

## VW crackmeters



### Description

**VW Crackmeters** are composed of VW displacement sensor and anchor part for fixing. It installed by two grouting anchors (with ball joint) on opposite sides of the crack and the sensor is mounted across the anchors.

A change in crack across two anchors changes the tension corresponding to change in its frequency signal when the vibrating wire excited by a plucking coils.

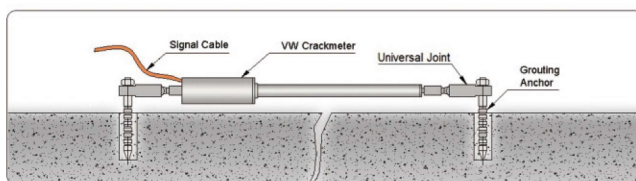
The VW readout unit processes the signal and displays a reading. The VW crackmeters are equipped with a temperature device for compensating for temperature variations.

The VW displacement sensor is available four ranges; 5mm (model **1322**), 25mm (model **1325**), 50mm (model **1330**), 100mm (model **1340**).

In installation of model 1322 and 1325, two mounting blocks is mounted across crack, using the epoxy glue.

### Features

- Stability and reliability in extreme environment
- Not affected by cable length and resistance change, reproducibility are very excellence
- Easy to use and installation
- Possible to automatic measurement



[Installation of VW crackmeter]

### Specification

Model	1322	1325	1330	1340
Sensor element	Vibrating wire sensor			
Range	5mm	25mm	50mm	100mm
Resolution	0.025% FSR (0.01mm)		0.025% FSR (0.02mm)	
Accuracy	±0.1% FSR			
Nonlinearity	±0.5% FSR			
Operating temperature	-40~80°C			
Built-in temperature device	Thermistor (3k $\Omega$ )			
Temperature device range	-40~105°C			
Temperature device accuracy	±0.5°C			
Waterproof	50m H <sub>2</sub> O			
Materials	Stainless steel, high grade epoxy potting			
Weight	0.2kg		0.58kg	0.6kg
Signal cable	Ø4.5mm, 0.24mm <sup>2</sup> × 4C shielded PVC cable			

### Applications

VW crackmeters are useful for measuring displacement at joints, and cracks in concrete structures or rock. Model 1322 is useful for measuring small displacement such as nuclear power plant and tiny crack at ultra strength structures. Model 1325 is designed to small size for narrowish place.

- Measurement of displacement at joints and cracks in structures that may be affected by nearby excavation and construction activities.
- Measurement of crack in structures that have experienced seismic activity.

### Ordering information

- Application field
- Cable length
- Keeping VW readout unit
- Frequent vibration or not in installation field
- It is possible to order manufacture up to 300mm range.

### Ancillary equipments

- Universal terminal box (model 7012/7024)

### The readout

It is connected to the system such as the VW readout units, data loggers to be data logging and data acquisition system to monitor readings. It is compatible with other company's readout unit.

- ACE-800 (VW readout)
- ACE-1000 (VW data recorder)
- ACE-1100 series (VW mini logger)
- ADL-16V (VW data logger)
- ADL-200A (Smart logger)
- VL Module (Smart LoRa system)