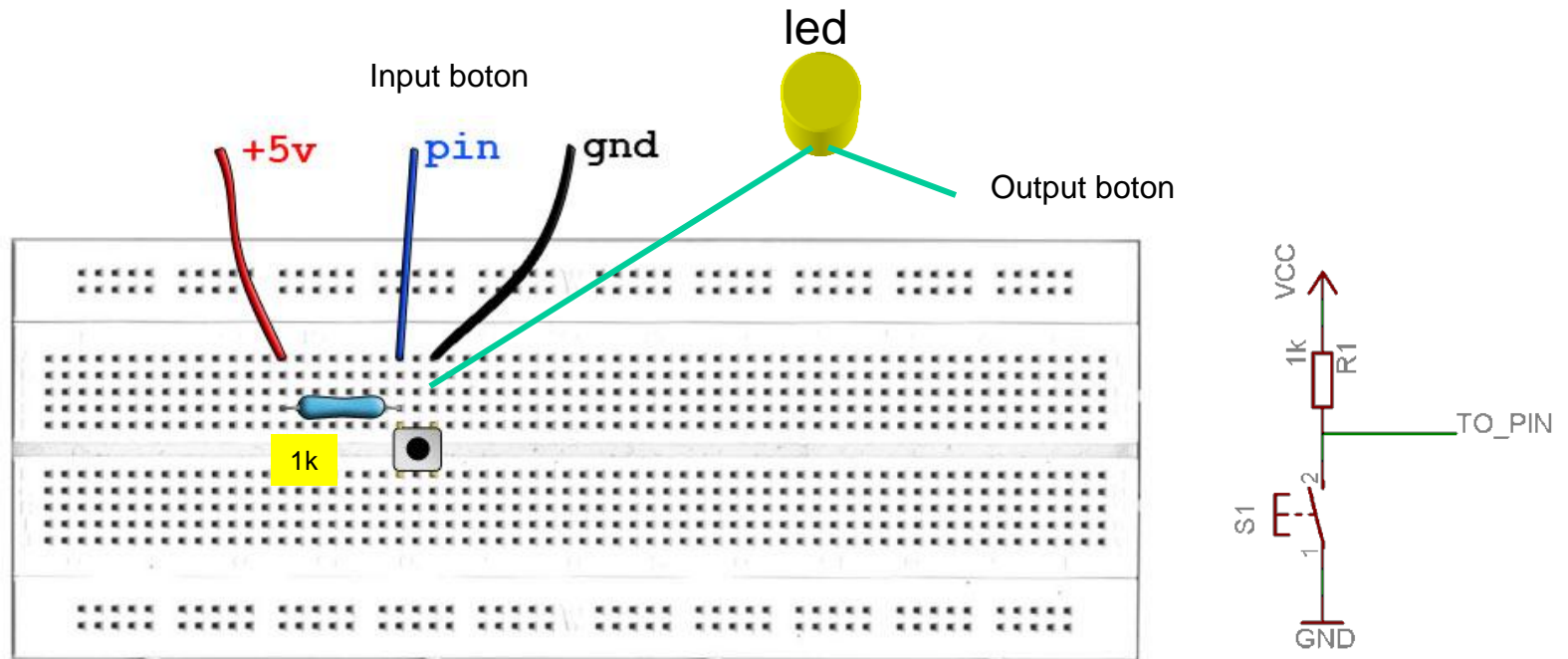
Puentes a realizar si queremos continuidad

