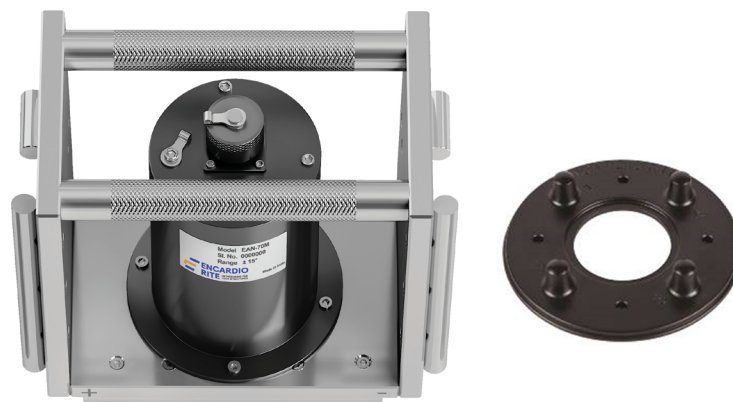


# PORTABLE TILT METER

MODEL EAN-70M

## DATASHEET



### OVERVIEW

The Encardio Rite model EAN-70M portable tilt meter is designed to provide accurate and reliable monitoring of tilt and inclination changes in various structures. Equipped with MEMS (Micro-Electro-Mechanical Systems) accelerometer technology, the EAN-70M is tailored for applications requiring high precision and stability over time. The system includes an EAN-70M tilt meter, tilt plates, and a readout unit. The tilt plates are anchored or bonded to the structure at specified locations. Readings are taken by placing the tilt meter over installed tilt plates and recording the output in the readout unit.

Applications include monitoring critical buildings and utilities in areas affected by excavation or tunneling activities, tracking the vertical rotation of retaining walls, assessing the stability of dams, piers, and ensuring the safety of structures in landslide-prone zones. It is also used to evaluate the performance of bridges under wind or traffic loading conditions.

The EAN-70M tilt meter is an essential tool for engineers and professionals involved in structural monitoring and geotechnical assessments. With its robust design, high precision, and ease of use, it ensures that potential issues are detected early, allowing for timely corrective actions. Whether for construction, geotechnical monitoring, or structural health assessments, the EAN-70M delivers reliable performance, helping safeguard structures and lives.

## FEATURES

- **Rugged & robust construction:** Ensures durability and excellent temperature stability, suitable for challenging environments.
- **High resolution readings:** Provides reliable, high-resolution data, ensuring accurate monitoring.
- **Weather resistant:** Die-cast aluminum tilt plates are dimensionally stable and resistant to weather conditions.
- **Easy installation:** Tilt plates can be anchored or bonded to surfaces, simplifying the setup process.
- **Economic monitoring:** One tilt meter can monitor multiple inexpensive tilt plates.
- **Single operator use:** Simplifies monitoring, allowing a single operator to perform measurements.
- **Versatile use:** The tilt plates can be mounted horizontally or vertically, depending on the application. The tilt meter's design allows it to take readings from both orientations, making it adaptable to different monitoring needs.
- **Simple operation and data logging:** The EAN-70M's user-friendly interface, coupled with the EDI series readout unit, enables quick setup and easy data collection. The system stores initial tilt readings and continuously monitors changes over time.

## PRODUCT OFFERINGS

### EAN-70M Portable tilt meter

A high-precision instrument that utilizes MEMS accelerometer technology for accurate tilt measurements. It is housed in a durable frame with machined surfaces to ensure precise positioning on tilt plates.

#### Tilt plates

Specially designed plates that serve as reference points for the tilt meter. They can be mounted at specified locations on the structure. Available in die-cast aluminum, these plates offer precise and long-lasting performance. Protective covers are available for the tilt plates if specifically ordered.

#### Digital readout unit (EDI series)

A compatible readout unit designed to work seamlessly with the EAN-70M tilt meter. It captures and stores tilt data, complete with time and date stamps, allowing for easy analysis and reporting.

Tilt plates are typically anchored to the structure but can also be bonded to smooth, clean surfaces like granite, stone, or tiles. The bottom surface of the portable tilt meter takes readings from horizontally mounted tilt plates, while the side surfaces are used for vertically mounted tilt plates.

The EAN-70M monitors changes in tilt over time by taking two readings for each tilt plate: one in the plus direction and one in the minus direction. Changes in tilt over time are determined by comparing initial readings with subsequent readings, providing critical data for assessing the stability and integrity of structures.



## SPECIFICATIONS

### EAN-70M Portable tilt meter

Sensor	Uniaxial
Measuring range	± 15° from vertical
Sensitivity	10 arc second
Accuracy <sup>1</sup>	± 0.1% fs
Output	± 4.1 V nominal at 15°
Material	Stainless steel frame, anodized aluminum housing
Dimensions	162 L x 90 B x 145 H mm
Net weight	3.6 kg
Temp. range	-20° to 80°C

### Die cast aluminium tilt plate and accessories

Mounting method	Hilti anchor HPS 1-6/15x40 # 260350 or equivalent
Diameter	142 mm
Height	24 mm
Weight	0.25 kg

<sup>1</sup> As tested under laboratory conditions

\*All specifications are subject to change without prior notice

DATASHEET | 1193-12 R04



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