

FSR UX™

Force Sensing Resistors®



Global human machine interface (HMI) leader, Interlink Electronics—the originator of the Force Sensing Resistor* (FSR)—expands its signature line of sensors with the FSR UX.

The improved design of the FSR UX offers a greatly expanded dynamic sensing range that extends from 0.5N to 150N, providing enhanced precision and broadening the scope of the FSR UX's potential applications.

The FSR UX 400 series comprises a full range of models in various sizes, shapes, and configurations, all of which can be utilized for custom sensing solutions.

FEATURES

- Improved sensing range extends from 0.5N to 150N
- Ultrathin form factor
- Able to withstand extreme temperatures and conditions
- Tested to 10 million actuations
- Simple and easy to integrate
- Customizable to a wide range of applications
- Cost effective

APPLICATIONS

- Industrial
- Robotics
- Medical
- Automotive
- Computing
- IoT
- Wearable Technology

*Force Sensing Resistors are robust polymer thick film (PTF) devices that exhibit a decrease in resistance when increased force is applied to the surface of the sensor.

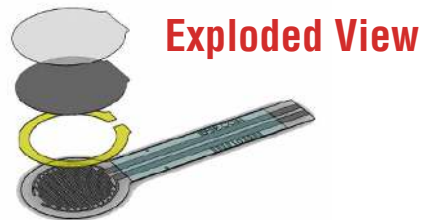
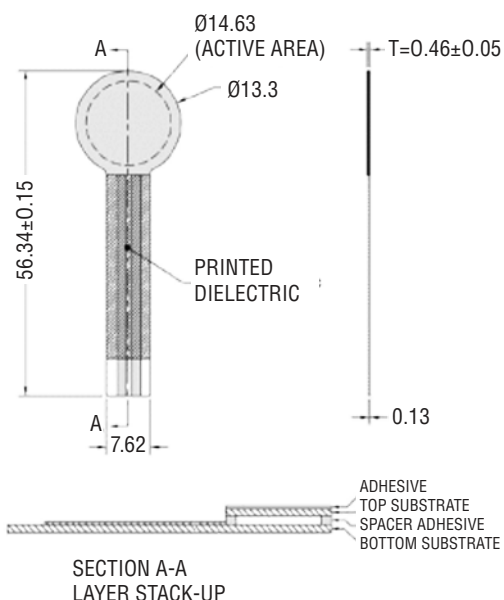


Device Characteristics

Sensor Resistance Output	Analog
Actuation Force	0.5N (min)
Force Sensing Range	0.5N – 150N
Force Repeatability Single Part	+/-2%
Force Repeatability Part to Part	+/-5% (Single Batch)
No-Load Resistance	>10 MΩ
Hysteresis	+5% (RF+ – RF-)/RF+
Long Term Drift @ 5kg, 10 days	< 4% log10(time)
Operating Temperature Performance	
Cold: -25°C after 1 hour	+1% resistance change
Hot: +85°C after 1 hour	+3% resistance change
Storage Temperature Performance	
Cold: -40°C after 120 hours	+1% resistance change
Hot: +85°C after 120 hours	+3% resistance change
Tap Durability	
Tested to 10 Million actuations @1kg, 4Hz	-10% resistance change
Thermal Shock @85°C to -40°C, 20 Cycles	+2% resistance change
Standing Load Durability	
2.5kg for 24 hours	-3% resistance change
UL	All materials UL grade 94 V-1 or better
RoHS	Compliant

Sensor Mechanical Data:

Active Area: Ø14.68mm
 Nominal Thickness: 0.46mm
 Switch Travel: 0.15mm



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NOTES

1. Specifications are derived from average measurements taken at 5,000 grams and are given as (one standard deviation/mean), unless otherwise noted. Measurement is dependent on actuation interface, mechanics, and measurement electronics.
2. The test was performed using FSR UX 402 design.
3. Additional information is available upon request.