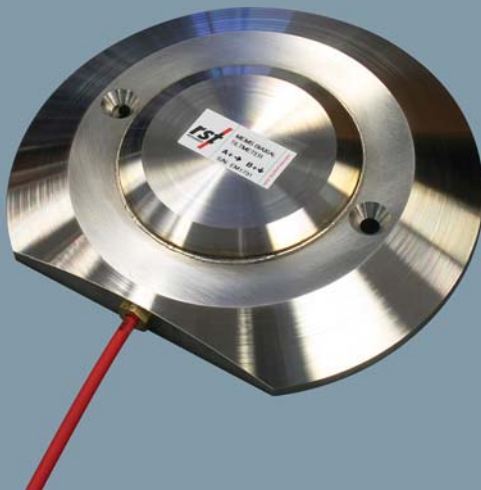




Submersible MEMS Tiltmeter

MEMS
TILT & INCLINATION
SERIES

Standard Submersible Tiltmeter on a Mounting Plate

Low Profile version of Tiltmeter
for installation on inclined concrete face.

specifications

| ITEM | DESCRIPTION |
|-------------------------|---|
| Range | ±15° (other ranges upon request) |
| Resolution (analog) | ±5 arc sec. (±0.025 mm/m) (10Hz BW) |
| Resolution (digital) | ±2 arc sec. (±0.0006°) (0.01 mm/m) |
| Non-linearity (analog) | ±0.05% F.S. (±0.0075°) (0.13 mm/m) |
| Non-linearity (digital) | ±0.0125% F.S. (±0.002°) (0.03 mm/m) |
| Repeatability (analog) | ±0.025% F.S. (±0.004°) (0.06 mm/m) |
| Repeatability (digital) | ±0.0125% F.S. (±0.002°) (0.03 mm/m) |
| Sensor | MEMS (Micro-Electro-Mechanical Systems) Accelerometer |
| Excitation (analog) | 8 - 15V DC |
| Operating Temp. | -40 to 85°C (-40 to 185°F) |

The RST Submersible Tiltmeter provides precision real-time remote monitoring of tilt of submerged structures. It consists of a MEMS inclinometer sensor and electronics mounted inside a rugged waterproof enclosure.

The instrument housing is machined from solid stainless steel, providing extreme endurance for long-term high-pressure underwater service. The cable entry is a submarine grade connector, which provides watertight performance at depths exceeding 200 meters.

The MEMS inclinometer sensor is internally connected to AC signal conditioning which provides power regulation, AC excitation, synchronous demodulation, and quiet, low-noise analog signal output. A digital output version is also available.

The tiltmeter can be mounted directly on horizontal, vertical or inclined surfaces. In all three situations, no precision levelling of the instrument is required as the wide measurement range of the MEMS tilt sensor (+/- 15°) allows for latitude in installation. Repeatability and other metrological specifications of the tilt sensor are unchanged at the center or at the ends of the measurement range.

ordering info

| ITEM | PART # |
|---|----------|
| **NOTE: Upon ordering, please specify if tiltmeter will be installed on a horizontal, vertical or inclined surface. | |
| MEMS Submersible Uniaxial Tiltmeter Digital Output | IC6750 |
| MEMS Submersible Uniaxial Tiltmeter 4-20mA Output | IC6752 |
| MEMS Submersible Biaxial Tiltmeter Digital Output | IC6756 |
| Signal Cable: 4 conductor 22 G OSD with polyurethane jacket | EL380004 |

MOUNTING

| | |
|--|--------|
| MEMS Submersible Uniaxial Tiltmeter Mounting Bracket | IC6760 |
| MEMS Submersible Uniaxial Tiltmeter Mounting Bracket Cover | IC6770 |

READOUTS & DATALOGGERS

| | |
|---|---------------|
| MEMS Analog Readout (analog systems) | IC6800-V |
| Ultra Rugged Field PC (digital bus systems) | IC32000-14803 |
| Digital Interface for Ultra Rugged Field PC with software | ELGL4010 |
| flexDAQ Dataloggers (analog and digital systems) | |

WORKS WITH



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

RST Instruments Ltd.11545 Kingston St.,
Maple Ridge, BC
Canada V2X 0Z5Telephone: 604 540 1100
Facsimile: 604 540 1005
Toll Free: 1 800 665 5599

info@rstinstruments.com

www.rstinstruments.com

applications

Remote, real-time monitoring of inclination of concrete-face rockfill dams slabs and concrete dams.

Monitor tilt of retaining walls, piles and bridge piers.

Monitoring of offshore structures.

Installation of submerged pipelines.

features

Solid construction for extreme endurance over long-term, high-pressure underwater situations.

Instrument can be mounted on inclined, vertical or horizontal surfaces with no need of precision levelling.

Analog and digital output also available.

High accuracy and repeatability.

Built-in transient protection.

Watertight performance.