

Lego Mindstorms EV3 – Touch Sensors

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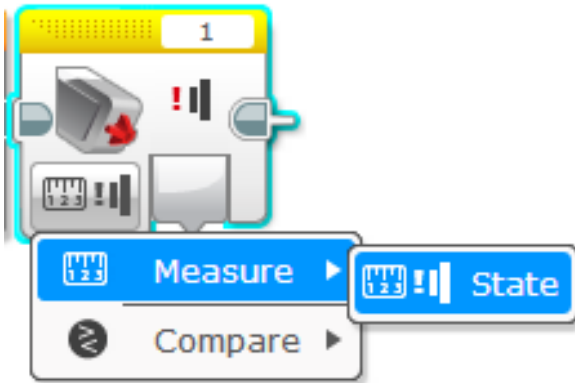
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EV3 Touch Sensor



- ✓ Detects when its front button is pressed or released or bumped
- ✓ Able to count single and multiple presses
- ✓ Used to build start/stop control systems
- ✓ Is a True or False switch
- ✓ Used to measure contact with surfaces

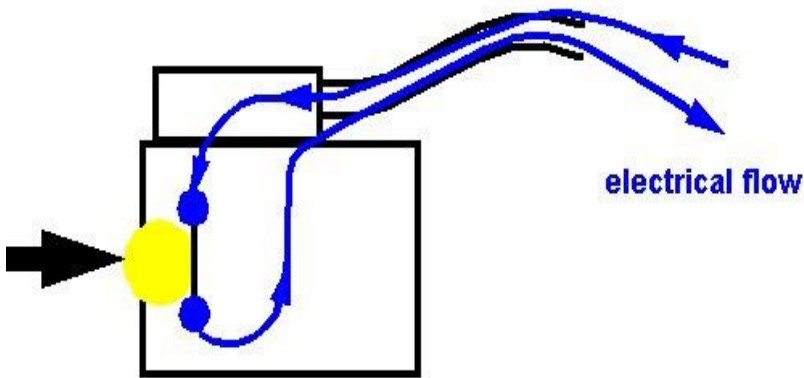


- ✓ Available in Yellow Sensor Tab (Sensor Blocks)
- ✓ Has two modes: Measure and Compare
- ✓ Measure reads the incoming values from the sensor
- ✓ Compare provide addition settings

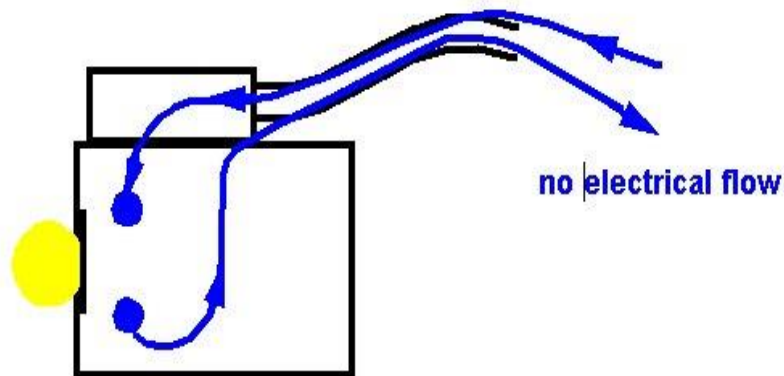
Reference: <http://ev3lessons.com/>



Touch Sensor - Principles of Operation



Touch sensor pressed



Touch sensor released

Works like a light switch in your house

When the button is pressed, an electrical circuit is connected inside the sensor, sending an electric current to the computer.

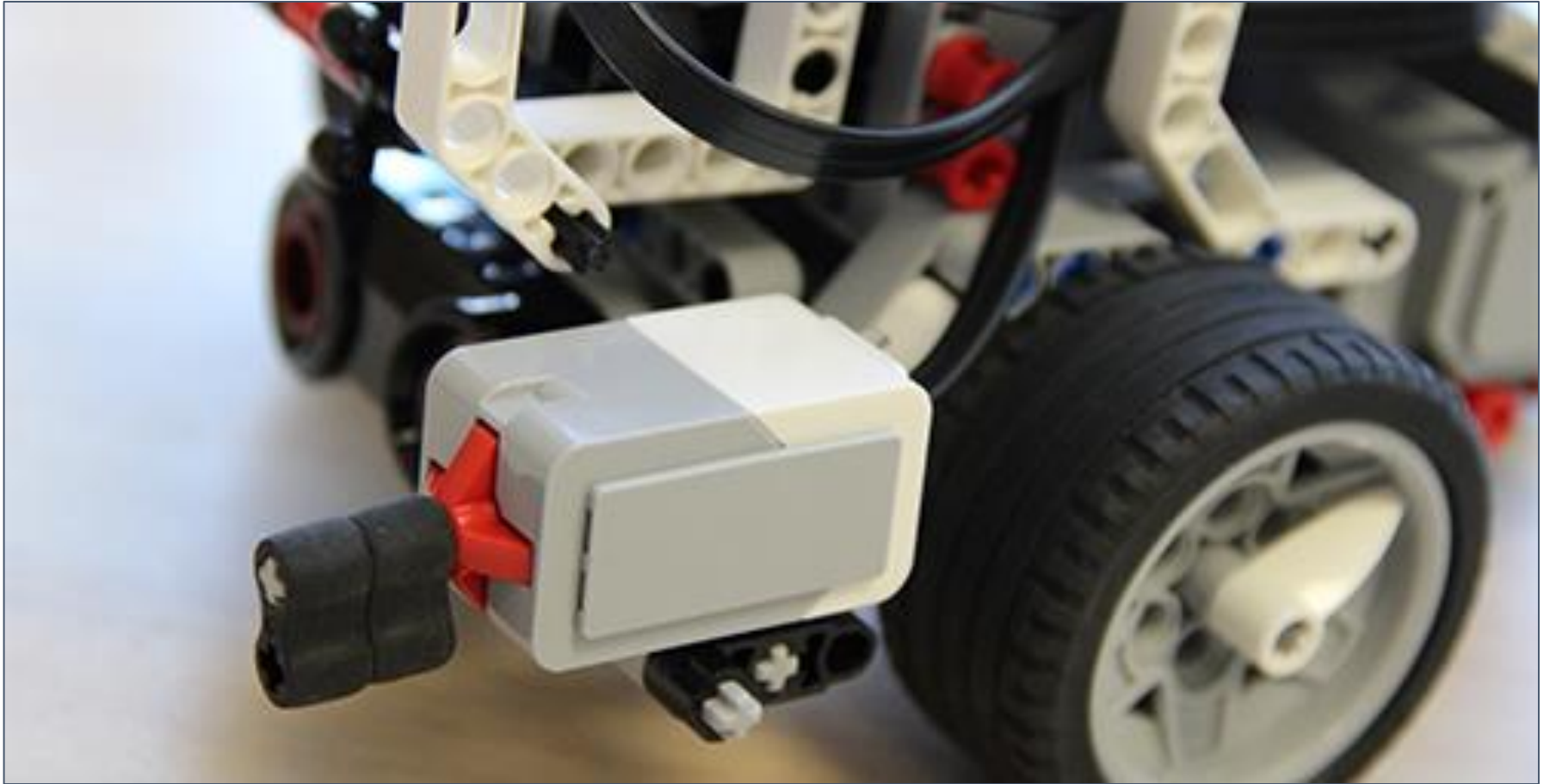
When the button is released, the circuit is broken and no electricity flows

