Tactilus®

FLEX SENSOR

Calibration Procedure

1 **Minimum bending angle:** Connect the sensor to the multi-meter, and position the sensor to the desired minimum bending angle (resting/flat state). Then measure the resistance.

2 **Maximum bending angle:** Bend the sensor to the maximum angle, as desired by your application. Then measure the resistance.

3 **Calculate bending angle:** Use the following equation to calculate the bending angle.

$$\text{Minimum bending angle} + \left\{ \left[\frac{\text{Maximum bending angle} - \text{Minimum bending angle}}{\text{Maximum resistance} - \text{Minimum resistance}} \right] \times \left[\text{Measured resistance} - \text{Minimum resistance} \right] \right\}$$

Example

Conditions

- Resistance measured at the minimum and maximum bending angle of the sensor is 100K Ohms and 200K Ohms respectively.
- The minimum and the maximum bending angles are 0° and 180° respectively.
- The sensor is bent to an angle (between minimum and maximum bending angles) and the multi-meter reading is 120K Ohms.

Solution

$$0° + \left\{ \left[\frac{180° - 0°}{200{,}000 - 100{,}000} \right] \times \left[120{,}000 - 100{,}000 \right] \right\}$$

Bending Angle = 36°

TACTILE PRESSURE EXPERTS
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