

## Tilt Beam

### Description

MEMS Tilt Beams measure differential movements in structures and consist of a MEMS sensor mounted on a rigid, fibreglass beam. The beam is mounted on anchor bolts set into the structure. They can be installed on any structure by joining together lengths of beams and are extremely accurate in generating movement profiles over long distances. Readings are taken with a manual readout by connecting at the end of the single cable linking all the bussed beams, or with a data logger at a remote monitoring station. Site specific, near-real time monitoring software is available.

### TILT BEAM SPECIFICATIONS

ITEM	SPECIFICATION
Range	$\pm 30^\circ$
Resolution (digital)	$\pm 0.0002^\circ$ (0.004 mm/m) <sup>1</sup>
Resolution (analog)	$\pm 5$ arc sec. ( $\pm 0.025$ mm/m) (10Hz BW)
Non-linearity (digital)	$\pm 0.0125\%$ F.S. ( $\pm 0.002^\circ$ ) (0.03 mm/m)
Non-linearity (analog)	$\pm 0.05\%$ F.S. ( $\pm 0.0075^\circ$ ) (0.13 mm/m)
Repeatability (digital)	$\pm 0.0125\%$ F.S. ( $\pm 0.002^\circ$ ) (0.03 mm/m)
Repeatability (analog)	$\pm 0.025\%$ F.S. ( $\pm 0.004^\circ$ ) (0.06 mm/m)
Sensor	MEMS (Micro-Electro- Mechanical Systems) Accelerometer, Uniaxial
Operating Temp.	-40 to 60°C (-40 to 140°F)

### FIBREGLASS BEAM (MOUNTING BRACKETS INCLUDED)

ITEM	SPECIFICATION
Beam Dimensions	51 X 51 mm (2 X 2 in.)
Gauge Length	1, 2 or 3 m (3, 5, 10 ft.)

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