# Leds



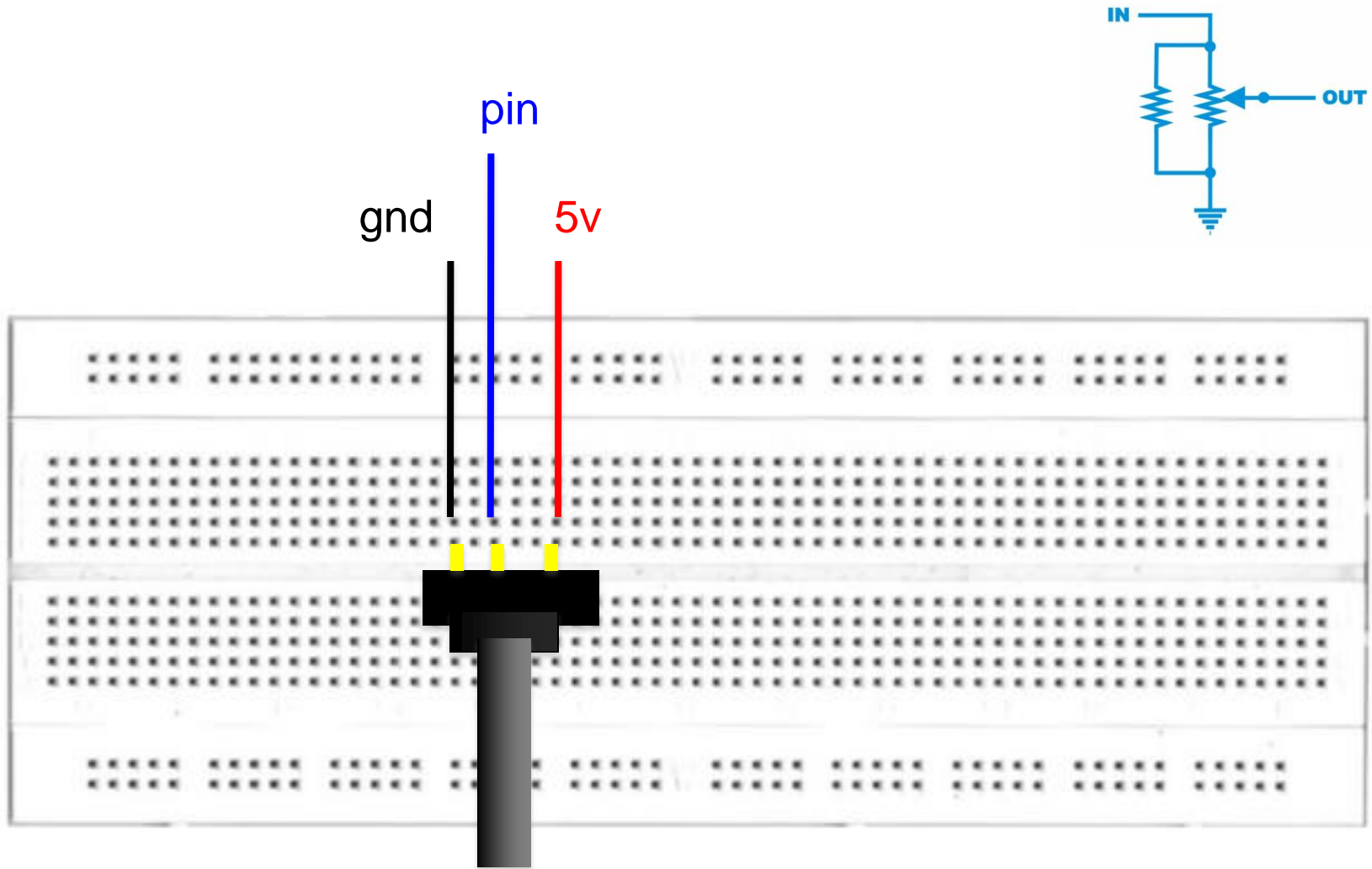
llamamos a la resistencia "pull up" resistor (mantener potencia estable dela fuente logica 5v)

