

# VIBRATING WIRE STRAIN GAUGES

Vibrating Wires strain gauges are suitable for measuring strain in steel members and concrete structures to determine the strain of:

- *TUNNEL LININGS*
- *DIAPHRAGM WALLS*
- *PILES AND FOUNDATIONS SLABS*
- *BEAMS AND CONCRETE SLABS*
- *BRIDGES AND DAMS*



Strain gauges are based on vibrating wire principle: a length of steel wire is tensioned between two mounting blocks that are welded to the steel surface being studied. Deformations of the surface will cause the two mounting blocks to move relatively to one another, thus altering the tension in the steel wire. The variation of the steel wire tension causes a variation in its resonant frequency of vibration.

Vibrating wire strain gauges are suitable for direct burial in concrete structures (**embedment type**) or arc welded to the steel structures (**weldable type**). Thermistor is incorporated in coil housing for thermal effects to be automatically compensated. Strain gauges can be read with handheld readout unit or connected to a datalogger.

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## APPLICATIONS

- Monitoring strain in steel arch tunnel supports or tunnel linings
- Monitoring beams on retaining walls
- Monitoring piles during pile testing
- Monitoring strain in anchors

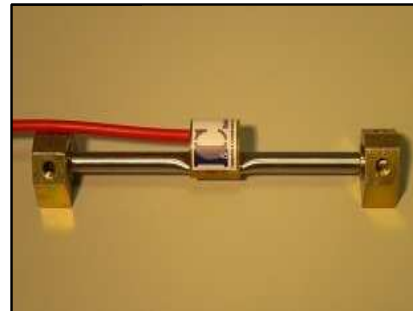


## TECHNICAL SPECIFICATIONS

### VW EMBEDMENT STRAIN GAUGE



### VW ARC WELDABLE STRAIN GAUGE



**Product code** *SG4200VW0000*

**Product code** *SG4000VW0000*

<i>Active gauge length</i>	<i>155 mm</i>	<i>165 mm</i>
<i>Range</i>	<i>3000 <math>\mu</math>-strain</i>	<i>3000 <math>\mu</math>-strain</i>
<i>Coil resistance</i>	<i>150 Ohm</i>	<i>150 Ohm</i>
<i>Zero frequency</i>	<i>800 Hz</i>	<i>800 Hz</i>
<i>Temperature range</i>	<i>-20°C to +80 °C</i>	<i>-20°C to +80 °C</i>
<i>Thermistor</i>	<i>Integral</i>	<i>Integral</i>
<i>Resolution</i>	<i>1 <math>\mu</math>-strain</i>	<i>1 <math>\mu</math>-strain</i>
<i>Nonlinearity</i>	<i>&lt; 0.5 % FS</i>	<i>&lt; 0.5 % FS</i>
<i>Accuracy</i>	<i>0.5 % FS</i>	<i>0.5 % FS</i>
<i>Gauge factor</i>	<i>3.304 x 10<sup>-3</sup> [<math>\mu</math>-strain/digit]</i>	<i>4.062 x 10<sup>-3</sup> [<math>\mu</math>-strain/digit]</i>

*The strain gauges can be supply with cable length required*

## ACCESSORIES



**SG4000BK2000**

*Arc weldable strain gauges pair of mounting blocks (replacement)*



**SG4000DIMA00**

*Stainless steel jig*

**YEC202VW000**

*2 twisted pair cable 0.25 mm<sup>2</sup>*



**INSTRUMENTED PILE**

*Product specifications described herein are subject to change without notification.*

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