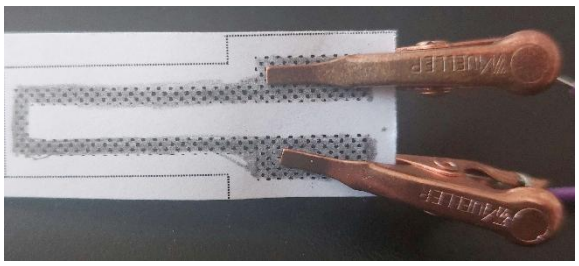
Low Tech Graphic Strain Sensor

LTGSS-2025

General features

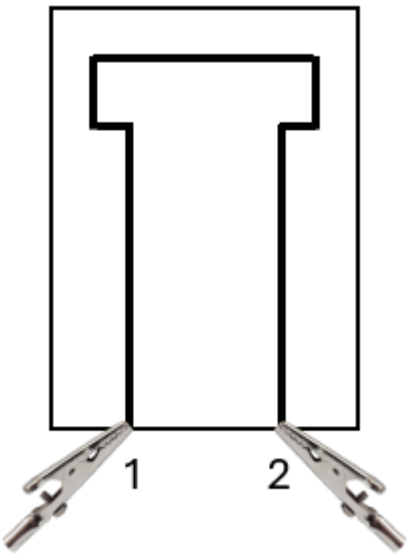
- Low power consumption
- Easy to use
- Low cost
- Detection of strain
- Different type of pen hardness



Description

This sensor is a strain gauge based on Graphene. Using a pencil, a layer of graphite is deposited on a sheet of paper and by exerting a stress on the sensor, the Graphene lattice will be more or less spaced and the electrons will flow more or less easily. By using an amplifier, we can measure the signal modified by this stress and thus determine its value. The advantage of this sensor is that it's easy to use, can be modified to suit the type of pencil and gives results similar to those of the industrial sensor.

Pin description



Pin number	Usage
1	In
2	Out

Specifications

Type	Graphene based sensor
Material	Graphene (from pen)
Sensor type	Passive
Dimensions	3 x 1.5 cm² Thickness : 0.2mm
Temperature	10 to 35°C
Pencil tone	4B to 2H
Supply voltage	Maximum 5V (for the arduino)

Electrical characteristics

Pencil tone	Units	Values		
		Min	Typ	Max
HB	MΩ	2.2	3	4.1
3B	MΩ	4	8.8	12.8
6B	MΩ	0.53	0.64	0.83

Application

This is an example of a circuit to use the LTGSS-2025

You can use an arduino device to receive the data