

info

Vibrating wire crack meters are used to measure movement across surface cracks and joints in concrete, rock, soil and between structures. They consist of a sensor outer body tube and an inner free-sliding rod which is connected at the internal end to a vibrating wire sensor by a spring. At the sensor end of the outer body and the external end of the rod anchors are attached which can be fixed either side of a crack or structure to be monitored.

The gauge operates on the principle that a tensioned wire, when plucked, 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 readout or data logger interface plucks the wire and measures the resultant resonant frequency of vibration. A change in distance between the anchors caused by the crack opening or closing causes the inner free-sliding rod to move within the outer body which changes the tension on the spring and the vibrating wire thus altering the resonant frequency of the wire. Vibrating Wire crack meters are installed by grouting, bolting, bonding or fixing expandable anchors to the structure to be monitored. The anchors incorporate ball joints where they are fixed to the gauge to accommodate any differential cross-axis movement and prevents the rod from binding within the outer casing.

Applications

- Concrete structures
- Stone & brick buildings
- Dams
- Tunnels
- Construction joints
- Pipelines
- Rock formations



Specification

- Ranges 5, 12.5, 25, 50, 100, 150, 200, 300mm
- Resolution. <0.025% FS
- Accuracy ± 0.1 to $\pm 0.5\%$ FS
- Non-linearity <0.5% FS
- Frequency 2200 - 3500 Hz
- Body material Stainless steel
- Inner rod Stainless steel O-ring Viton
- Anchor material Mild steel, BZP
- Anchor types Grout, bond, bolt, expandable
- Waterproof rating 18 bar
- Dimensions 80(l) x 80 (w) x 61(h)mm

Getec UK

34 South Molton Street
London
W1K 5RG

T: 02074095201

E: enquiries@getec-uk.com

W: www.getec-uk.com