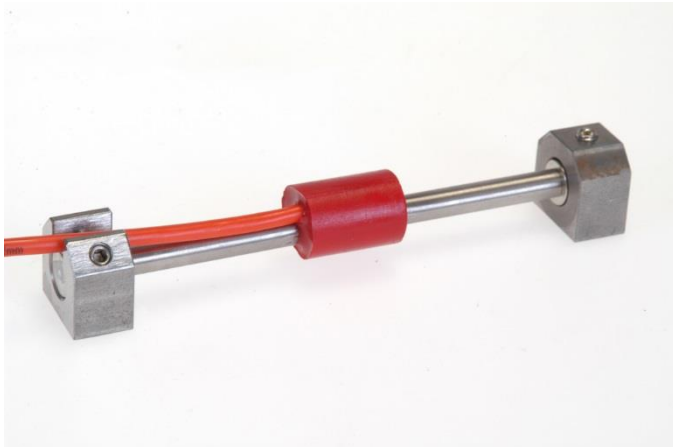


VW Strain Gauge - Surface Mount

Strain gauges offer the ability to measure the effect of loads, settlement or other changes in a structure. They record strain, which is a dimensionless measure of deformation. Stress is related to strain by a material's properties and is predictable within a certain range of applied strain.

Strain gauges are useful for determining the effects of applied loads to a structure, such as the loading of post tension cables or removal of temporary supports. Piles of driven, cast or pre cast construction can also benefit from strain measurement as with sufficient strain gauges information such as the depth at which the load is transferred to the soil and the percentage of the load born as end bearing can be determined.

Geosense® VWS-2000 series vibrating wire surface strain mount gauges are designed for the long term monitoring of steel or concrete structures. Gauges are attached to steel structures by arc welding or using alternative end blocks, bonded or grouted into concrete.



Anchor Types

A range of interchangeable anchor blocks allow the VWS-2000 to be used for many tasks.



Arc Weld



Grout



Bolt/bond

Features

- Reliable long term performance
- Rugged, suitable for demanding environments
- Range of mounting blocks
- Insensitive to long cable lengths.
- High accuracy
- Integral Thermistor for temperature correction
- Suitable for remote reading and data logging

Specifications

Measurement of stress and strain deformation in:

- Steel struts
- Excavation support systems
- Driven and bored piles
- Tunnel linings
- Bridges & arches
- On-board truck weighing

Technical Specifications

Model	VW S-2000	VW S-2012
Gauge Length	150 mm	89 mm
Overall Length	156 mm	95 mm
Resolution	1 $\mu\epsilon$	1 $\mu\epsilon$
Strain Range	3000 $\mu\epsilon$	3000 $\mu\epsilon$
Accuracy	± 0.1 to $\pm 0.5\%$ FS	± 0.1 to $\pm 0.5\%$ FS
Non Linearity	<0.5% FS	<0.5% FS
Temperature	-20°C to +80°C	-20°C to +80°C
Frequency Range	850-1550	850-1550

VW Strain Gauge - Surface Mount

Specifications

- VWS-2000 vibrating wire strain gauges may be read by the VW-2106 or any vibrating wire readout device and may be readily connected with data loggers with vibrating wire interface modules.
- Vibrating wire strain gauges output a frequency signal and are therefore insensitive to resistance changes in connecting cables caused by contact resistance or leakage to ground.
- Cable may be readily and simply extended on site without special precautions. Gauges may be read up to 1000 metres away from their installed location without change in calibration.

Accessories and Customisation

To order VWS-2000 series strain gauges the following information should be specified:

- Gauge length
- Anchor type
- Cable length
- The accessories below will speed installation and data collection:
- Readout or datalogger
- Setting tool
- Spacing jig
- Dummy gauge

Readout Systems

Custom datalogger systems for any number of sensors in any configuration are also available and can be designed on request. Please see our other data sheets for details of readout equipment, terminal boxes and data loggers specific to vibrating wire devices.

About PCTE

PCTE have over 30 years' experience in the measurement and testing of construction materials. PCTE can provide more than just the equipment, they can provide expert training. PCTE have a service centre in Sydney in which they can provide calibration, repairs and warranty repairs.

Other Equipment

PCTE supply three main ranges: NDT, Lab and Geotech Instrumentation.

NDT includes: Rebound Hammers, Covermeters, Ultrasonics, GPR, Corrosion Testing, Coating Testing and Foundation Testing

Lab includes equipment for: Concrete, Cement, Aggregate, Soil, Asphalt and Metal

Geotech Instrumentation includes: Strain Gauges, Piezometers, Inclometers, Extensometers, Tiltmeters, Load Cells and Dataloggers