

### SS3 Strain Stamp

Low Cost Strain Gage Sensor with Integrated Accelerometer and Thermistor in Postage Stamp Size Package

#### GENERAL DESCRIPTION

The SS3 is a low cost flexible strain gage sensor with an integrated thermistor and MEMS accelerometer for dynamic or static structural monitoring applications. Each SS3 includes a temperature compensated full bridge electrical resistance strain sensor, one thermistor, and one single axis high-g accelerometer or one 2-axis low-g accelerometer. The SS3 can be bonded to the surface of the structure being monitored using cyanoacrylate adhesive (super glue) reducing the time and cost for field installation (no welding required). The SS3 package is small and flexible allowing for mounting on curved and flat surfaces. The integrated thermistor is located at the strain gage mounting surface for accurate temperature measurements. The SS3 with a high-g accelerometer provides high bandwidth dynamic measurements up to 30 kHz. The low-g accelerometer provides seismic or vibration measurements below 500 Hz, and high resolution tilt measurements.

All three SS3 models are well suited for connection to our GST5 modules for distributed monitoring or other high-speed data acquisition systems.

#### Technical Features

- ✓ Static and Dynamic
- ✓ Embedded Full Bridge Strain Sensor
- ✓ Flexible Package Mounts to Flat or Curved Surfaces
- ✓ Easy Field Installation - No Welding Required
- ✓ 2-Axis MEMS Low-g Accelerometer (0 to 500 Hz)
- ✓ Single Axis MEMS High-g Accelerometer (<30 kHz)



MODEL	DESCRIPTION
SS3A	Strain with Thermistor
SS3B	Strain, Thermistor, High-g Accelerometer
SS3C	Strain, Thermistor, Low-g Accelerometer

Parameter	Typical Values
Strain Gauge Range	3000 $\mu\epsilon$
Strain Gauge Resolution	<1 $\mu\epsilon$
High-G 1-Axis Accelerometer	+/- 50g, 250g, or 500g (0 to 30kHz)
High-G Accelerometer Linearity	+/- 0.2% Full Scale
Low-G 3-Axis Accelerometer	+/- 2g (0 to 500 Hz)
Low-G Accelerometer Linearity	+/- 0.2% Full Scale
Thermistor Sensor Accuracy	+/- 3 degrees Fahrenheit
Power Supply	5 Volts DC Regulated
Standard Cable Pigtail Length	12 inches
Stamp Size (L x W x H)	1.3 x 0.5 x 0.2 inches