# Boton/control led

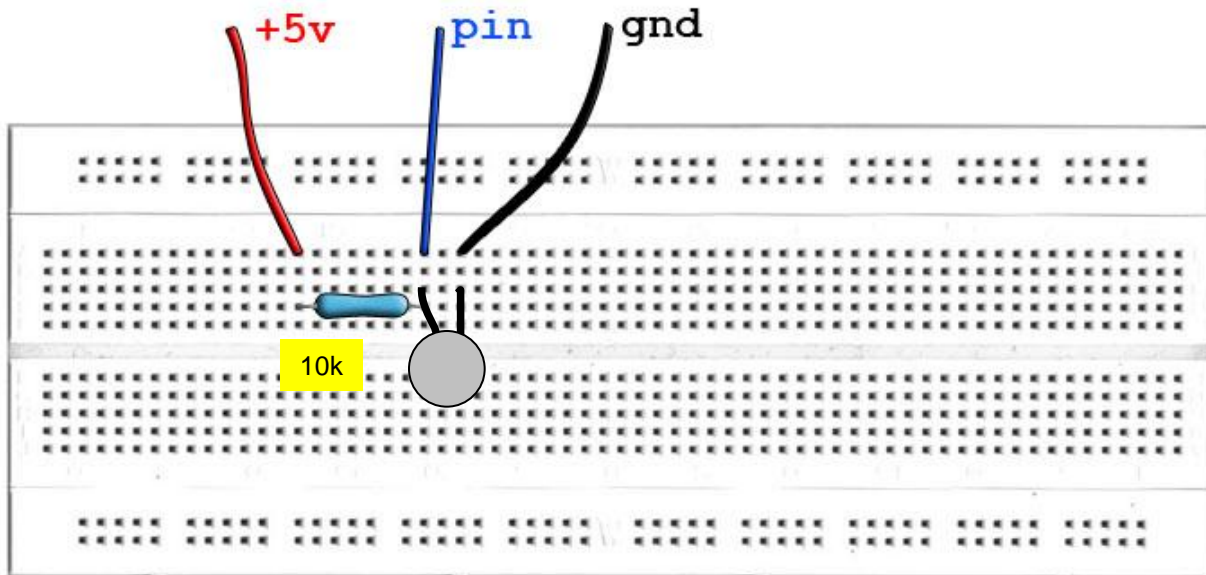


llamamos a la resistencia "pull up" resistor (mantener potencia estable dela fuente logica 5v)

