

SS4 and SS4C Structural Health Monitoring Sensors for Steel and Concrete

High Accuracy Multipurpose Flexible Sensor Package with Fully Integrated Strain Gauge, 3-Axis Accelerometer and Temperature Sensor. Monitor Tilt, Vibrations, Temperature and Stresses All in One Small Package.

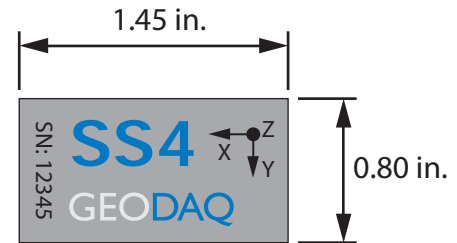
GENERAL DESCRIPTION

Monitor stresses and vibrations for steel and concrete structures using the low cost SS4 or SS4C multipurpose sensors. Useful for both dynamic and long-term static structural monitoring applications. Each SS4/SS4C includes an electrical resistance strain sensor, temperature sensor, and 3-axis accelerometer. The SS4 and SS4C can be bonded to the surface of the structure being monitored using two part epoxy or cyanoacrylate adhesive reducing the time and cost for field installation (no welding required). The SS4 package is small and flexible allowing for mounting on curved and flat steel or aluminum surfaces. The SS4C package is 5-inches long and mounts to reinforced concrete surfaces. All sensors fully conditioned with 0 to 3.3V single-ended outputs, so very easy to integrate into data acquisition systems.

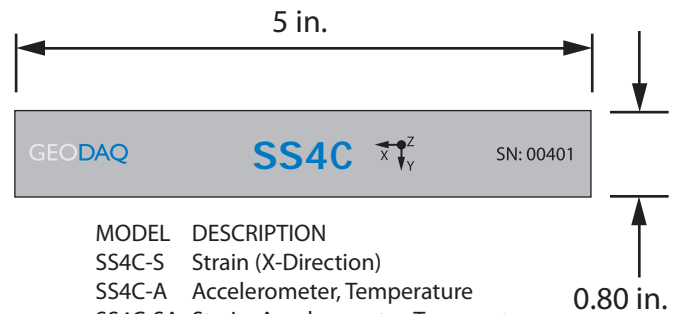


Technical Features

- ✓ Tilt, Stress, Temperature and Vibration
- ✓ Embedded Strain Sensor
- ✓ High Resolution 3-Axis MEMS Accelerometer
- ✓ Temperature Sensor
- ✓ Static and Dynamic



MODEL	DESCRIPTION
SS4-S	Strain (X-Direction)
SS4-A	Accelerometer, Temperature
SS4-SA	Strain, Accelerometer, Temperature



MODEL	DESCRIPTION
SS4C-S	Strain (X-Direction)
SS4C-A	Accelerometer, Temperature
SS4C-SA	Strain, Accelerometer, Temperature

Parameter	Typical Values
Strain Gauge Range	3000 $\mu\epsilon$
Strain Gauge Resolution	1 $\mu\epsilon$
Accelerometer Range	+/- 2g or +/-8g
Accelerometer Linearity	+/- 0.1% Full Scale
Accelerometer Bandwidth	1400 Hz
Accelerometer Resolution	0.2 mg rms (0 to 50 Hz)
Temperature Sensor Accuracy	+/- 1.5 degrees Fahrenheit
Power Supply	12 Volts DC Unregulated
Standard Cable Pigtail Length	12 inches
Standard Cable Type	8 Pin IP68 Circular