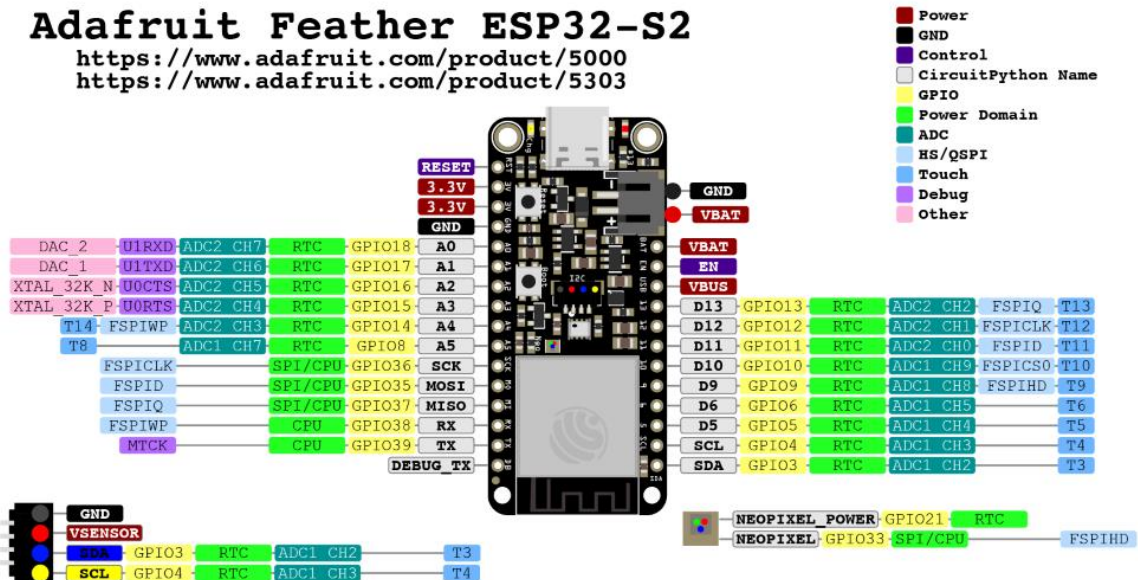


Datasheet

Feather ESP32

Adafruit Feather ESP32-S2

<https://www.adafruit.com/product/5000>
<https://www.adafruit.com/product/5303>



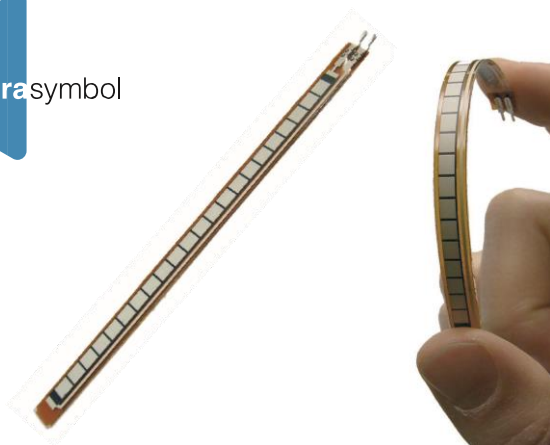
Stemma QT Power pin VSENSOR and I2C pull-up resistors are enabled/disabled by GPIO 7.
If you have a rev B board, set IO7 LOW to enable.
If you have a rev C board, set IO7 HIGH to enable.

Lien de la datasheet : [Pinouts](#) | [Adafruit ESP32-S2 Feather](#) | [Adafruit Learning System](#)

Features

- Angle Displacement Measurement

Capteur de flexion ZD10-100

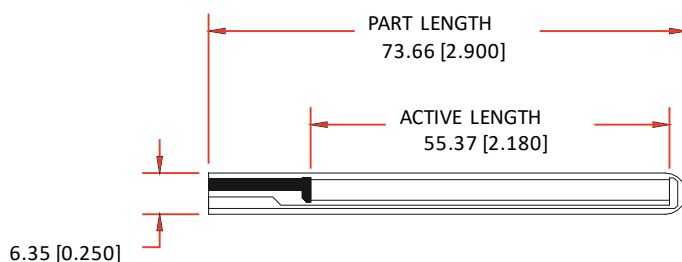


- Bends and Flexes physically with motion device
- Possible Uses
 - Robotics
 - Gaming (Virtual Motion)
 - Medical Devices
 - Computer Peripherals

