



Applications

The Vibrating Wire Rebar Strain Gauges are commonly used for measuring strains in concrete piles, mass concrete structures, diaphragm, slurry walls, caissons and for casting in place concrete piles.

Description

The Vibrating Wire Rebar and Sisterbar Strain Gauge is fixed axially inside a short, central length of round steel bar. This central section is de-bonded from the surrounding concrete by means of a plastic coating, and is extended by welding a length of rebar to each end.

Rebar Strain Gauges are welded into the reinforcing cage and must be matched to the size and grade of the rebar forming the cage.

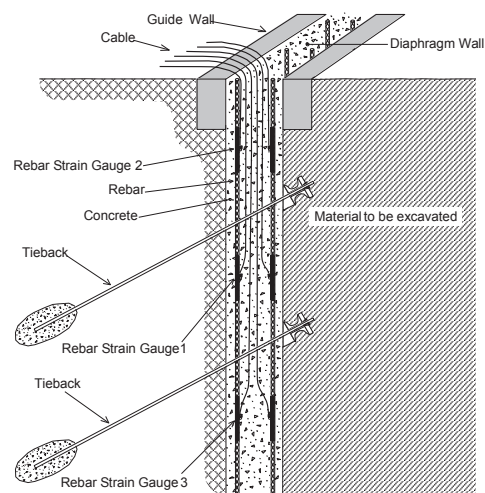
Sister Bars are installed alongside existing lengths of rebar within

the cage. Both types of strain gauge are extremely robust, reliable and waterproof.

The gauges can be read individually or remotely as part of a data collection system. A factory fitted, four core screened cable connects the coil to the readout unit. A thermistor to measure temperature changes can be included in the Rebar and Sisterbar Strain Gauge sensors.

Key Features

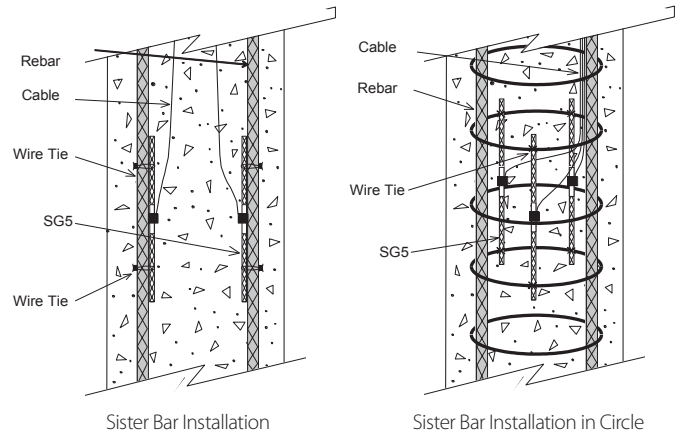
- ◆ Accurate, long-term stability
- ◆ Robust design and reliable
- ◆ Available for most rebar sizes
- ◆ Fit for manual or remote reading
- ◆ Range is adjustable to suit compression or tension
- ◆ Integral thermistor



Comprehensive information about this product and our full range is available at www.cgeo-instruments.com
If you would prefer to speak with someone directly, please call +852 2206 0092 or email info@cgeo-instruments.com

Main Specifications

Model	CGEO-SG5 Sisterbar	CGEO-SG5 Rebar	
Range	1500 $\mu\epsilon$	2000 $\mu\epsilon$	3000 $\mu\epsilon$
Diameter	12mm	14, 16, 18, 20, 22, 25, 28, 32, 36, 40mm	14, 16, 18, 20, 22, 25, 28, 32, 36, 40mm
Resolution	0.4 $\mu\epsilon$		
Accuracy	0.25% F.S.		
Temperature Range	-20 to + 80 °C		
Waterproof	Customized 1, 2, 3MPa		



Operation

Rebar Strainmeters and "Sister Bars" are designed to be embedded in concrete for the purpose of measuring concrete strains due to imposed loads. It consists of a sealed element containing the wire, which is de-bonded from the concrete by a plastic coating. This is attached to two lengths of rebar, one at either end, which in turn are used to transfer strain from the structure to be monitored to the gauge.

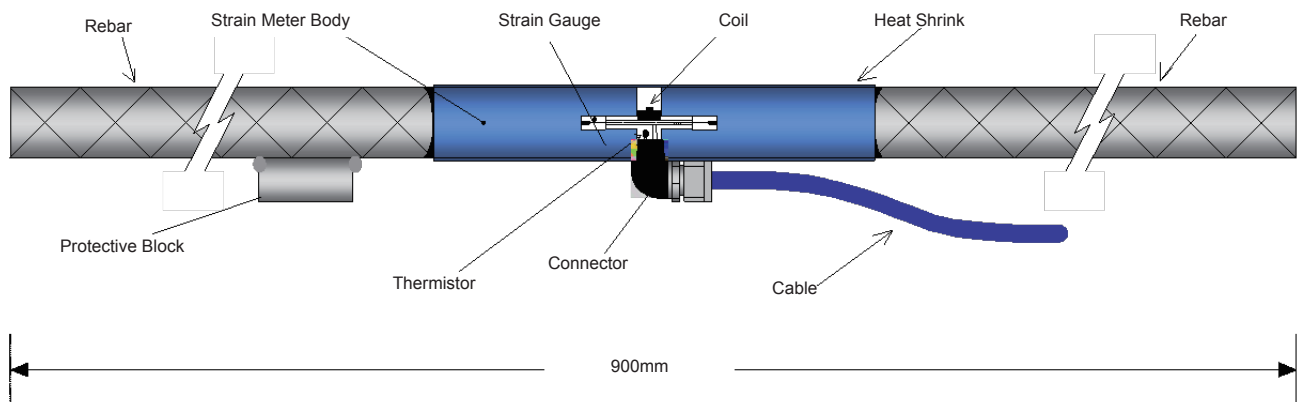
The Rebar Strain Gauge is installed by welding the gauge into the rebar cage at a location within the structure suitable to accurately pass loads from the cured concrete into the gauge. Sisterbars (of 12mm diameter) are installed alongside existing lengths of rebar within the cage.

Rebar Strain Gauges and Sisterbars are usually installed in pairs within the structure on either side of the neutral axis, so that bending movements can be separated from axial loads.



The gauges can be read individually or remotely/automatically as part of a data collection system.

The integrated thermistor allows for temperature data to be recorded, aiding the evaluation of thermally induced strains.



International Manufacturer of Geotechnical & Structural Instruments

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