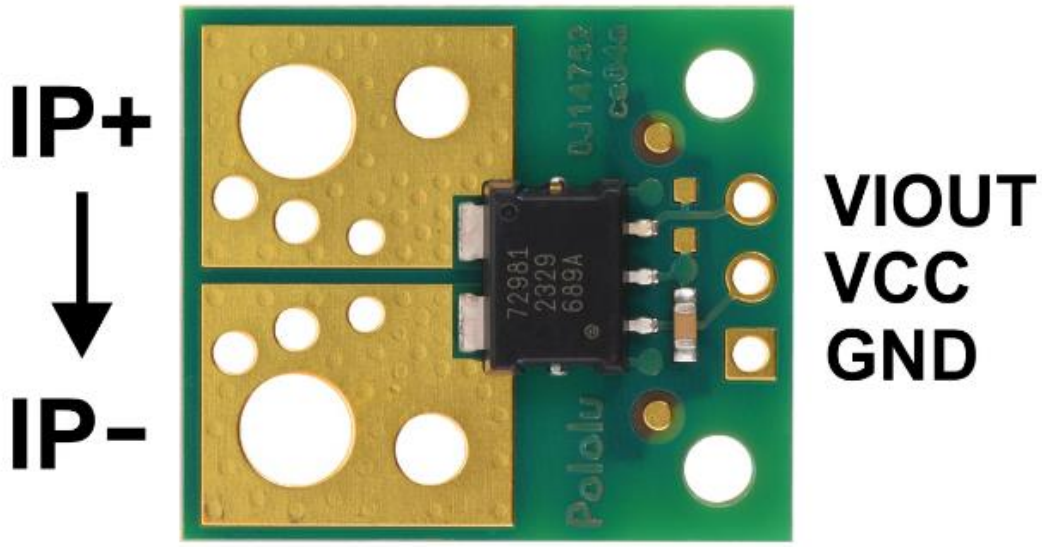
Uso del Sensor.



ACS72981 Current Sensor Compact Carrier pinout.

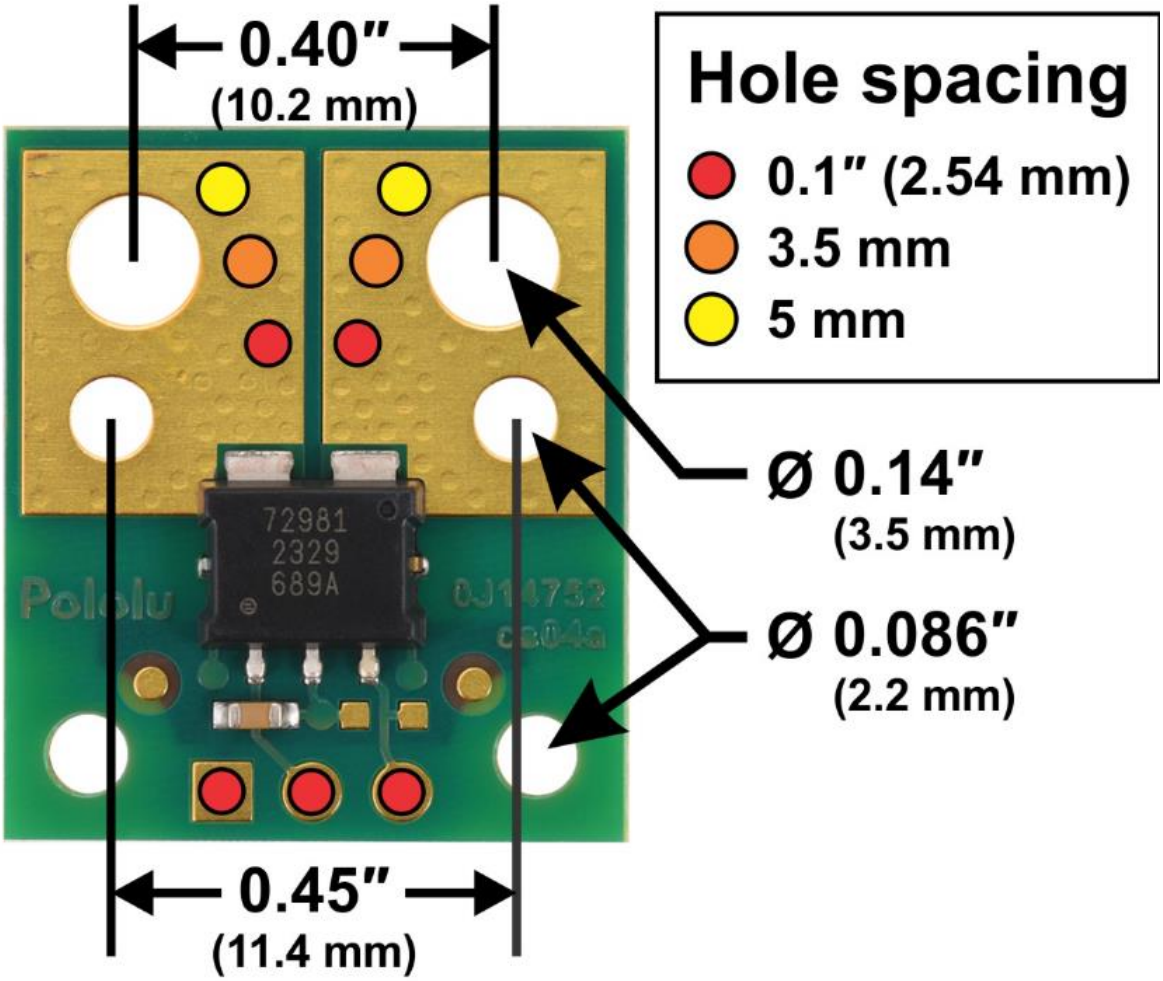
This sensor has five required connections: the input current (IP+ and IP-), logic power (VCC and GND), and the sensor output (VIOUT).