- Musical Instruments

Peak

Dimensional Diagram - Stock Flex Sensor

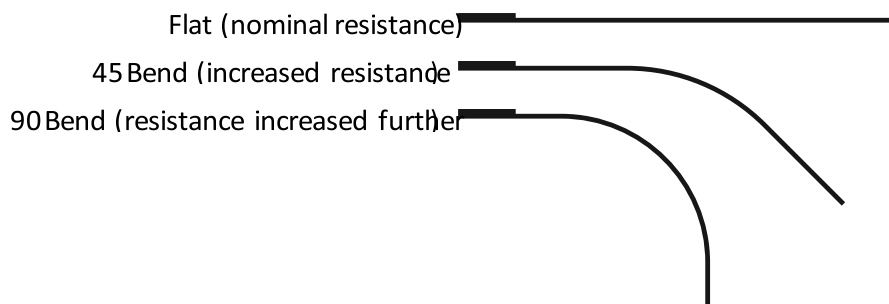


How to Order - Stock Flex Sensor

FS	L	0055	253	ST
Series	Model	Active Length	Resistance	Connectors
FS = Flex Sensor	L = Linear	0055 = 55.37mm	253 = 25K Ohms	ST = Solder Tab

- Physical Therapy
- Simple Construction

How It Works



- Low Profile

Mechanical Specifications

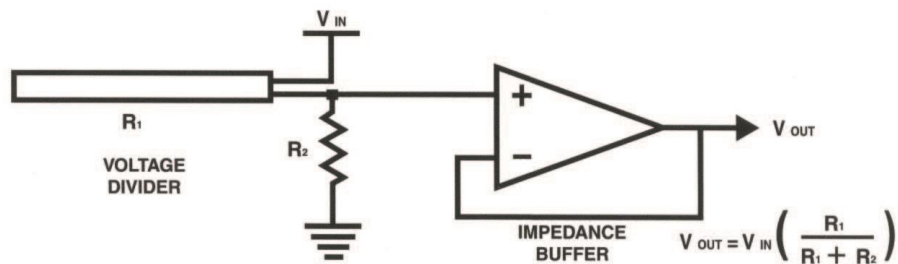
- Life Cycle: >1 million
- Height: 0.43mm (0.017")
- Temperature Range: -35°C to +80°C

Electrical Specifications

- Flat Resistance: 25K Ohms
- Resistance Tolerance: $\pm 30\%$
- Bend Resistance Range: 45K to 125K Ohms (depending on bend radius)
- Power Rating : 0.50 Watts continuous. 1 Watt

Schematics

BASIC FLEX SENSOR CIRCUIT:

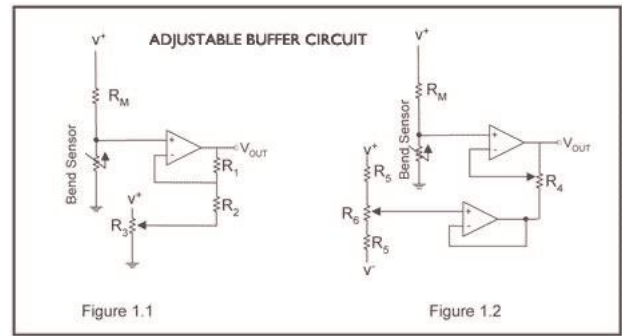


Following are notes from the ITP Flex Sensor Workshop

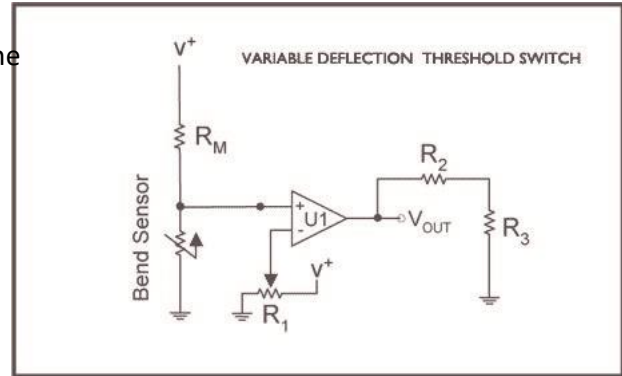
"The impedance buffer in the [Basic Flex Sensor Circuit] (above) is a single sided operational amplifier, used with these sensors because the low bias current of the op amp reduces error due to source impedance of the flex sensor as voltage divider. Suggested op amps are the LM358 or LM324."

