



Monitor
with
Confidence

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A close-up section of the Track Monitoring System shown mounted on a rail track plank.

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) Inclonometer
Operating Temp.	-40 to 85°C (-40 to 185°F)

ORDERING INFO

ITEM	PART #
2 m length: Track Settlement Sensor - MEMS Digital Bus UNIAXIAL (includes 1 anchor, cable in & out with connectors) - for wooden ties	IC9000
3 m length: Track Settlement Sensor - MEMS Digital Bus UNIAXIAL (includes 1 anchor, cable in & out with connectors) - for wooden ties	IC9003
2 m length: Track Settlement Sensor- MEMS Digital Bus BIAXIAL (includes 1 anchor, cable in & out with connectors) - for wooden ties	IC9050
3 m length: Track Settlement Sensor- MEMS Digital Bus BIAXIAL (includes 1 anchor, cable in & out with connectors) - for wooden ties	IC9053
Track End Anchor	IC9040
Extension Cable: xxx Length F x Bare Leads	IC9035-X
Track Twist Sensor – MEMS Digital Bus (includes tie mounts, 1m cable with connectors) - for wooden ties	IC9100

** Contact RST for Concrete Tie Mounts.

READOUTS + DATA LOGGERS

ITEM	PART #
Ultra Rugged Field PC ²	IC32000-AR2-RSTS
Digital Interface for Ultra Rugged Field PC ² with software.	ELGL4010
DT2485 DT-BUS Data Logger	DT2485
flexDAQ Data Loggers	

	PRODUCT CATEGORY:
	INCLINOMETERS + TILT SENSORS

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 locales 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 2 or 3 meter lengths can be cut down in the field to fit the actual tie locations.

Settlement and twist sensors are based on the same MEMS devices used in RST's MEMS Tilt & Inclination Series of products from RST Instruments. These sensors are fully compatible with RST's flexDAQ Data Loggers and GeoViewer software for data display and management (see separate brochures).

> 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.
- Easily adaptable to data logging with RST's DT2485 DT-BUS Data Logger and with RST's flexDAQ Data Loggers.
- Available for wooden tie and concrete tie systems.
- Data can be viewed in near-real time in the GeoViewer software.

> BENEFITS

- ✓ Increase Safety
- ✓ High Accuracy



Above: Increasing close-up images of a bussed section along the Track Monitoring System.
Below: A portion of railroad track showing an installed Track Monitoring System.