# Conectar un potenciómetro

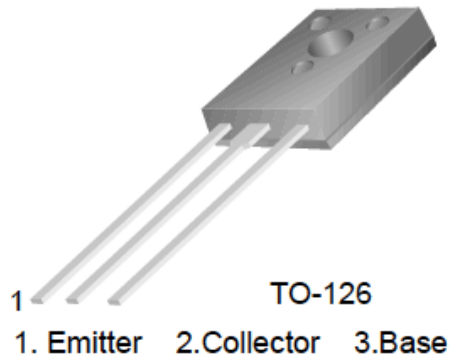


TILT sensor (sensor variable inclinómetro) o un LDR (fotoresistencia) también



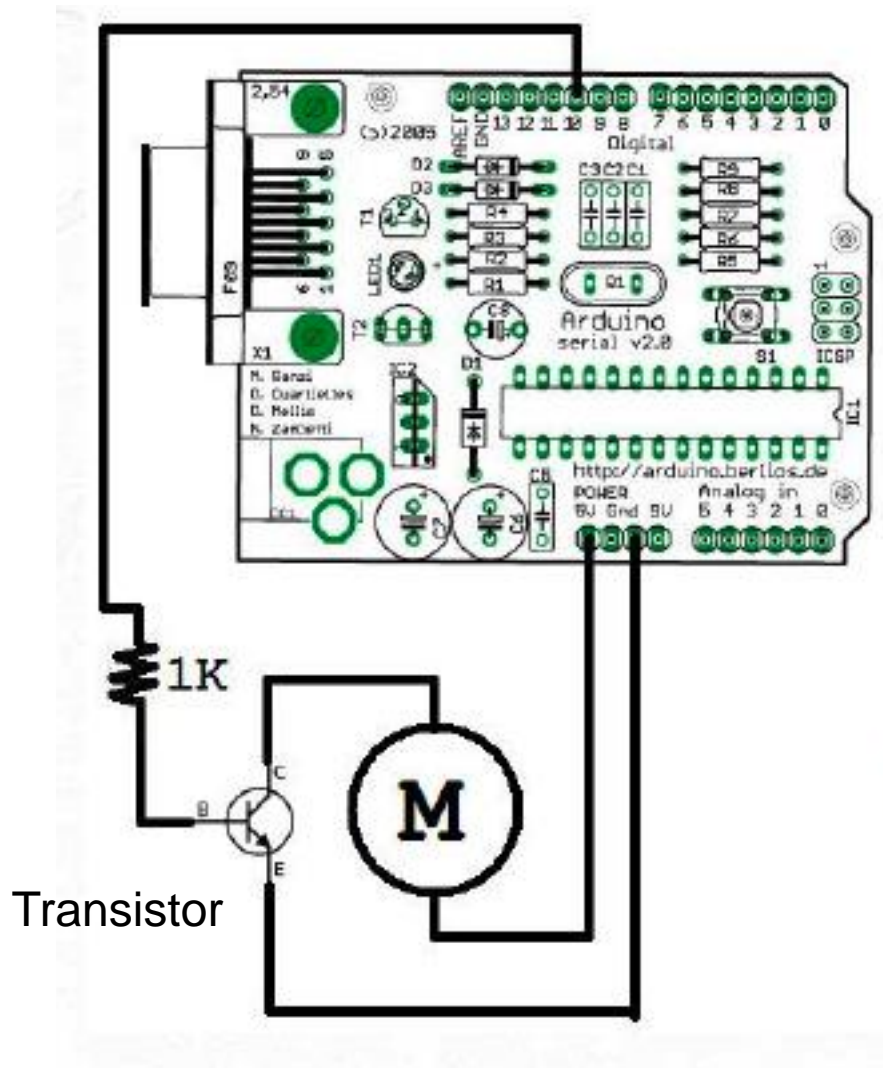
- llamamos a la resistencia “pull up” resistor (mantener potencia estable de la fuente logica 5v)
- Pueden ser de 10K
- tu puedes utilizar el mismo código que el ejemplo de boton

