

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.

Tiltmeter / Submersible Tiltmeter (MEMS) Specifications

ITEM	SPECIFICATION
Range	$\hat{A}\pm 30\hat{A}^\circ$
Resolution	$\hat{A}\pm 0.0002\hat{A}^\circ$ (0.004 mm/m) \hat{A}^1
Sensor Precision	$\hat{A}\pm 0.0013\hat{A}^\circ$ (0.02 mm/m) \hat{A}^1
Sensor Precision	$\hat{A}\pm 0.0005\hat{A}^\circ$ (0.01 mm/m) \hat{A}^2
Sensor 24hr Stability	$\hat{A}\pm 0.03$ mm/m \hat{A}^1
Sensor 24hr Stability	$\hat{A}\pm 0.01$ mm/m \hat{A}^2
Sensor	MEMS Accelerometer
Temperature Dependent Uncertainty	$\hat{A}\pm 0.016$ mm/m/ $\hat{A}^\circ\text{C}$ ($\hat{A}\pm 0.001\hat{A}^\circ/\hat{A}^\circ\text{C}$), for $\hat{A}\pm 5\hat{A}^\circ$ from vertical
Temperature Dependent Uncertainty	$\hat{A}\pm 0.033$ mm/m/ $\hat{A}^\circ\text{C}$ ($\hat{A}\pm 0.002\hat{A}^\circ/\hat{A}^\circ\text{C}$), for $\hat{A}\pm 15\hat{A}^\circ$ from vertical
Temperature Accuracy	$\hat{A}\pm 0.5$ $\hat{A}^\circ\text{C}$ (0 $\hat{A}^\circ\text{C}$ to 60 $\hat{A}^\circ\text{C}$)
Temperature Accuracy	$\hat{A}\pm 1.0$ $\hat{A}^\circ\text{C}$ (-40 $\hat{A}^\circ\text{C}$ to 60 $\hat{A}^\circ\text{C}$)
Temperature Resolution	0.06 $\hat{A}^\circ\text{C}$
Operating Temperature	-40 to 60 $\hat{A}^\circ\text{C}$ (-40 to 140 $\hat{A}^\circ\text{F}$)
Dimensions	$\hat{A}, 28.6\text{mm} \times 211\text{mm}$ ($\hat{A}, 1.125\hat{A}^\bullet \times 8.31\hat{A}^\bullet$)
\hat{A}^1 : 99% Confidence Interval \hat{A}^2 : 68% Confidence Interval	

SPECIFICATIONS