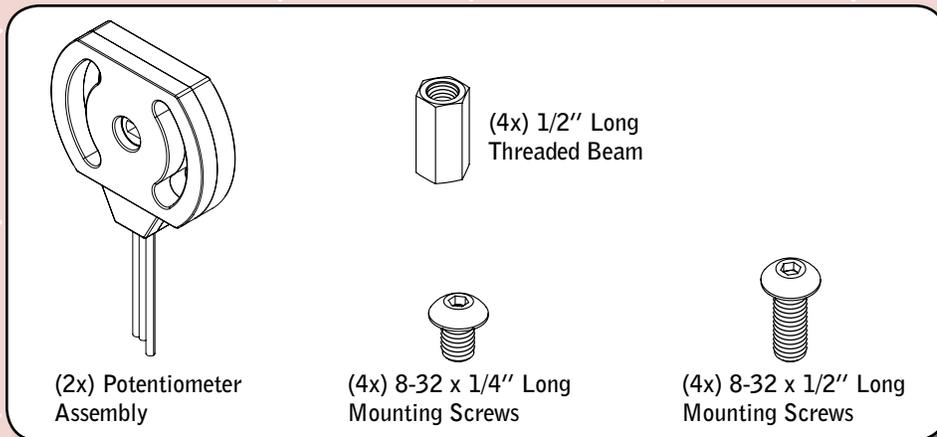


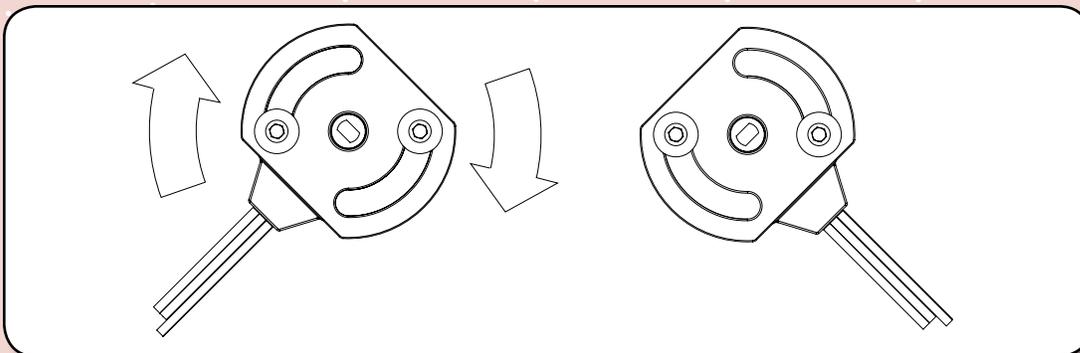
Potentiometer Kit

The Vex Potentiometer will keep things 'on the level'. Use this sensor to get an analog measurement of angular position. This measurement can help to understand the position of robot arms, or other mechanisms. To effectively utilize this sensor, users are required to use the Vex Programming Kit.

YOU MUST HAVE A PROGRAMMING KIT TO USE THIS SENSOR!



The Potentiometer is designed with a "D-hole" in the center. This hole should slide easily over the Vex square shafts. The Potentiometer also includes (2) "arcs" which are 1/2" from the center hole; these arcs are used for mounting the Potentiometer to the robot structure.



The mounting arcs allow for 90-degrees of adjustment to the Potentiometer position. Since the Potentiometer has limited travel, it is important to ensure that the shaft that is being measured by the Potentiometer does not travel more than 260-degrees (the Potentiometer can only move mechanically about 265-degrees \pm 5 and can only measure electrically 250-degrees \pm 20). The adjustment arcs allow the Potentiometer's "range of motion" to be repositioned to match the shaft's range of motion. To measure the motion of something which moves more than 230-degrees, try gearing down the shaft's motion to a secondary shaft (this secondary shaft will move less distance) and then measure this secondary shaft.

Limited 90-day Warranty

This product is warranted by Innovation First against manufacturing defects in material and workmanship under normal use for ninety (90) days from the date of purchase from authorized Innovation First dealers. For complete warranty details and exclusions, check with your dealer.