# Conectar un motor simple DC-5V con un transistor BD137



## NPN-BD137

- 1-E= Emisor (ground)
- 2 -C = Colector (pin-motor)
- 3- B = Base (pin)



## Conectar un IR SHARP GP2XX



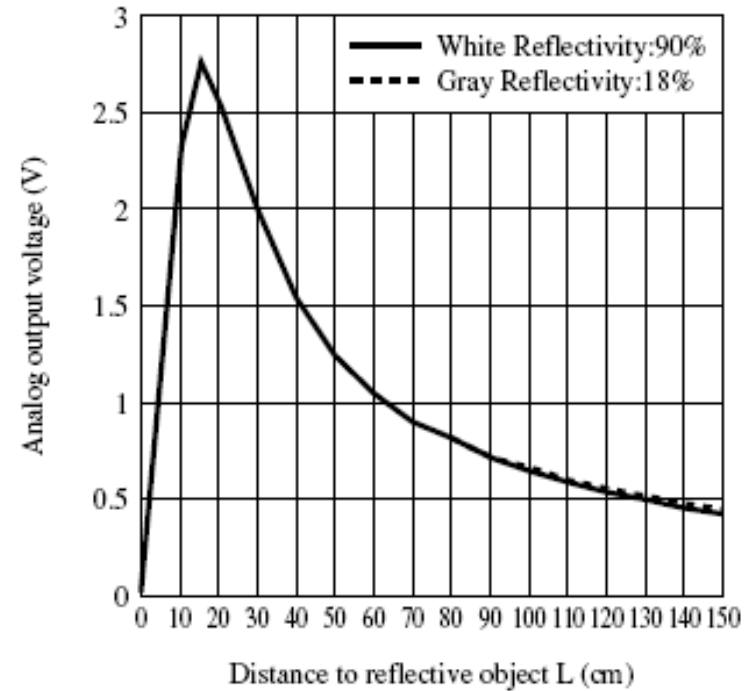
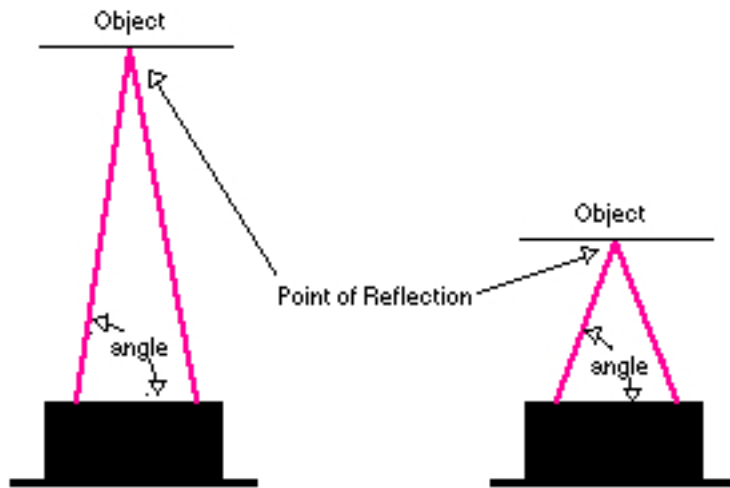
[http://www.acroname.com/robotics/info/articles/sharp/sharp\\_compare.pdf](http://www.acroname.com/robotics/info/articles/sharp/sharp_compare.pdf)

