



ENCARDIO RITE



VIBRATING WIRE TILT METER

MODEL EAN-80V

OVERVIEW

The Encardio-rite model EAN-80V vibrating wire tilt meter is suitable for monitoring of inclination and vertical rotation in structures. It is a high resolution tilt meter, is rugged in construction and has excellent temperature stability.

Tilt changes in structures may be caused due to construction activities such as excavation, tunneling and de-watering, that affect the ground that supports the structure. Changes in tilt may also result from loading of a structure, such as loading of a dam during impoundment, loading of a diaphragm wall during excavation or loading of a bridge deck due to wind and traffic. Data from the tilt meter provides early warning of threatening deformations, allowing time for corrective action to be taken or if necessary, for safe evacuation of the area.

Model EAN-80V tilt meter comprises of pendulous mass supported by a vibrating wire strain transducer and an elastic hinge. The transducer measures changes in force caused by the rotation of the center of gravity of the mass.



FEATURES

- ♦ Suitable for hostile & severe environment.
- ♦ Provides reliable and high resolution readings.
- ♦ Rugged & robust construction and excellent temperature stability.
- ♦ Easy to install and take readings.
- ♦ Proven vibrating wire technology
- ♦ Readings can be taken by remote datalogger.

APPLICATIONS

- ♦ Monitoring vertical rotation of retaining walls.
- ♦ Monitoring inclination and rotation of dams, piers and piles, etc.
- ♦ Monitoring stability of structures in landslide areas.
- ♦ Monitoring tunnels for convergence and other movements.
- ♦ To evaluate performance of bridges and struts under load.

The vibrating wire transducers provide a relatively low cost system which offers excellent resolution, long term stability and a low thermal sensitivity.

The tilt meter is fixed to the structure using two anchors. Movement of the structure causes change in tilt of the tilt meter, which results in change in output of the sensor. Measurements can be made on horizontal or vertical surfaces. Subsequent sets of readings show how the structure is behaving and will give an indication of permanent deformations as time progresses.

READ-OUT

The model EAN-80V vibrating wire tilt meter can be read by vibrating wire read-out unit like Encardio-rite model EDI-51V. The readings can also be read or logged at a remote location by an automatic data acquisition system like Encardio-rite model EDAS-10.

SPECIFICATIONS

Sensor	Vibrating wire type, uniaxial
Full scale range	$\pm 10^\circ$
Resolution	10 arc second
Temperature range	-20°C to 85°C
Dimension	31.75 mm x 160 mm
Weight	0.4 kg (sensor);

All specifications are subject to change without prior notice

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DATA SHEET 1197-06R0