



ENCARDIO RITE



TILT METER

MODEL EAN-90M

OVERVIEW

The Encardio-rite model EAN-90M 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-90M tilt meter consists of a basic sensor, mounted inside a stainless steel housing. The sensor output is ± 2.8 V nominal at $\pm 10^\circ$. This output can be carried over long distances without any signal degradation. The sensor provides a relatively low cost system which offers excellent resolution, long term stability and a low thermal sensitivity.

The tilt meter (uniaxial and biaxial) is fixed on to a vertical or horizontal surface by means of an adjustable bracket and expandable anchor (as shown in the adjacent picture).

Movement of the structure causes change in tilt of the tilt



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.
- ♦ 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.

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-90M tilt meter can be read by Encardio-rite model EDI-53 portable digital read-out unit/datalogger. 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	Uniaxial, Biaxial also available on request
Standard range	$\pm 15^\circ$
Sensitivity	± 10 arc second
Accuracy ¹	$\pm 0.1\%$ fs
Temperature range	-20°C to 50°C
Sensor dimension	32 mm dia x 250 mm length
Bracket dimension	65 mm x 65 mm x 40 mm, 8 mm thickness
Weight	0.95 kg (sensor with bracket)

¹ As tested under laboratory conditions

All specifications are subject to change without prior notice

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