



MEMS Tilt Beams

MEMS
TILT & INCLINATION
SERIES**rst**
INSTRUMENTS**GEOSENSE**Official RST distributor in
Europe & MENAGeotechnical Centre
Rougham Industrial Estate
Rougham, Bury St Edmunds
Suffolk IP30 9ND
ENGLAND
Telephone: +44(0)1359 271167
Facsimile: +44(0)1359 271168Geosense is a division of
Marton Geotechnical Services Ltd

info@mgsgeosense.co.uk

www.mgsgeosense.co.uk

ISO 9001:2000
REGISTERED QUALITY SYSTEM

applications

Monitoring the effects of
tunneling and excavating
on nearby buildings and
other structures.Monitoring the movement of
tunnel walls and railway tracks.Monitoring the stability of
structures where slope
instability is occurring.Monitoring the deflection of
bridges and beams under load.

features

Simple construction with
no moving parts to damage.Convenient to install on any
structure and easy to use.Beams can be linked together
to provide detailed movement
data over long distances.Analog, digital and frequency
outputs available.

Easily adaptable to datalogging.

Integral temperature sensor.

Fibreglass composite beams
minimize thermal effects.

accessories

Terminal stations.

'GeoViewer' Monitoring
Software, near real time.

additional ordering info

Number of beam modules
required.

Horizontal or vertical beam.

Groutable or expansion
shell type anchors.

Portable readout or datalogger.

Biaxial versions also available.

RST Instruments Ltd. reserves the right
to change specifications without notice.

MEMS Tilt Beams measure differential movements in structures and consist of a MEMS sensor mounted on a rigid, fibreglass beam. The beam is then mounted on anchor bolts set into the structure.

MEMS Tilt Beams can be installed on any structure and by joining together lengths of beams, extremely accurate movement profiles can be generated covering long distances. Sensors can be read either with a manual readout (requiring access to each sensor) or with a datalogger (at a remote monitoring station). Site specific near-real time monitoring software is available.

specifications

ITEM	DESCRIPTION
Range	±15° (other ranges upon request)
Resolution	±5 arc sec. (±0.025 mm/m) (10Hz BW) (or better, readout technique dependent)
Non-linearity	±0.1% F.S.
Sensor	MEMS (Micro-Electro-Mechanical Systems) Inclinometer
Excitation	8 - 15V DC
Operating Temp.	-40 to 85°C (-40 to 185°F)

ordering info

ITEM	PART #
MEMS HORIZONTAL TILT BEAM MODULE	
Analog Voltage - requires beam	IC6015
4-20mA - requires beam	IC6016
Digital Output - requires beam	IC6017
Digital Bus Output - requires beam	IC6018
Frequency - requires beam	IC6019
MEMS VERTICAL TILT BEAM MODULE	
Analog Voltage - requires beam	IC6080
4-20mA - requires beam	IC6081
Digital Output - requires beam	IC6082
Digital Bus Output - requires beam	IC6083
Frequency - requires beam	IC6084
MEMS BEAMS	
0.5 m - requires a tilt beam module	IC6060
1 m - requires a tilt beam module	IC6061
2 m - requires a tilt beam module	IC6062
3 m - requires a tilt beam module	IC6063

READOUTS & DATALOGGERS

Readout for MEMS Analog Voltage module	IC6800-V
flexDAQ Dataloggers	

specifications: tilt beam (mounting brackets included)

ITEM	BEAM DIMENSIONS	GAUGE LENGTH
Fibreglass Tilt Beam	51 X 51 mm (2 X 2 in.)	1, 2 or 3 m (3, 5, 10 ft.)



WORKS WITH

flexDAQDATALOGGERS
custom, turn-key datalogger
systems shipped "ready to run"