<http://www.acroname.com/robotics/info/articles/sharp/sharp.html>

# Conectar un IR SHARP GP2XX

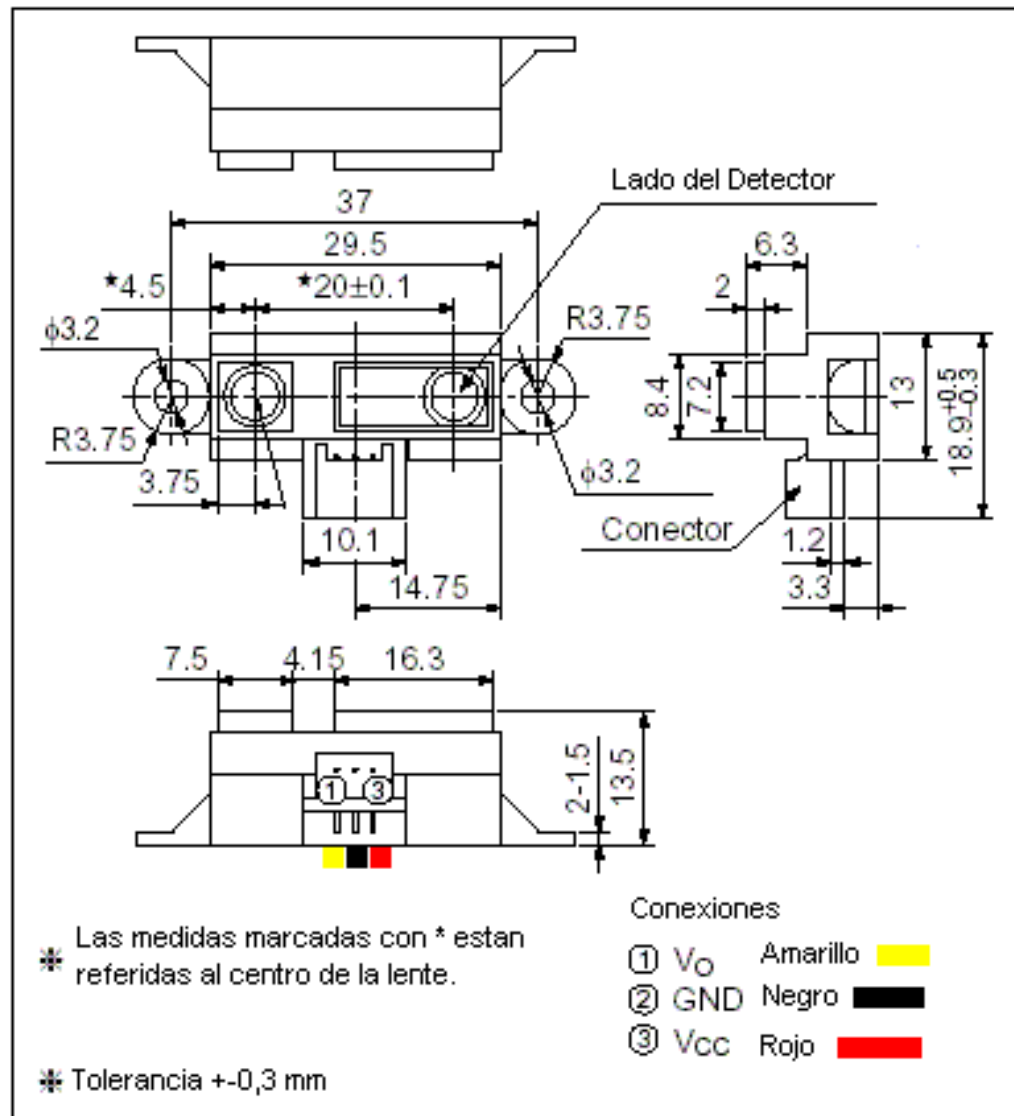
**SHARP**

**Fig.3 Analog Output Voltage vs. Distance to Reflective Object**



[http://www.acroname.com/robotics/info/articles/sharp/sharp\\_compare.pdf](http://www.acroname.com/robotics/info/articles/sharp/sharp_compare.pdf)

<http://www.acroname.com/robotics/info/articles/sharp/sharp.html>



## SHARP GP2D12

<http://www.superrobotica.com/download/sharp/gp2d12.pdf>

## Conectar un sensor ultrasonidos MAXSONAR

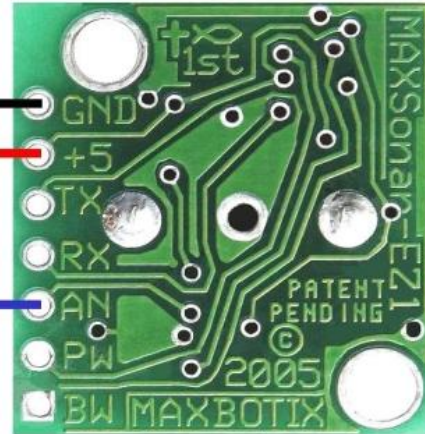


A very easy way to use just one MaxSonar-EZ1 for ranging is shown in the circuit below. Just solder wires from the GND, +5V, & AN to your circuit. When connected as shown, the MaxSonar-EZ1 continuously updates the analog voltage output with 10mV representing 1-inch. Using the analog output allows one to read the voltage (proportional to range) anytime.

\*Connect to circuit ground/common.

\*Connect to +5V supply.

Connect to an Analog to Digital pin on your microcontroller.



**\*Do not reverse voltage polarity!** (May damage the MaxSonar-EZ1)

<http://www.maxbotix.com/performance.htm>

[http://www.maxbotix.com/MaxSonar-EZ1\\_FAQ.html](http://www.maxbotix.com/MaxSonar-EZ1_FAQ.html)

MaxBotix® Inc.

For more information or latest product datasheets visit: [www.maxbotix.com](http://www.maxbotix.com)

The names MaxBotix, MaxSonar, EZ0, EZ1, EZ2, EZ3, EZ4, AE0, AE1, AE2, AE3, AE4 and WR1 are trademarks of MaxBotix Inc.

# MB1010

## LV-MaxSonar®-EZ1™ Beam Pattern

Sample results for measured beam pattern are shown on a 30-cm grid. The detection pattern is shown for dowels of varying diameters that are placed in front of the sensor