The LEGO brick can sense this flow of electricity, so it knows if the touch sensor is pressed or released

Reference: <https://www.teachengineering.org>



Mechanism for Stopping a Robot – Touch Sensor Pressed

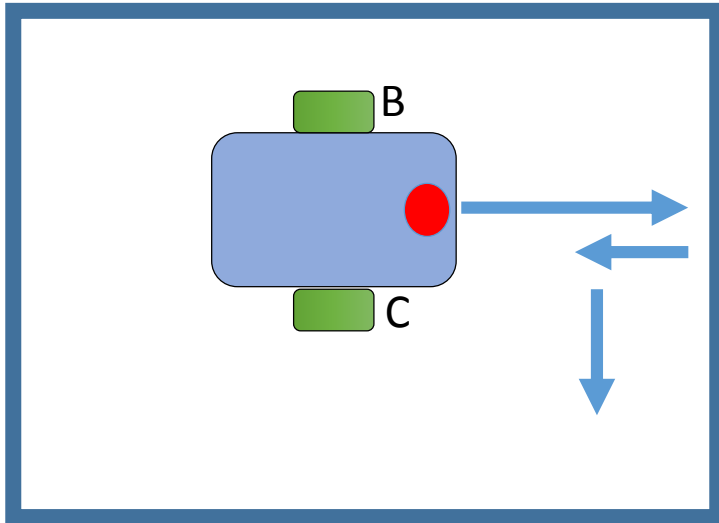


Mechanism for making the robot move until the touch sensor is pressed

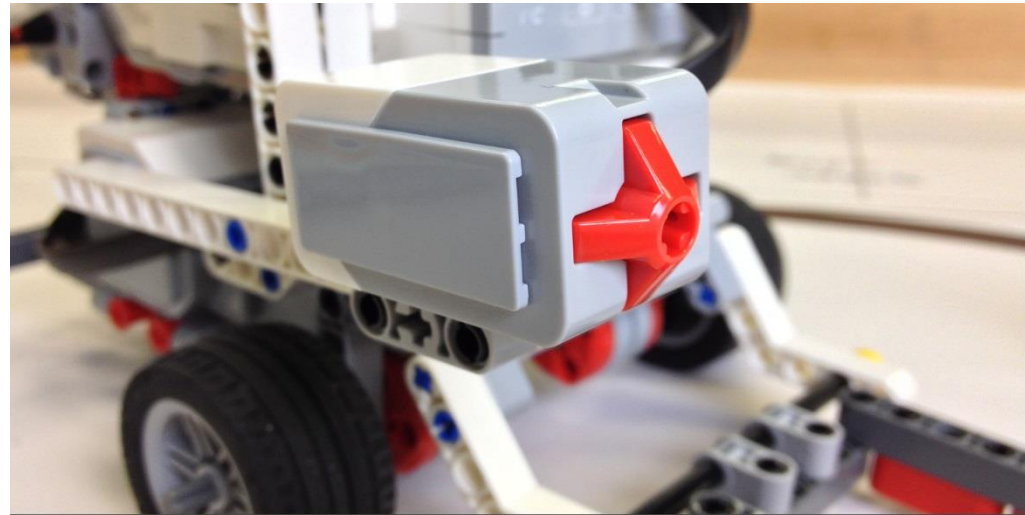
Reference: <http://curriculum.cs2n.org>



Activity on Touch Sensor



Program your robot to move until it hits the edge of a wall. Then back up and turn right 90 degrees



Build Touch Sensor attachment to robot. Make robot react on Touch Sensor input

Reference: <http://ev3lessons.com/>



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