



1-axis Fingertip Pressure Sensor

Model: FTS1

Datasheet

The **FTS** line offers a range of pressure sensors from by Seed Robotics, providing high resolution and high integration with the Robot Hands produced by Seed Robotics.

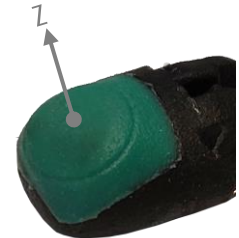
The FTS1 sensor measures the magnitude of force applied on the Z axis of the sensor as shown in the diagram, providing a wide range of measurement and high resolution.

These sensors are recommended for applications where high resolution contact force measurement is necessary. The high resolution and low cost make it possible to build highly sensitive hands for next generation research in A.I., industrial robots and medical applications.

An FTS3, 3 axis variant of this sensor is available for applications where measurement of forces in X, Y and Z axis are required.

Key Benefits:

- High resolution
- High measurement range
- High overload tolerance
- Mechanical shock resistant
- Cost efficient



Sensor Type	1 axis contact pressure sensor	
Dimensions of Preferential contact area	Circular, 12mm diameter	Force applied perpendicular to fingertip
Nominal Capacity	Standard Range: 0-10N	Extended Range: 10N – 30N
Maximum Resolution	Standard Range Resolution: 10mN	Extended Range Resolution: 100mN
Non linearity	Standard Range: 2.5%	Extended Range: 6%
Overload capability	Up to 50N	
Hysteresis (typical)	< 2%	
Sampling Frequency	50Hz	
Working temperature range	10°C – 35°C (operation is possible outside this range but non-linearly may increase)	
Interface	UART over RS422 (Full Duplex)	
	Sensors are grouped in one single Acquisition Board for each hand.	
	One interface of RS422 provides data for all sensors in one hand.	
Power requirement	1mA per sensor	Power is supplied by the hand. No specialized power supply required

The sensor is optimized for measuring in the 0-10N range, where it can provide its highest resolution and precision. For measurement above 10N and up to 30N, an extended range model is used, providing the additional measurement range with lower resolution.

Remarks:

- Seed Robotics is a registered trademark by Seed Cognitiva, Robotics Innovation, Lda
- The information shown is accurate at the time of writing and may be subject to change without notice.