

## Product Data Sheet: FlatMesh Nano

The FlatMesh Nano is an extremely high precision and exceptionally stable three axis tilt sensor which reports its measurements through Senceive's FlatMesh wireless communications network to a FlatMesh Gateway.

It has been successfully applied in many applications, including those measuring:

- Tunnel distortion
- Tunnel heave/settlement
- Embankment slippage
- Structural movement
- Rail track heave/settlement
- Rail track bed cant and twist



### Key Features

- Integrated triaxial tilt sensor
- Extremely low noise performance
- Extremely low profile
- Resolution of 0.0001° (0.0018mm/m) and repeatability of ±0.0005° (±0.009mm/m)
- Operational in any orientation
- Integrated battery
- 1 year battery life, including when acting as a relay node within the mesh communications network
- Integrated temperature sensor
- Versatile mounting options
- Waterproof to IP67 / IP68

### Physical Specifications

Parameter	Value
Diameter	40mm
Height	30mm

<b>Total Mass</b>	40g
<b>Housing Material</b>	PVC and Aluminium
<b>Protection</b> (BS EN 60529: 1992 + A2: 2013)	IP67 IP68 at 2m for 24 hours
<b>Mounting Options</b>	Magnetic, screws, gluing
<b>Operating Temperature Range</b>	-40°C to +85°C

## FlatMesh Radio Specifications

Parameter	Value
<b>Communication Type</b>	Proprietary FlatMesh v3 Mesh Networking Protocols IEEE 802.15.4 compliant
<b>Frequency Band</b>	2400 – 2485 MHz ISM Band
<b>Maximum Transmit Power (EN 300 328 v1.8.1)</b>	6.5dBm
<b>Range</b>	Up to 300m depending on the environment Consult with Senceive for your application
<b>RF Module</b>	Senceive FM3Node

## Tilt Sensor Specifications

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

## Internal Battery

Parameter	Value
<b>Battery Type</b>	Lithium Manganese Dioxide
<b>Nominal Voltage</b>	3.0V
<b>Nominal Capacity</b>	1000mAh
<b>Typical Battery Life</b>	9 – 12 months at 20-30 minute reporting intervals, including when acting as a relay node Consult with Senceive for your application

## Certifications

- Tested to conformity with all the essential requirements of the Radio Equipment Directive 2014/53/EU and RoHS Directive 2011/65/EU
- FCC Grant of Equipment Authorization: FCC ID 2AMFBFM3NT
- Network Rail Acceptance PA05/04146
- London Underground Approved



### CONTACTANOS

Para más información:

email:

[info@grupoacre.com](mailto:info@grupoacre.com)

info

## Ordering Information and Accessories

Model	Description
FM3NT-10	FlatMesh Nano
FF-GS10	Direct gluing plate <ul style="list-style-type: none"><li>- Single use direct gluing to structures.</li></ul>
FF-MK10	Magnetic mounting kit <ul style="list-style-type: none"><li>- Perfect for steel or cast iron structures</li></ul>