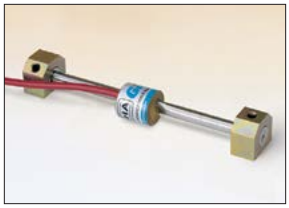
Model 3900 Embedment Strain Gauge

The Model 3900 Embedment Strain Gauge is designed for the measurement of dynamic strains in concrete structures, earth fills and soils. It comprises a full bridge strain gauged proving ring coupled, between two flanges, with a spring and shaft. When the flanges move relative to one another, the tension in the spring changes and hence the strain in the proving ring. A PVC tube serves as a protective housing and holds the gauge at the desired initial tension.

Specifications	
Range	5000 με
Resolution	0.125 mV/V nominal
Accuracy[1]	±0.25% F.S.
Nonlinearity	< 0.5% F.S.
Temperature Range[2]	–20 °C to +80 °C
Active Gauge Length[2]	203 mm

[1]Transducer accuracy established under laboratory conditions. | [2]Other ranges/lengths available on request.

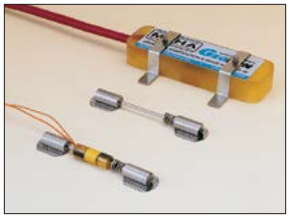


Model 4000 Arc Weldable Strain Gauge

The Model 4000 Strain Gauge is designed primarily for arc welding to steel structures such as tunnel linings, excavation bracing, piles and bridges. The gauge has a 150 mm gauge length (longer or shorter versions are also available) a 3000 με range and a 1 με sensitivity. The gauge can be adapted for bonding to concrete or for bolting to steel surfaces by modification of the end blocks.

Specifications	
Range[1]	3000 με
Resolution	1.0 με
Accuracy[2]	±0.5% F.S.
Nonlinearity	< 0.5% F.S.
Temperature Range[1]	–20 °C to +80 °C
Active Gauge Length[1]	150 mm

[1]Other ranges/lengths available on request. | [2]Transducer accuracy established under laboratory conditions. Accuracy of ±0.1% F.S. available with optional, individual calibration.



Model 4100 〉 4150 〉 4151 Miniature Strain Gauges

The Model 4100/4150 Strain Gauge has a 51 mm gauge length (3000 με range, 1 με sensitivity) and is designed to measure strains in steel structures (4100) and on reinforcement bars (4150) where space may be limited. The gauge is installed quickly and easily by means of a capacitive discharge spot welder or, for short-term use, with special epoxy adhesives. (The 4151 is designed with pins for grouting).

Specifications	4100	4150	4151
Range[1]	3000 με	3000 με	3000 με
Resolution	0.4 με	0.4 με	0.4 με
Accuracy[2]	±0.5% F.S.	±0.5% F.S.	±0.5% F.S.
Nonlinearity	< 0.5% F.S.	< 0.5% F.S.	< 0.5% F.S.
Temperature Range[3]	–20 °C to +80 °C	–20 °C to +80 °C	–20 °C to +80 °C
Active Gauge Length	51 mm	51 mm	51 mm

[1]Also available with 5,000 με range (1.0 με resolution) or with 10,000 με range (2.0 με resolution). (Range is dependent on the readout). | [2]Transducer accuracy established under laboratory conditions. Accuracy of ±0.1% F.S. available with optional, individual calibration. | [3]Other ranges available on request.

Model 4200 〉 4202 〉 4210 Concrete Embedment Strain Gauges

These Strain Gauges are designed for direct embedment in concrete. The 4200 (standard model) has a 153 mm gauge length and 1 με sensitivity and is commonly used for strain measurements in foundations, piles, bridges, dams, tunnel linings, etc. The 4210 has a 250 mm gauge length making it particularly suitable for use in large aggregate concrete. The 4202 is designed for laboratory use and/or where there are space limitations. Low modulus versions, for measuring concrete curing strains, are also available (please contact GEOKON for details).

Specifications	4200	4202	4210
Range[1]	3000 με	3000 με	3000 με
Resolution	1.0 με	0.4 με	0.4 με
Accuracy[2]	±0.5% F.S.	±0.5% F.S.	±0.5% F.S.
Nonlinearity	< 0.5% F.S.	< 0.5% F.S.	< 0.5% F.S.
Temperature Range[1]	–20 °C to +80 °C	–20 °C to +80 °C	–20 °C to +80 °C
Active Gauge Length	153 mm	51 mm	250 mm[1]

[1]Other ranges/lengths available on request. | [2]Transducer accuracy established under laboratory conditions. Accuracy of ±0.1% F.S. available with optional, individual calibration.

Model 4200HT 〉 4200HT-T High Temperature Embedment Strain Gauges

The Model 4200HT and 4200HT-T (pictured at left) High Temperature Embedment Strain Gauges are similar to the standard Model 4200. However, the Model 4200HT is designed for short-term use at temperatures up to 200 °C and the Model 4200HT-T is designed for long-term use at temperatures up to 220 °C. They are particularly useful for measurements in autoclaved spun concrete piles.

Specifications	4200HT	4200HT-T
Range[1]	3000 με	3000 με
Resolution	1.0 με	1.0 με
Accuracy[2]	±0.5% F.S.[3]	±0.5% F.S.
Nonlinearity	< 0.5% F.S.	< 0.5% F.S.
Temperature Range	–20 °C to +200 °C	–20 °C to +220 °C
Active Gauge Length	153 mm	148 mm

[1]Other ranges available on request. | [2]Transducer accuracy established under laboratory conditions. [3]Accuracy of ±0.1% F.S. available with optional, individual calibration.

Model 4911 〉 4911A Rebar Strainmeters

The Model 4911 Rebar Strainmeter is designed for measuring strains in foundations, slurry walls, precast piles, caissons, bridge abutments, tunnel liners, etc. The standard Model 4911 (#4 rebar), known as the "Sister Bar", is installed alongside structural rebar. Larger models (4911A) are available for welding directly into structural rebar. Where short-term dynamic measurements are to be made, Model 3911/3911A Rebar Strainmeters, which utilize bonded resistance strain gauges, can be substituted, or added.

Specifications	4911	4911A
Range	3000 με	3000 με
Resolution	0.4 με	0.4 με
Accuracy[1]	±0.25% F.S.	±0.25% F.S.
Nonlinearity	< 0.5% F.S.	< 0.5% F.S.
Temperature Range[2]	–20 °C to +80 °C	–20 °C to +80 °C
Rebar Sizes	4 *(Sister Bar)*	6, 7, 8, 9, 10, 11, 14
Active Gauge Length	914 mm	1105 mm

[1]Transducer accuracy established under laboratory conditions. | [2]Other ranges available on request.