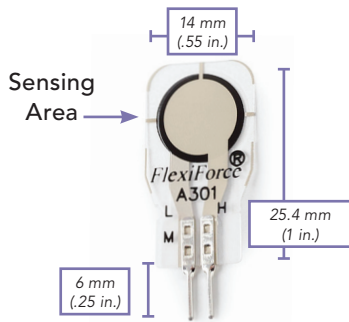


# FlexiForce™

## Standard Model A301

### Actual size of sensor



The A301 design is optimized for high volume manufacturing and is ideal for embedding into products and applications. This sensor is available in low and high quantities off-the-shelf, ideal for an easy proof of concept. The A301 can be used with our test & measurement, prototyping, and embedding electronics, including the OEM Development Kit, FlexiForce Quickstart Board, and the ELF™ System\*. You can also use your own electronics, or multimeter.



## Physical Properties

Thickness	0.203 mm (0.008 in.)
Length	25.4 mm (1 in.)**
Width	14 mm (0.55 in.)
Sensing Area	9.53 mm (0.375 in.) diameter
Connector	2-pin Male Square Pin
Substrate	Polyester
Pin Spacing	2.54 mm (0.1 in.)

## Benefits

- Small size is ideal for prototyping and integration
- Available with Enhanced Stability Series (ESS) pressure sensitive ink for high-temperature and high-humidity environments
- Thin and flexible
- Easy to use

✓ ROHS COMPLIANT

\* Sensor will require an adapter/extender to connect to the ELF System. Contact your Tekscan representative for assistance.

\*\*Length does not include pins. Please add approximately 6 mm (0.25 in.) for pin length for a total length of approximately 32 mm (1.25 in.).

## Standard Force Ranges as Tested with Circuit Shown

4.4 N (0 - 1 lb)

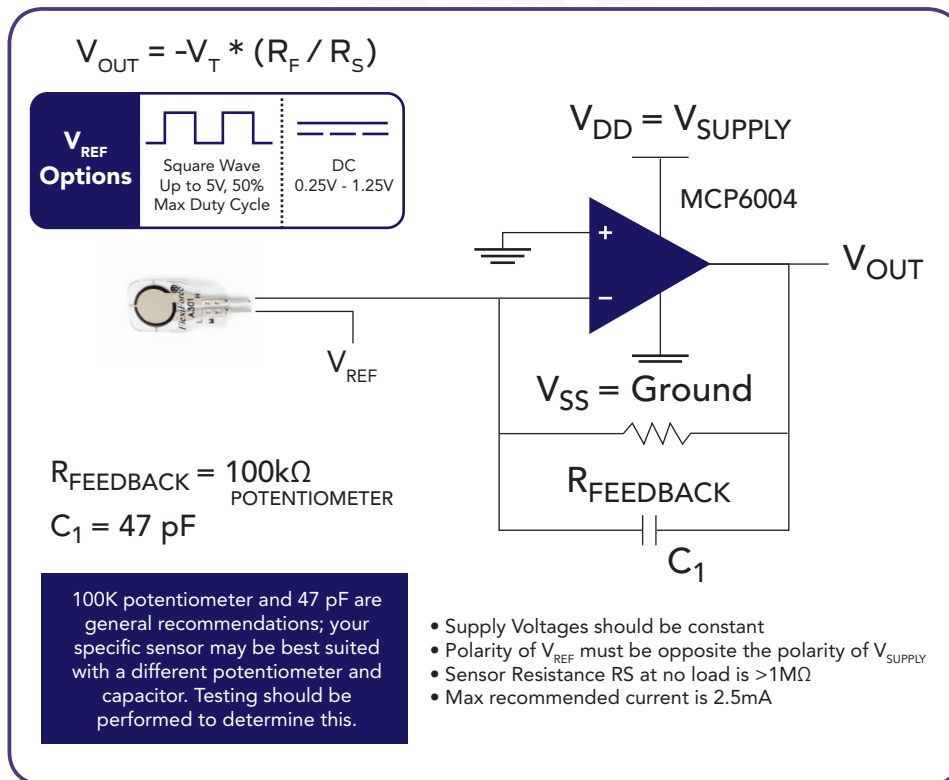
111 N (0 - 25 lb)

445 N (0 - 100 lb)†

†This sensor can measure up to 4,448 N (1,000 lb). In order to measure higher forces, apply a lower drive voltage (-0.5 V, -0.25 V, etc.) and reduce the resistance of the feedback resistor (1kΩ min.). To measure lower forces, apply a higher drive voltage and increase the resistance of the feedback resistor.

Sensor output is a function of many variables, including interface materials. Therefore, Tekscan recommends the user calibrate each sensor for the application.

### Recommended Circuit



	Typical Performance	Evaluation Conditions
Linearity (Error)	< ±3% of full scale	Line drawn from 0 to 50% load
Repeatability	< ±2.5%	Conditioned sensor, 80% of full force applied
Hysteresis	< 4.5% of full scale	Conditioned sensor, 80% of full force applied
Drift	< 5% per logarithmic time scale	Constant load of 111 N (25 lb)
Response Time	< 5μsec	Impact load, output recorded on oscilloscope
Operating Temperature	-40°C - 60°C (-40°F - 140°F)	Convection and conduction heat sources
Acceptance Criteria	±40% sensor-to-sensor variation	

\*All data above was collected utilizing an Op Amp Circuit. If your application cannot allow an Op Amp Circuit, visit [www.tekscan.com/flexiforce-integration-guides](http://www.tekscan.com/flexiforce-integration-guides), or contact a FlexiForce Applications Engineer.

Force reading change per degree of temperature change = 0.36%/°C (±0.2%/°F).



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