"You can also test your flex sensor using the simplest circuit, and skip the op

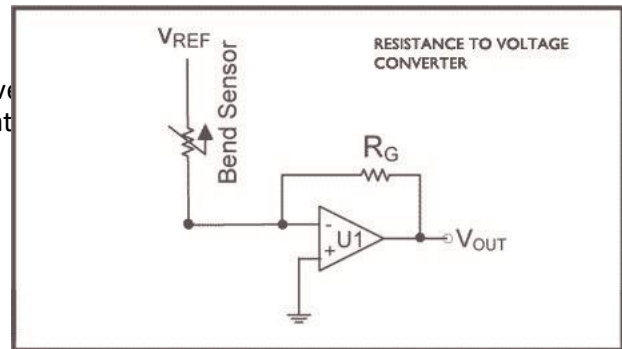
"Adjustable Buffer - a potentiometer can be added to the circuit to adjust the sensitivity range."



"Variable Deflection Threshold - an op amp is used and outputs either high or low depending on the voltage of the inverting input. In this way you can use the flex sensor as a switch without going through a microcontroller."



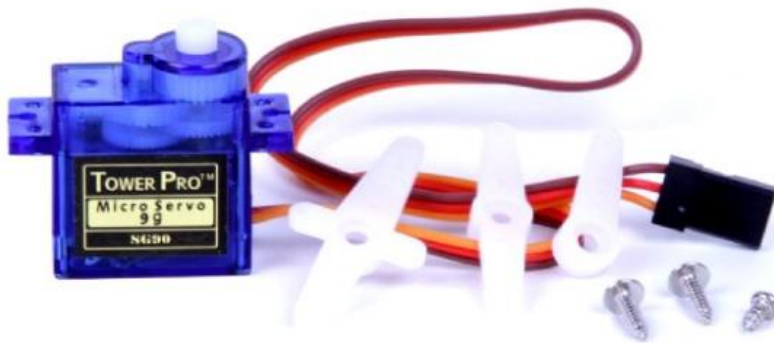
"Resistance to Voltage - use the sensor as the input of a resistance to voltage converter using a dual sided supply op-amp. A negative reference voltage will give a positive output. Should be used in situations when you want output at low degree of bending."



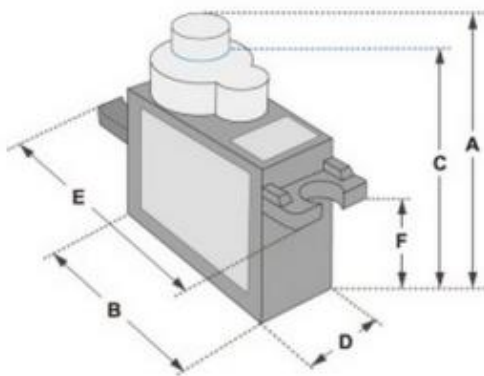
Servo moteur 5-6V

SERVO MOTOR SG90

DATA SHEET



Petit et léger avec une puissance de sortie élevée. Le servo peut pivoter d'environ 180 degrés (90 dans chaque direction) et fonctionne comme les types standard mais plus petit.



Dimensions & Specifications	
A (mm) :	32
B (mm) :	23
C (mm) :	28.5
D (mm) :	12
E (mm) :	32
F (mm) :	19.5
Speed (sec) :	0.1
Torque (kg-cm) :	2.5
Weight (g) :	14.7
Voltage :	4.8 - 6

Source : [SERVO MOTOR SG90 DATA SHEET \(ic.ac.uk\)](http://ic.ac.uk)

Autre lien : [SG90.pdf \(akizukidenshi.com\)](http://akizukidenshi.com)

Main robotisée :



Description :

- 5 servos utilisés pour conduire chaque doigt qui peut se déplacer de manière flexible.
- Tension pour les servos moteurs : 5-6V
- Matériel utilisé : Acrylique noir 5.0
- Poids : 289g
- Protocol de contrôle : 0,5ms – 2,5ms pour les servos de 0 à 180°. Il n'y a pas de blocage ni de points de coupure.
- Main déjà assemblée
- Hauteur max : 189,7mm

- [Bras mécanique assemblé pour bricolage, robot droit et stocke la main avec servos, pince à cinq doigts, pince à griffes - AliExpress](#)

