

Robot-R-Us Singapore

Robot R Us

Force Sensitive Resistor - Small (0.16" Dot)

SG\$8.80



Force Sensing Resistors (FSRs) are robust, polymer thick film (PTF) devices that exhibit a decrease in resistance when increased pressure is applied to the surface of the sensor. This force sensitivity is optimized for use in human touch control of electronic devices such as automotive electronics, medical systems and industrial PCs. FSRs are not a load cell or strain gauge devices though they have many similar properties. They are more appropriate for qualitative rather than precision measurements. The harder the force, the lower the resistance. When no pressure is being applied to the FSR its resistance will be larger than 1M Ω . This FSR can sense applied force anywhere in the range of 100g-10kg. Two pins extend from the bottom of the sensor with 0.1" pitch making it bread board friendly. There is a peel-and-stick rubber backing on the other side of the sensing area to mount the FSR.

This is force sensitive resistor has a sensing area of 0.16" diameter. This FSR will vary its resistance depending on how much pressure is being applied to the sensing area.

SPECIFICATIONS

- Device thickness: 0.008" to 0.050" (0.20 to 1.25 mm)
- Force Sensitivity Range: 10 kg
- Pressure Sensitivity Range: 150 psi (10 kg/cm²)
- Part-to-Part Force Repeatability: +-15% to +- 25% of established nominal resistance
- Single Part Force Repeatability: +- 2% to +- 5% of established nominal resistance
- Force Resolution: Better than 0.5% full scale
- Break Force (Turn-on Force): 20 g to 100 g (0.7 oz to 3.5 oz)
- Stand-Off Resistance: > 1M
- Switch Characteristic: Essentially zero travel
- Device Rise Time: 1-2 msec (mechanical)
- Lifetime: > 10 million actuations
- Temperature Range: -30 C to +70 C
- Maximum Current: 1 mA/cm² of applied force
- Sensitivity to Noise/Vibration: Not significantly affected

- EMI / ESD: Passive device
- Tail Connector: Recommended 1 mm pitch connector(s):LIF AVX #04-6227-004, ZIF Molex #0522070485 or equivalent.

Features

- Force sensing optimized for use in human touch control applications.
- Maintenance-free control solution.
- Robust design that is tested to over 10 million actuations.

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Applications

- Game controllers
- Musical instruments
- Medical device controls
- Remote controls
- Navigation electronics

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Documents:

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[Datasheet](#) (400 FSR)

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[FSR Integration Guide](#)

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[Bildr Tutorial](#)

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[Vendor Information](#)

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