

Standard Submersible Tiltmeter on a Mounting Plate alongside its cover.

	PRODUCT CATEGORY:
	INCLINOMETERS + TILT SENSORS

Submersible Tilt Meter

The RST Submersible Tilt Meter 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 tilt meter 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 ($\pm 15^\circ$) 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.

SPECIFICATIONS

ITEM	DESCRIPTION
Range	$\pm 15^\circ$
Resolution (digital)	± 2 arc sec. ($\pm 0.0006^\circ$) (0.01 mm/m)
Resolution (analog)	± 5 arc sec. (± 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 or Biaxial
Operating Temp.	-40 to 85°C (-40 to 185°F)

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
MEMS Submersible Biaxial Tiltmeter 4-20mA Output	IC6753
Signal Cable: 4 conductor 22 G OSD with polyurethane jacket	EL380004

MOUNTING

Horizontal Mounting Plate - MEMS Submersible Tiltmeter	IC6760
Vertical Mounting Bracket - MEMS Submersible Tiltmeter	IC6761
Mounting Bracket Cover - MEMS Submersible Tiltmeter	IC6770

READOUTS & DATA LOGGERS

Ultra Rugged Field PC ² (digital bus systems)	IC32000-AR2-RSTS
Digital Interface for Ultra Rugged Field PC ² with software	ELGL4010
flexDAQ Dataloggers (analog and digital systems)	

TEMPERATURE MEASUREMENT

Standard for digital, and optional for 4-20mA (contact RST for details)

> APPLICATIONS

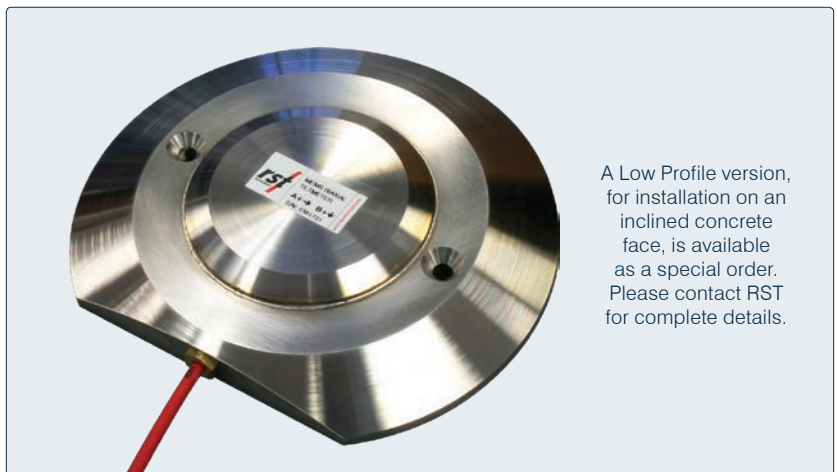
Remote, real-time monitoring of inclination of concrete-face rockfill dams slabs and concrete dams.	Monitor tilt of retaining walls, piles and bridge piers.
Monitoring of offshore structures.	Installation of submerged pipelines.

> 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 available.	High accuracy and repeatability.
Built-in transient protection.	Watertight performance.

> BENEFITS

✓ Increase Safety	✓ High Accuracy
✓ High Reliability	✓ Custom Options



A Low Profile version, for installation on an inclined concrete face, is available as a special order. Please contact RST for complete details.

