

In-Place Tiltmeter / Submersible Tiltmeter (MEMS)

Description

The system consists of an adjustable universal mounting bracket that can be installed vertically, horizontally, or at an angle, an interconnecting cable, and a data logger or readout instrument. The housing is IP68 rated up to 2 MPa. for maximum resistance against water ingress. The cables are securely encapsulated inside the housing with water-proof connectors to provide watertight performance at depths up to 200 meters submersion. Bussed and non-bussed versions are available to accommodate daisy-chained and single-point installations.

SPECIFICATIONS

In-Place Tiltmeter / Submersible Tiltmeter (MEMS) Specifications

ITEM	SPECIFICATION
Range	$\pm 30^\circ$
Resolution	$(\pm 0.0002^\circ)$ (0.04 mm/m) ¹
Sensor Precision	$\pm 0.0013^\circ$ (0.02 mm/m) ¹
Sensor Precision	$\pm 0.0005^\circ$ (0.01 mm/m) ²
Sensor 24hr Stability	± 0.03 mm/m ¹
Sensor 24hr Stability	± 0.01 mm/m ²
Sensor	MEMS Accelerometer
Temperature Dependent Uncertainty	± 0.016 mm/m/ $^\circ\text{C}$ ($\pm 0.001^\circ/\text{C}$), for $\pm 5^\circ$ from vertical
Temperature Dependent Uncertainty	± 0.033 mm/m/ $^\circ\text{C}$ ($\pm 0.002^\circ/\text{C}$), for $\pm 15^\circ$ from vertical
Temperature Accuracy	± 0.5 $^\circ\text{C}$ (0 $^\circ\text{C}$ to 60 $^\circ\text{C}$)
Temperature Accuracy	± 1.0 $^\circ\text{C}$ (-40 $^\circ\text{C}$ to 60 $^\circ\text{C}$)
Temperature Resolution	0.06 $^\circ\text{C}$
Operating Temperature	-40 to 80 $^\circ\text{C}$ (-40 to 175 $^\circ\text{F}$)
Dimensions	$\varnothing 28.6\text{mm} \times 211\text{mm}$ ($\varnothing 1.125'' \times 8.31''$)

1: 99% Confidence Interval 2: 68% Confidence Interval