

Track Monitoring System (MEMS)

Description

The Track Monitoring System (MEMS) 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 MEMS accelerometer sensors mounted longitudinally along the track alignment, typically with a mount spacing of 2 or 3 meters. The 2 or 3 meter lengths can be cut down in the field to fit the actual tie locations. The Track Monitoring sensor is 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 RSTAR Affinity Digital Suite or GeoExplorer software for data display and management.

TRACK MONITORING SYSTEM SPECIFICATIONS

ITEM	SPECIFICATION
Range	$\pm 30^{\circ}$
Resolution (digital)	$\pm 0.0002^{\circ}$ (0.004 mm/m) ¹
Sensor	MEMS (Micro-Electro-Mechanical Systems) Accelerometer
Operating Temp.	-40 to 60°C (-40 to 140°F)
¹ : 99% Confidence Interval	

SPECIFICATIONS