

## Profile Monitoring System for Tunnel Concrete Segments

### Description

**NOTE: This is a legacy and discontinued product not available for order.**

The RST Profile Monitoring System for Tunnel Concrete Segments is a series of tilt meters, fixed to the tunnel wall on each of the precast concrete segments erected in place as tunnel lining by a Tunnel Boring Machine (TBM). The system is based on the assumption that each concrete segment is a rigid body and that the complete ring deforms by rotation of the individual segments one relative to the other, and the rotation points are the contact surfaces between adjacent segments.

### PROFILE MONITORING SYSTEM SENSOR SPECIFICATIONS

ITEM*	SPECIFICATION
Range	$\pm 15^\circ$
Resolution	$\pm 2$ arc sec. ( $\pm 0.0006^\circ$ ) (0.01 mm/m)
Non-linearity	$\pm 0.0125\%$ F.S. ( $\pm 0.002^\circ$ ) (0.03 mm/m)
Repeatability	$\pm 0.0125\%$ F.S. ( $\pm 0.002^\circ$ ) (0.03 mm/m)
System Accuracy	1 mm convergence typical
Sensor	MEMS (Micro-Electro-Mechanical Systems) Accelerometer, Digital Bus, Uniaxial
Operating Temp.	-40 to 85°C (-40 to 185°F)

\*Tilt sensor parameter  
SPECIFICATIONS