

vw temperature sensor

VWTS 6000



The **VWTS 6000** vibrating wire temperature sensor is used primarily for the measurement of internal temperature in concrete structures, soil, rock or water.

The sensor operates on the principle that when plucked, a tensioned wire vibrates at its resonant frequency. The square of this frequency is proportional to the strain in the wire.

Around the wire is a magnetic coil which when pulsed by a vibrating wire readout or data logger interface plucks the wire and measures the resultant resonant frequency of vibration.

The sensor consists of a tensioned wire clamped inside a stainless steel cylinder. Changes in temperature cause the stainless steel body to expand and contract at a different rate to that of the vibrating wire thus altering the resonant frequency.

The thermal response of the **VWTS 6000** is relatively slow and is therefore not suitable for measuring rapidly changing temperatures.

The **VWTS 6000** vibrating wire temperature sensor is fitted with an internal Thermistor and gas-discharge tube for lightning protection.

Electromagnetic compatibility according to EN 61326-1 and EN 61326-A1 directives for EMC emission and immunity.



Applications

Stress and /or strain determination in or on:

- Dams
- Concrete structures
- Geothermal wells
- Soil & rock temperatures
- Water temperature
- Landfills

Features

- Accurate
- High resolution
- Long term stability
- Insensitive to long cable lengths.
- accuracy
- Integral Thermistor
- Integral lightning protection
- Suitable for remote reading and data logging



VWTS-6000

Specifications

Temperature range*	100°C
Operating temperature range	-20°C to +80°C*
Non linearity	<0.5% FS
Operating frequency	2000 to 3500 Hz
Cable	4 x 22 AWG (shielded)
Weight	210 g
Dimension	20 diam x 140mm

*Other ranges available on request

The **VWTS-6000** vibrating wire temperature sensor may be read by the VW2106 or any vibrating wire readout device and may be readily data logged using Campbell Scientific or any other data loggers with vibrating wire interface modules.

Vibrating wire temperature sensors 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 3000 metres away from their installed location without change in calibration.

Ordering Information

Cable length
Terminal box - number of terminals
Special mounting brackets

Geotechnical Centre
Rougham Industrial Estate
Rougham, Bury St Edmunds
Suffolk IP30 9ND
England