The sensor requires a supply voltage of 4.5 V to 5.5 V to be connected across the VCC and GND pads, which are labeled on the bottom silkscreen. The sensor outputs a ratiometric analog voltage on VIOUT that is centered at VCC/2 and changes by 10 mV × (VCC/5 V) per amp of input current, with positive current increasing the output voltage and negative current decreasing the output voltage:

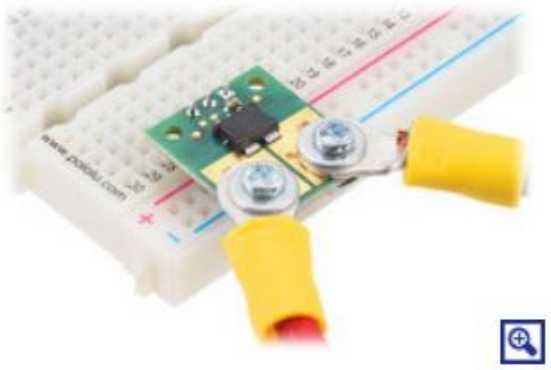
$$V_{\mathrm{IOUT}} = \frac{V_{\mathrm{CC}}}{2} + 0.01\frac{\mathrm{V}}{\mathrm{A}} \cdot \frac{V_{\mathrm{CC}}}{5\mathrm{V}} \cdot I_{\mathrm{P}} = V_{\mathrm{CC}} \cdot \left(\frac{1}{2} + \frac{I_{\mathrm{P}}}{500\mathrm{A}}\right)$$

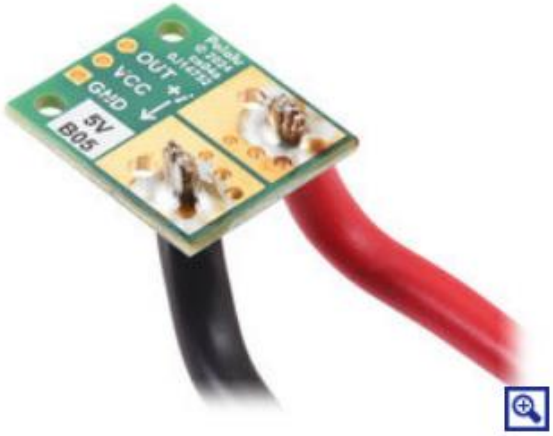
$$I_{\mathrm{P}} = 500\mathrm{A} \cdot \left(\frac{V_{\mathrm{IOUT}}}{V_{\mathrm{CC}}} - \frac{1}{2}\right)$$

The VIOUT, VCC, and GND pins work with 0.1"-pitch header pins and are compatible with standard solderless breadboards.



You can insert the board into your current path in a variety of ways. For typical high-current applications, you can solder wires directly to the through-holes that best match your wires, or you can use solderless ring terminal connectors, as shown in the pictures below. The largest through-holes are big enough for 8 AWG wires or #6 or M3.5 screws, and the second-largest through-holes (and mounting holes) are sized for 12 AWG wires or #2 or M2 screws. Holes with 0.1", 3.5 mm, and 5 mm spacing are also available as shown in the diagram above for connecting male header pins or terminal blocks, but please note that these connection options will generally not be suitable for the kinds of high currents intended for this sensor.





Warning: This product is intended for use below 30 V. Working with higher voltages can be extremely dangerous and should only be attempted by qualified individuals with appropriate equipment and experience.