



FlexiMeasure™

FlexiMeasure is a lightweight inclinometer designed for structural monitoring applications. Multiple segments can be connected in series to form a chain of flexibly coupled sensors. Because FlexiMeasure uses triaxial sensors it can be installed in any orientation.

Suitable for many monitoring applications including:

- Tunnel distortion and convergence
- Tunnel heave/settlement
- Structural movement
- Consolidation and compaction
- Shape/stability - Profile monitoring

Key features

- Light weight carbon fibre construction
- Operates in any orientation
- Ultra-low power consumption – can operate indefinitely with a small solar panel
- Quick-connect segments – length of overall chain can be determined on site and adjusted to suit requirements
- Joints are flexible so a string of segments can be fitted to bridge or tunnel arches
- Auto segment sequence detection
- Extremely low noise performance
- Low profile and discreet
- Resolution of 0.0001°(0.0018 mm/m) and repeatability of ±0.0005°(±0.009 mm/m)
- Integrated temperature sensor
- Versatile mounting options
- Waterproof to 200 m depth
- Compliant with EMC standards for railway trackside equipment
- Available in different lengths to suit specific requirement
- Segments can be re-used in other applications and configurations

FlexiMeasure™



Physical Specifications

Parameter	Value
Length	0.5 m, 1 m, 2 m, 3 m
Total Mass	250 g for 1 m segment
Housing Material	Carbon fibre and stainless steel 316
Protection (BS EN 60529: 1992 + A2: 2013)	IP68 at 200 m water depth pressure for 24 hours
Mounting Options	Inclinometer casing and structural
Operating Temperature Range	-40°C to +85°C

Tilt Sensor Specifications

Parameter	Value
Resolution	0.0001° (0.00175 mm/m)
Repeatability	±0.0005° (±0.0087 mm/m)
Range	±90°

Power and Communication

Parameter	Value
Power	3.6V DC from EdgeHub
Readout Device	Senceive EdgeHub with LTE
Typical Battery Life	Indefinitely on 30 W solar panel
Maximum Chain Length	32 segments or 96 m

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Certifications

System including EdgeHub:

- Tested to conformity with the essential requirements of the Radio Equipment Directive (RED) 2014/53/EU and the RoHS Directive 2011/65/EU
- Tested to comply with Part 15 of CFR 47 of the FCC Rules
- Passed testing to EN 50121-4 Railway EMC: "Emission and immunity of the signalling and telecommunications apparatus" for equipment within 3 metres of the track

Ordering Information and Accessories

Model	Description
FS-FXM-0500	FlexiMeasure segment 0.5 m
FS-FXM-1000	FlexiMeasure segment 1 m
FS-FXM-2000	FlexiMeasure segment 2 m
FS-FXM-3000	FlexiMeasure segment 3 m
FS-EC-BB59-FX10	FlexiMeasure IPI Borehole Cable Assembly (59 mm ID, 10 m cable)
FS-EC-BB59-FX2	FlexiMeasure IPI Borehole Cable Assembly (59 mm ID, 2 m cable)
FS-EC-BB49-FX10	FlexiMeasure IPI Borehole Cable Assembly (49 mm ID, 10 m cable)
FS-EC-BB49-FX2	FlexiMeasure IPI Borehole Cable Assembly (49 mm ID, 2 m cable)
FF-FXW-59	FlexiMeasure IPI Wheel Guide Kit (59ID)
FF-FXW-49	FlexiMeasure IPI Wheel Guide Kit (49ID)
FT-FXM	FlexiMeasure Installation Kit
FS-FXMT	FlexiMeasure Chain Terminator
FF-FXM-SF	FlexiMeasure Structural Mounting Bracket
FS-EC-FX2	FlexiMeasure to EdgeHub connection cable (2 m)
FS-EC-FX10	FlexiMeasure to EdgeHub connection cable (10 m)
FM3H-LTE-S	Senceive EdgeHub with LTE (without FlatMesh)

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