

WiSen: M-Tilt Node



WIRELESS MONITORING SYSTEM



This internally battery powered sensor node allows measurement of tilt in 2 axis from a horizontal plane. With wide tilt range ($\pm 30^\circ$) and very high accuracy ($\pm 0.01^\circ$) and precision ($\pm 0.001^\circ$).

The node also includes an integrated temperature sensor and wireless mesh radio transmitter via the internal antenna.

The battery lifespan is +3 years at hourly readings.

Sensors communicate via mesh radio technology can be up to 400m from each other or the SmartGateway. The sensors mesh together and automatically form a network relaying data off each other (up to 9 sub mesh levels of data hop) and back to a central data hub called a SmartGateway which contains the data logging functions, radio mesh control systems and external communication to the WiSenMeshNet cloud based datacentre.

Features

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|---------------------------------------|---------------------------|
| • WiSen Mesh Node | • Upto 1 second frequency |
| • Dual axis tilt $\pm 30^\circ$ range | • End user configurable |
| • $\pm 0.0025^\circ$ precision | • Small Form Factor |
| • Intelligent node/repeater | • Internal Antenna |
| • Battery life +3 years | • IP66 |



Interface accessible via the internet



Call **03 9823 1533** for more information
survey.crkennedy.com.au



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Specification	
Basics	1304: M-Tilt
Primary Battery Power	Qty. x 1 (3.6V Lithium primary 2/3A ER17335)
Accuracy Stop Voltage	2.7VDC
Mesh Stop Voltage	2.1VDC
Battery Connection	Standard Aluminium Battery Holder
Working Current (DC)	Max. 23mA (Typ. 18mA)
Local Storage	Min. 450 Messages during Meshing
L x W x H	52 x 50 x 40mm
Weight	98g
Primary Sensor	
Sensor Type	MEMS Dual-Axis Tilt Sensor, A-axis; B-axis Tilt Values
Range	-30° to +30°
Accuracy	0.01° (36□ or 0.1745mm/m) for readings within range [-10°, +10°]; 0.04° (144□ or 0.700mm/m) for readings within range [-30°, +30°]
Precision	0.0025° (9□ or 0.0436mm/m)
Long Term Stability	< 0.014° (50□ or 0.2443mm/m)
Standard System Parameter	
Temperature	Range: -40 to 85°C, Accuracy: +/-1°C, typical 0.5°C; precision: 0.1°C
Voltage	Accuracy: +/- 0.1V
Standard System Parameter	
WSN Protocol	WISENMESHNET® Protocol
Industrial Standard	
Casing and Painting Materials	PC
IP Rating	>= IP66
Operating Temperature	-40 to 85°C
Fire Proof	Approved
Certificates	CE, London Underground Product Approval, Network Rail Approval
Re-Calibration Method	
Inspection Period	Every 3 Years by Manufacturer (or inspected by arranged methods)



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