Piezo Vibration Sensor - Small Horizontal

SEN-09198 ROHS✔

★★★½☆ 2

DESCRIPTION DOCUMENTS

The Minisense 100 from Measurement Specialties is a low-cost cantilever-type vibration sensor loaded by a mass to offer high sensitivity at low frequencies. Useful for detecting vibration and 'tap' inputs from a user. A small AC and large voltage (up to +/-90V) is created when the film moves back an forth. A simple resistor should get the voltage down to ADC levels. Can also be used for impact sensing or a flexible switch.

Comes with machine pins that allows for horizontal mounting.

We've seen this used as great musical inputs.

Features:

- Flexible PVDF Piezo Polymer Film
- Wide dynamic range
- Laminated for higher voltage output
- Breadboard friendly leads

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Piezo Vibration Sensor - Small Horizontal Product Help and Resources

TUTORIALS SKILLS NEEDED

Piezo Vibration Sensor Hookup Guide

MAY 5, 2016

How to combine a piezo sensor, high-value resistor, and an Arduino to create a vibration sensor.

COMMENTS 16 REVIEWS ★★★½☆ 2

Customer Reviews

★★★½☆ 3.5 out of 5

Based on 2 ratings:

5 star		1
4 star		0
3 star		0
2 star		1
1 star		0

Currently viewing all customer reviews.

3 of 3 found this helpful:

★★★★★ Convenient and sensitive!

about 2 years ago by Member #703525 ✔ verified purchaser

This sensor's super convenient - it can plug directly into the breadboard! And once done prototyping, the pins also make it easy to solder to.

I'm using this to detect the vibrations of my washing machine and it works perfectly for this task.

1 of 1 found this helpful:

★★☆☆☆ Very bad at detecting non-direct vibration/taps (even within 1 inch)

about a year ago by Member #842674 ✔ verified purchaser

I purchased 4 of these and 2 were DOA.

Moving past this, since that can happen with any batch of hardware, the main issue is that the sensors give results all over the place (and they seem to flake out a lot). They are simply not good at measuring NON-direct vibrations/taps. If you place it on metal, wood, etc, and start knocking within 1" of the sensor, it will either NOT pick it up, or "barely" register a few #s (which is just as bad – see why bellow).

Just by connecting them + and -, and applying the 1M resistor (as per: https://www.arduino.cc/en/Tutorial/KnockSensor), you will see a range of ~95-105 at "resting".

The problem is that you keep getting random spikes like these: (this is one "sweep" over a second or so) Sensor 01: 98 Sensor 01: 94 Sensor 01: 89 Sensor 01: 82 Sensor 01: 91 Sensor 01: 99

That's even when placing it on a carpet, with no vibration/movement/etc. in the area.

The main issue with this is that that's roughly the range of a "normal" knock/vibration detection within an inch or so.

I purchased it to detect laundry vibrations, and signal when the laundry machine is running.

Stumbled across articles (guessing from previous reviewer): * https://community.particle.io/t/best-vibration-sensor-for-spark/1134/12 and * http://davidhoulding.blogspot.com/2014/02/high-sensitivity-vibration-sensor-using.html

I ran into the same thing the author found:

"I found the raw output of the piezo unsuitable for direct input to the Arduino as it is typically a very small voltage signal and needs amplification"

(using a Photon on my side however vs an Arduino)

At the end of the day, this simply did not do what it claimed – detect vibrations. I am a bit disappointed, and I would definitely not recommend them.

> ROB-24601 replied on September 26, 2016:
>
> Sorry that you received 2 DOA, and the others aren't acting as you expected. I would suggest getting in touch with our tech support team, they should be able to help you out.

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