

# BEAM SENSORS - CONTACT SENSORS

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Contact sensors (as their name implies) require physical contact with some other object in order to "trigger."

While this is sometimes a bit inconvenient for your 'bot (unlike proximity sensors, contact sensors won't help a 'bot avoid an obstacle before it is within "arm's reach"), it has two big advantages:

- Contact sensors are very easy to build at home from various bits & pieces you probably already have lying around.
- Contact sensors don't draw power until contact is made.


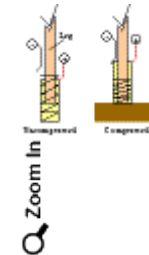
## **Obstacle avoidance contact sensors**

Contact sensors for obstacle avoidance are essentially the electronic version of a cat's "whiskers." In most designs, a whisker is attached to one electrical contact, and this contact gets pushed into another one if the whisker touches something. You can also just mount a "whisker" to a small pushbutton switch (you can salvage some nice "soft" ones from floppy drives).

Ian Bernstein's site has an excellent tutorial for one contact sensor design here.

## Ground contact sensors

Some BEAMbots may want to know when a leg touches the ground. Here, you'll need some sort of a foot contact sensor. Again, you can use a "soft" pushbutton switch (preferably salvaged) for this job. You can also build a fairly simple ground contact sensor of your own.

<p>Clifford Boerema, Jr. posted a nice design for a foot contact sensor.</p>	
<p>I drew up a similar design for a normally-open sensor, using a spent .22 cal cartridge (if you're a "plinker," you should be able to come up with lots of these).</p>	
<p>It's normally-closed cousin is here.</p>	<div style="border: 1px solid black; padding: 5px; display: inline-block;"><b>Coming Soon!</b></div>

Source: [http://www.solarbotics.net/library/circuits/sensors\\_contact.html](http://www.solarbotics.net/library/circuits/sensors_contact.html)