**A** 6.1-mm (0.25-inch) diameter dowel

**B** 2.54-cm (1-inch) diameter dowel

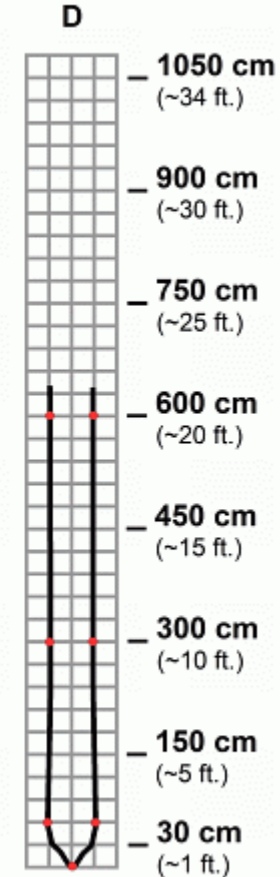
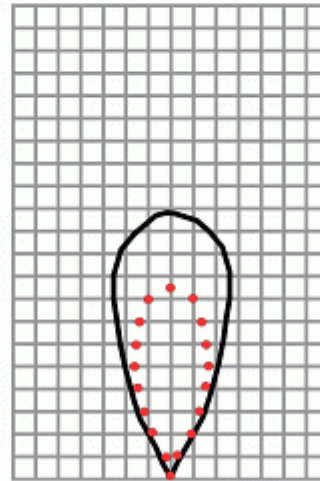
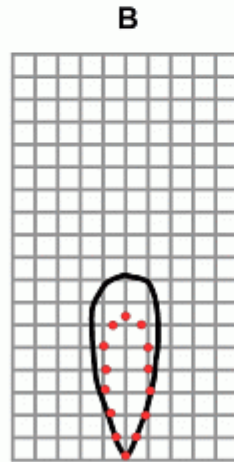
**C** 8.89-cm (3.5-inch) diameter dowel

**D** 11-inch wide board moved left to right with the board parallel to the front sensor face.

This shows the sensor's range capability.

**Note:** For people detection the pattern typically falls between charts A and B.

— 5.0 V  
● 3.3 V



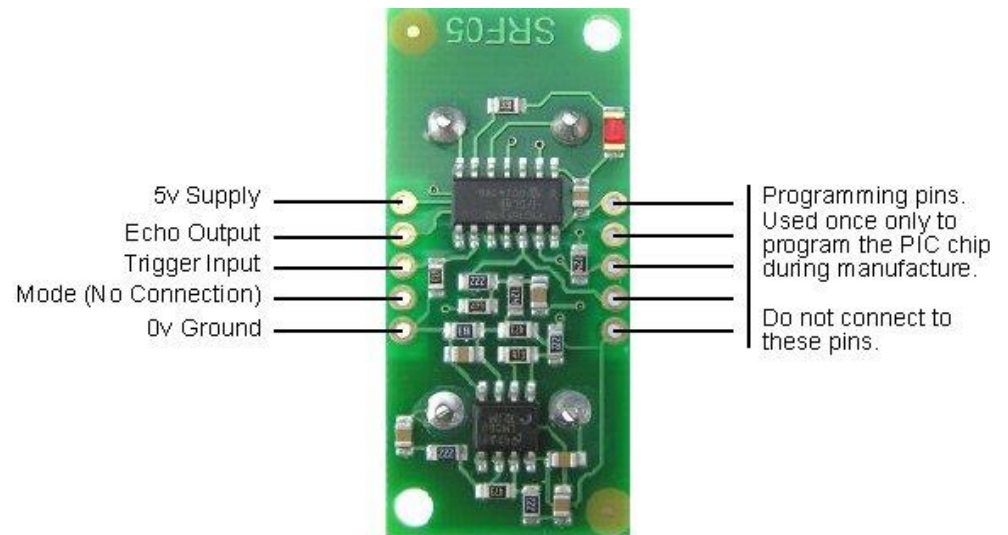
**Beam Characteristics are Approximate**

Beam Pattern drawn to a 1:95 scale for easy comparison to our other products.

<http://www.maxbotix.com/performance.htm>

[http://www.maxbotix.com/MaxSonar-EZ1\\_FAQ.html](http://www.maxbotix.com/MaxSonar-EZ1_FAQ.html)

# Conectar un sensor ultrasonidos PARALLAX y SRF04



Connections for 2-pin Trigger/Echo Mode (SRF04 compatible)

## Conectar un sensor acelerómetro



<http://www.sparkfun.com/products/9269>

Ejemplo:

[http://www.youtube.com/watch?v=\\_ifAWRAdqNg&feature=fvwrel](http://www.youtube.com/watch?v=_ifAWRAdqNg&feature=fvwrel)