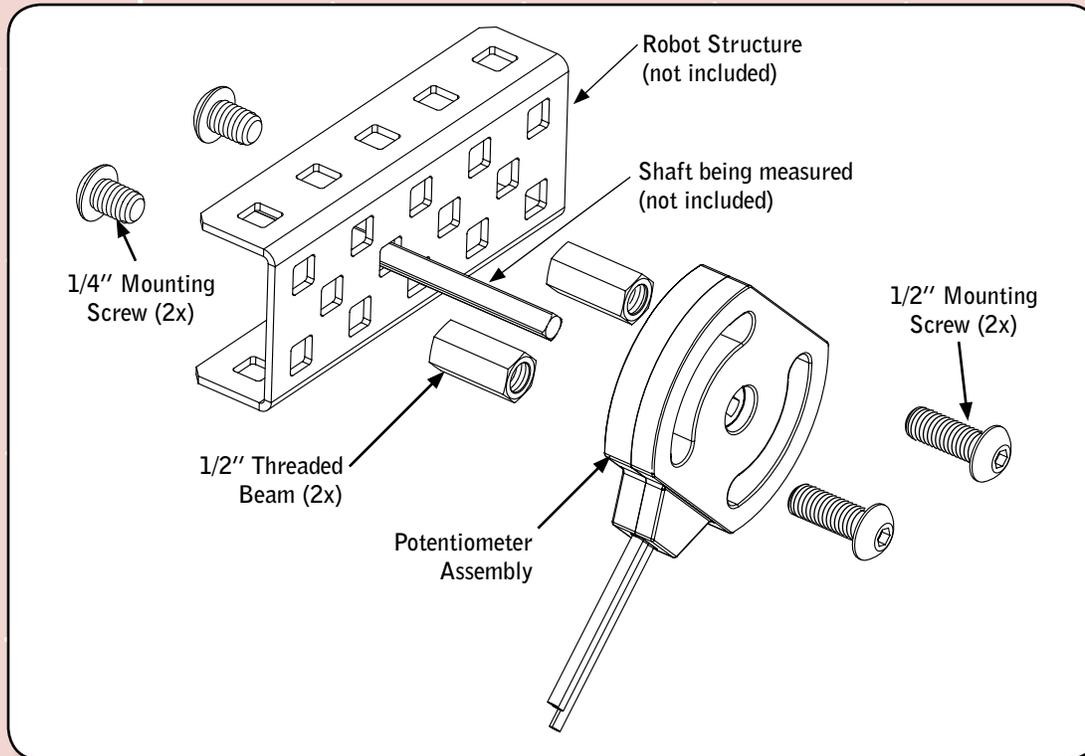
Innovation First, Inc.
1519 IH 30 W
Greenville, TX 75402

For More Information, and additional Parts & Pieces refer to:
www.VexRobotics.com

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Potentiometer Kit, continued

Slide the Potentiometer down the shaft being measured, and ensure that it sticks out of the Potentiometer a little bit on the far side. Mount the Potentiometer using the provided hardware. Ensure the Potentiometer is centered on the shaft and that there is no mechanical bind BEFORE tightening the mounting screws.



The Potentiometer (or Pot for short) describes an electrical device in which the user can adjust the resistance. As the resistance of the sensor changes, a varying voltage is created and thus the sensor acts as a variable voltage divider. This varying analog voltage can be measured by the Vex Controller and is proportional to the position of the shaft connected to the center of the Pot. This is how you obtain an analog measurement of an angular position.

Before you can use the Potentiometer, you must reprogram your Vex Controller to read the varying voltage of the sensor on the corresponding port you are planning on connecting to. How to write/change your code to read the varying voltage is not covered in these instructions. We suggest searching our Forum for help at www.vexforum.com. To connect the Potentiometer Sensor to the Vex Controller, you plug the Sensor Connector into any port in the Analog/Digital Bank on the Vex Controller, typically you start with the 1st position. Note that the Connector is keyed to fit into the Vex Controller Port in a specific orientation; plugging it in backwards could damage your Sensor.

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