

vw crack meter



VWCM-4000 crack meters are used to measure movement across surface cracks and joints in concrete, rock, soil and 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 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.

VWCM-4000 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 inner rod from binding within the outer casing.



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

Applications

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

Features

- Simple to install and read
- High resolution & accuracy
- Internal thermistor
- Insensitive to long cable runs
- Datalogger compatible
- Ranges from 5 to 100mm
- Waterproof up to 18 bar



Groutable anchors



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Specifications

| | |
|---------------|---------------------------------------|
| Ranges | 5, 12.5, 25, 50, 100, 150, 200, 300mm |
| Resolution | <0.025% FS |
| Accuracy | ±0.1 to ±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 |



Ordering Information

When ordering please specify:

Range

Anchor type

Readout type

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



Specifications may be changed without prior notice