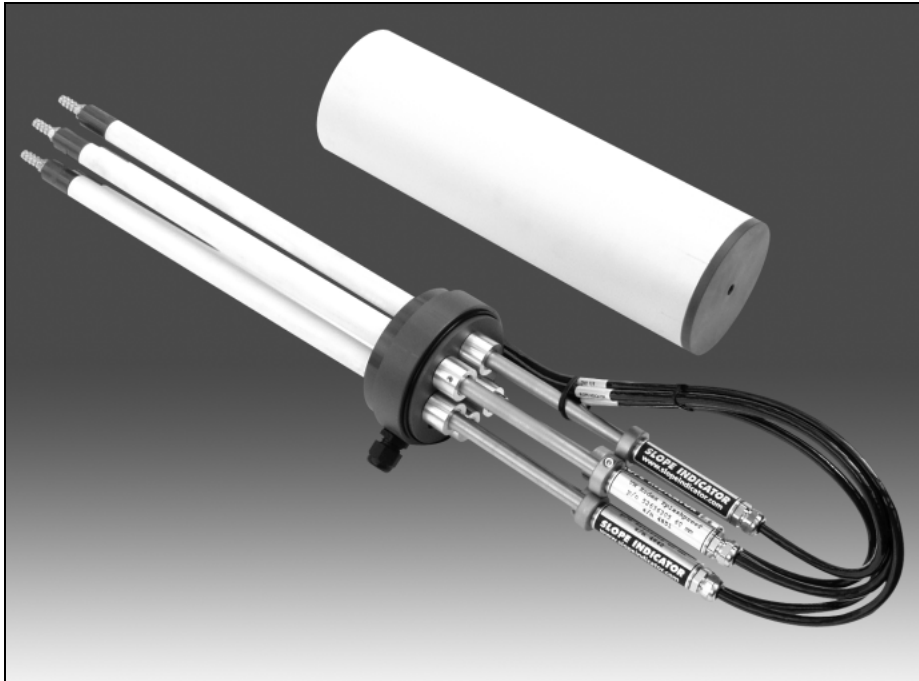


# VW Displacement Transducer



VW Displacement Transducer mounted in head of rod extensometer

## Advantages

**High Accuracy:** The VW displacement transducer provides a resolution of 0.025% FS and a repeatability of 0.5% FS.

**Range of 60 and 100 mm:** The VW displacement transducer is available in 60mm and 100 mm ranges (2.4 and 4 inch).

**Twist-Proof Shaft:** The displacement transducer has a unique, twist-proof shaft that prevents accidental damage to the sensor during installation.

**Suitable for Data Logging:** The displacement transducer is easily connected to a data logger for unattended monitoring. It can also be read manually.

## Applications

The VW displacement transducer is used with the rod extensometer to monitor settlements above foundations, subsidence above tunnels, displacements of retaining structures, and deformations in underground openings.

## Installation

The VW displacement transducers are installed in head of the extensometer as the last step of the installation process. One transducer is used for each rod.

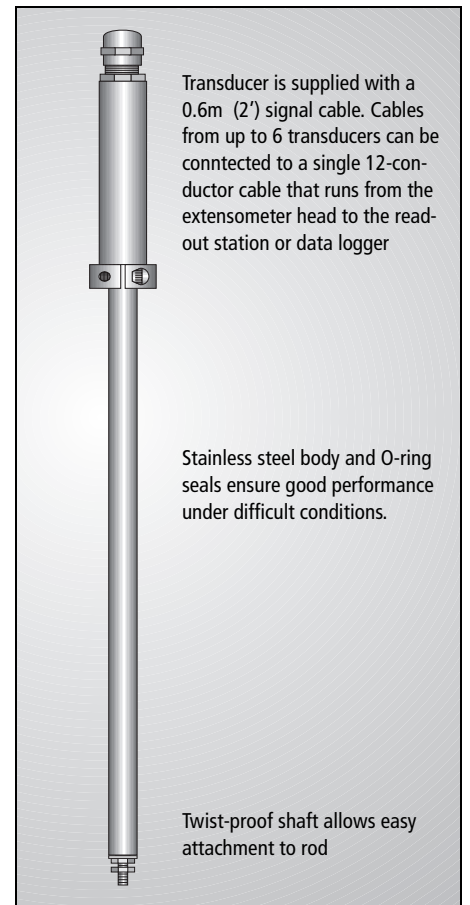
The transducer screws into the end of the rod, so that it can monitor both extension and compression. The unique twist-proof shaft helps prevent damage to the transducer as it is installed.

The sensor is then connected to a readout and adjusted to its initial position.

## Operation

Readings are taken with a VW readout or a data logger. Calibration factors are applied to the frequency readings to convert them to a distance in mm or inches.

The initial reading establishes a baseline. Subsequent readings are compared to the baseline to determine the magnitude, direction, and rate of change.



**VW DISPLACEMENT TRANSDUCER****60mm VW Transducer . . . . . 52636305****100mm VW Transducer . . . . . 52636325**

The VW displacement transducer is used with the electric reference head of the rod extensometer. Transducer is supplied with 0.6 m (2') of signal cable for internal attachment within the protective cover of the extensometer head. Use one sensor per measured point.

**Sensor Type:** Vibrating wire. Built-in temperature sensor is an RTD or a thermistor.

**Range:** 60 mm or 100 mm.

**Resolution:** 0.025% FS with VWP Indicator.

**Repeatability:**  $\pm 0.5\%$  of Full Scale.

**RTD Range:** -45 to 100°C.

**Materials:** Stainless steel, neoprene O-rings.

**SIGNAL CABLE****Signal Cable, 4-Wire . . . . . 50613524**

For one VW sensor. Not required if transducer is connected to larger cable (below) within the head of the extensometer. Shielded cable with four 22-gauge tinned copper conductors and polyurethane jacket.

**Signal Cable, 12-Wire . . . . . 50612512**

Used between the reference head and the readout station. Accommodates up to 6 VW displacement transducers. Shielded cable has twelve 20-gauge tinned-copper conductors and a polyethylene jacket.

**Universal Terminal Box . . . . . 57711600**

For use with portable readout. Not required with data logger. Splashproof fiberglass box is 290 wide x 345 high x 135 mm deep (11.5 x 13.5 x 5.25" ).

**READOUTS**

Compatible readouts include the VWP Indicator and other pluck-type VW readouts. See separate data sheets for features and specifications.

**DATA LOGGERS**

Compatible data loggers include the VW MiniLogger and the Campbell Scientific CR10X data logger. See data sheets for features and specifications.