
VW Displacement Gauge VWDT-5000

Geosense® VWDT-5000 series of vibrating wire displacement gauges cover displacement ranges up to 300mm and are fully waterproof to a minimum of IP68 (16 bar external pressure)



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Overview



Geosense® VWDT-5000 series of vibrating wire displacement transducers cover displacement ranges up to 300mm and are fully waterproof to a minimum of IP68 (16 bar external pressure). They can be incorporated into many displacement products such as crack and joint meters, convergence meters, soil extensometers and displacement meters.

VWDT-5000 transducers are particularly rugged, and are carefully constructed and thermally aged to minimise long term drift and changes in calibration. The gauges will withstand demanding environmental factors encountered in Civil Engineering construction sites such as tunnels and piling applications.

The data from the VWDT-5000 can be monitored by means of a portable read-out unit or connected to a data logger and distributed if required by telemetry.

Vibrating wire instruments 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 1000 metres away from their installed location, without change in calibration.

Instruments may be read by any commercially available Vibrating wire readout system operating on either the pluck pulse or swept frequency excitation principle, provided that these units operate over the frequency range of the instruments. In addition, these instruments can be data-logged by a variety of data-loggers equipped with vibrating wire excitation modules including Campbell Scientific and Datalogger units.

Units are supplied with a M6 female threaded connection on the measuring plunger.

APPLICATIONS

- Rod Extensometers
- Crack-meters
- Joint-meters
- Wire Convergence meters

FEATURES

- Reliable long-term performance
- Rugged, suitable for demanding environments
- High accuracy
- Insensitive to long cable lengths
- Waterproof to 16 bar

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Specifications

DIMENSIONS

Model	Range (mm)	Length Compressed (mm)	Length Extended (mm)	Diameter (mm)
VWDT-5001*	5	200	204	13
VWDT-5002	12.5	213	224	13
VWDT-5003	25	262	283	13
VWDT-5004	50	293	338	13
VWDT-5005	75	387	454	13
VWDT-5006	100	418	508	13
VWDT-5007	150	548	683	13
VWDT-5008	200	678	858	13
VWDT-5009	300	935	1205	13
VWDT-5010	500	1451	1901	13

PERFORMANCE

Resolution	<0.025% FS
Accuracy	±0.1% FS
Nonlinearity	<0.5% FS

ELECTRICAL

Frequency range	1650-2700 Hz
Nominal zero value	1850 Hz

MECHANICAL

Operating temperature range	-20 °C to +80°C
Body material	Stainless steel
Inner rod	Stainless steel
O-ring	Viton
Waterproof rating	IP68 (16 bar)
Cable	2 pair PUR sheath
Cable Type	Type 900 - VW Sensor with Foil Screen & Drain Wire

ORDERING INFORMATION

Range	
Anchor type	
Readout type	

*Available on request



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