

# BSIL-ST4-150/ST4-250/ ST4X Vibrating Wire Embedment Strain Gauge



## Applications

The Vibrating Wire Embedment Strain Gauge is designed to measure internal strains in mass concrete placed in foundations, bridges, dams, tunnel linings or any concrete structure.

## Description

The gauge is composed of two end stainless steel pads joined by a tube that protects a length of steel wire. The steel wire is sealed in the tube by a set of O-rings on each end pad. Both end pads have a flat circular flange to allow transfer of concrete deformation to the wire.

The changes in strain are monitored by the coil assembly mounted on the center of the gauge. It may be pre-attached to rebar or by attachment to a 2, 3, 4 or more directional rosette, thereby measuring strain in several directions.

The gauges can also read temperature if required.

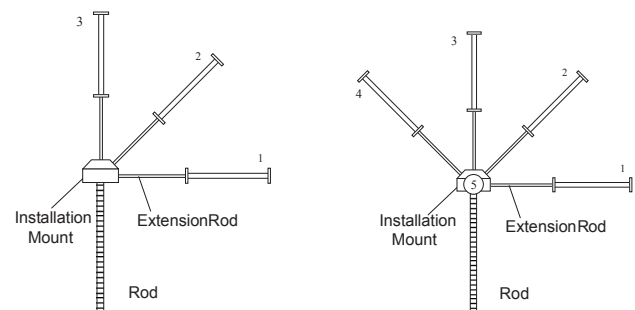
The Model BSIL-ST4-150/ST4X has a 150mm Gauge length and commonly for strain measurement of foundations, piles, bridges and tunnel linings.

The Model BSIL-ST4X is designed as a one-piece structure for measuring strains in steel members and incorporate the excellent waterproof performance (can be customized) and techniques to make these gauges suitable for use in hostile conditions.

And the Model BSIL-ST4-250 has a 250 mm Gauge length and suitable for massive concrete's strain measurement which can be embed into the Roller Compacted Concrete (RCC).

## Key Features

- ♦ Accurate, long-term stability
- ♦ Robust design and reliable
- ♦ O-ring seals provide waterproofing
- ♦ Fit for manual or remote reading
- ♦ Range is adjustable to suit compression or tension
- ♦ Integral thermistor



Model BSIL-ST4 Axial Mounting



Comprehensive information about this product and our full range is available at [www.bsil.com.cn](http://www.bsil.com.cn)

If you would prefer to speak with someone directly, please call +86-10-63780922 or email [info@bsil.com.cn](mailto:info@bsil.com.cn)

## Main Specifications

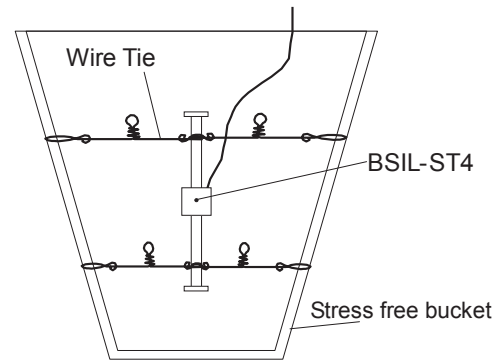
Model	BSIL-ST4-150	BSIL-ST4-250	BSIL-ST4X
Range	3000 $\mu\epsilon$	2500 $\mu\epsilon$	3000 $\mu\epsilon$
Resolution	1 $\mu\epsilon$	0.5 $\mu\epsilon$	1 $\mu\epsilon$
Accuracy	0.1% F.S.		
Temperature Range	-20 to +80 °C		
Waterproof	Customized	Customized	Customized (Standard 0.5MPa)
Gauge Length	150mm	250mm	150mm

## Operation

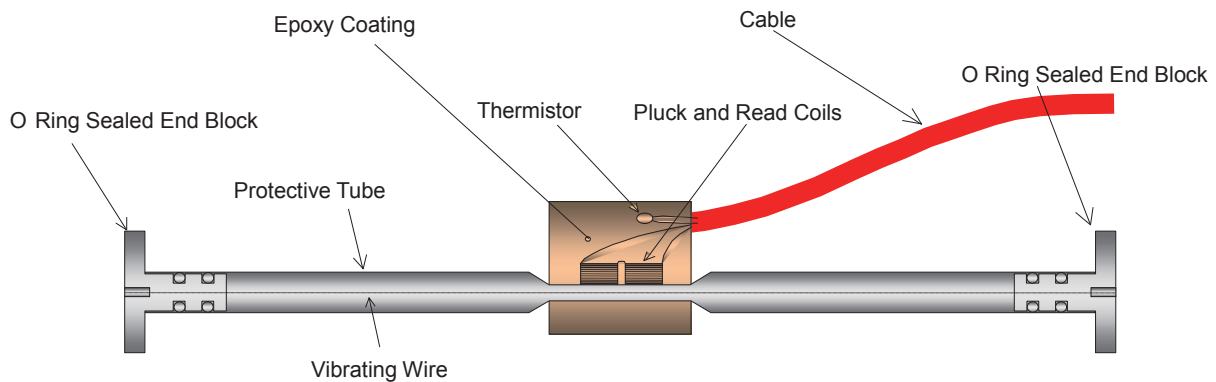
The Model BSIL-ST4 Embedment Strain Gauge is installed prior to concrete pour and protected during the pour to prevent damage.

The gauge may also be pre-cast into a concrete briquette for subsequent casting into the structure, or embedded into holes drilled into an existing structure. The pickup coil is fitted over

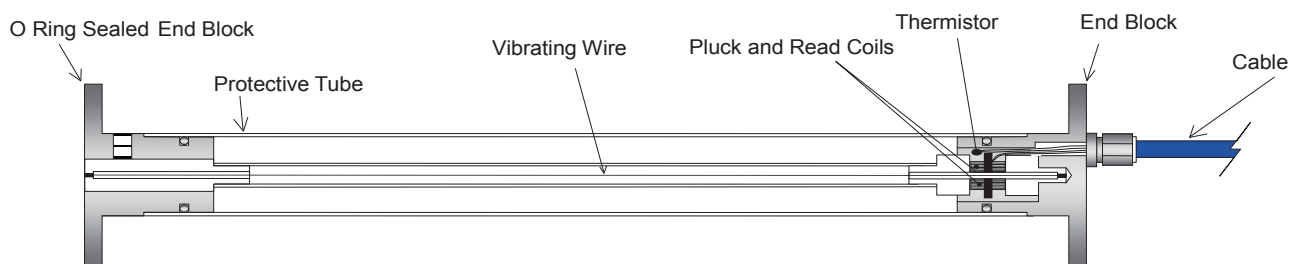
a flattened section in the centre of the gauge tube and held in place using a securing clamp; this can be installed on site immediately prior to installation. The sensor is then installed by placing the gauge at a location in the structure suitable for accurately passing microdeformation from the surrounding cured concrete to the gauge. Cables from the gauges are run to a readout, a terminal box, or a data logging point.



Model BSIL-ST4 Axial Mounting



Model BSIL-ST4 Vibrating Wire Embedment Strain Gauge



Model BSIL-ST4-250 Vibrating Wire Embedment Strain Gauge



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