FlexiForce®
Standard Force & Load Sensors Model # A201

Actual size of sensor

Sensing area

Physical Properties

Thickness	0.208 mm (0.008 in.)
Length	197 mm (7.75 in.)*
	optional trimmed lengths: 152 mm (6 in.), 102 mm (4 in.), 51 mm (2 in.)
Width	14 mm (0.55 in.)
Sensing Area	9.53 mm (0.375 in.) diameter
Connector	3-pin Male Square Pin (center pin is inactive)
Substrate	Polyester (ex: Mylar)
Pin Spacing	2.54 mm (0.1 in.)

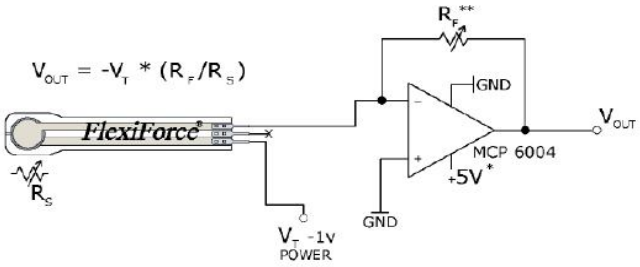
Length does not include pins, please add 31.75 mm (0.25 in.) for pin length to equal a total length of 203.2 mm (8 in.).

Standard Force Ranges (as tested with circuit shown below)

0 - 1 lb. (4.4 N)
0 - 25 lb. (110 N)
0 - 100 lb. (440 N)*

In order to measure forces above 100 lb (up to 1000 lb), apply a lower drive voltage (-0.5 V, -0.10 V, etc.) and reduce the resistance of the feedback resistor (1kΩ min.) Conversely, the sensitivity can be increased for measurement of lower forces by increasing the drive voltage or resistance of the feedback resistor.

Recommended Circuit



- * Supply Voltages should be constant
- ** Reference Resistance R_F is 1kΩ to 100kΩ
- Sensor Resistance R_S at no load is >5MΩ
- Max recommended current is 2.5mA

Typical Performance

Linearity (Error)	< ±3%
Repeatability	< ±2.5% of full scale
Hysteresis	< 4.5 % of full scale
Drift	< 5% per logarithmic time scale
Response Time	< 5 sec
Operating Temperature	15°F - 140°F (-9°C - 60°C)

Evaluation Conditions

Line drawn from 0 to 50% load
Conditioned sensor, 80% of full force applied
Conditioned sensor, 80% of full force applied
Constant load of 25 lb (111 N)
Impact load, output recorded on oscilloscope
Time required for the sensor to respond to an input force

**Force reading change per degree of temperature change = ±0.2%/°F (0.36%/°C)*
***For loads less than 10 lbs., the operating temperature can be increased to 165°F (74°C)*
High-temp model (HT201) available, functioning in environments up to 400°F (204°C)

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