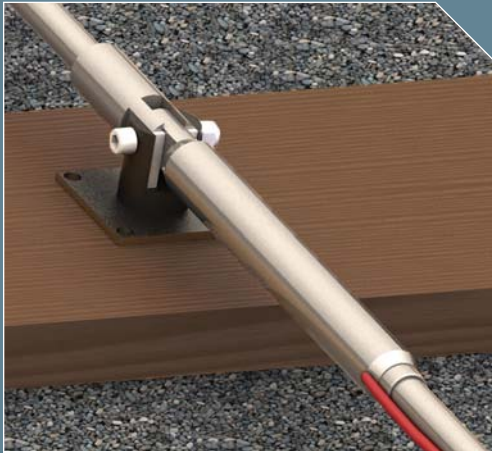




# Track Monitoring System



The Track Monitoring System is intended for monitoring settlement and twist of railroad tracks which may be affected by nearby construction activity, such as tunnelling or adjacent excavation, or which are located near hazardous zones such as potential washout or landslide areas.

The Track Monitoring System consists of bussed settlement sensors mounted longitudinally along the track alignment, typically with a mount spacing of 2 or 3 meters and one, or several, track twist sensors mounted perpendicularly to the settlement sensors. The settlement and twist sensors are based on the same MEMS devices used in the MEMS Tilt & Inclination Series of products from RST Instruments. These sensors are fully compatible with flexDAQ dataloggers and the GeoViewer data display and management software.

**RST Instruments Ltd.**

11545 Kingston St.,  
Maple Ridge, BC  
Canada V2X 0Z5

Telephone: 604 540 1100  
Facsimile: 604 540 1005  
Toll Free: 1 800 665 5599

info@rstinstruments.com

www.rstinstruments.com

**specifications**

ITEM	DESCRIPTION
Range	±15°
Resolution (digital)	±2 arc sec. (±0.0006°) (0.01 mm/m)
Non-linearity (digital)	±0.0125% F.S. (±0.002°) (0.03 mm/m)
Repeatability (digital)	±0.0125% F.S. (±0.002°) (0.03 mm/m)
Sensor	MEMS (Micro-Electro-Mechanical Systems) Inclinometer
Operating Temp.	-40 to 85°C (-40 to 185°F)

**readouts + dataloggers**

ITEM	PART #
Ultra Rugged Field PC	IC32000-14803
Digital Interface for Ultra Rugged Field PC with software.	ELGL4010
flexDAQ Dataloggers	

**ordering info**

ITEM	PART #
Track Settlement Sensor - MEMS Digital Bus: Includes 1 anchor, cable in & out with connectors, for wooden tie.	IC9000
Track Settlement Tubing x 2m: 20mm x 2mm	IC9010
Track Settlement Tubing x 3m: 20mm x 2mm	IC9012
Track End Anchor: One required per string- includes dummy spacers for start and end anchor	IC9020
1m Extension Cable M/F Connectors	IC9030
2m Extension Cable M/F Connectors	IC9031
3m Extension Cable M/F Connectors	IC9032
Extension Cable: xxx Length F x Bare Leads	IC9035-X
Track Twist Sensor - MEMS Digital Bus Comes with sleeper mounts, for wooden ties, connector in & out.	IC9100

\*\* Contact RST for Concrete Tie Mounts.

**applications**

Railroad track monitoring in construction zones.

Railroad track monitoring in geologically unstable areas (prone to washout, landslide, etc.)

**features**

High accuracy MEMS digital tilt sensors.

Single cable digital bus system.

String of settlement sensor can be as long as required.

Available for wooden tie and concrete tie systems.

Easily adaptable to datalogging (FlexDAQ dataloggers).

Data can be viewed in near-real time in the GeoViewer software.

